



NORTH MARIN WATER DISTRICT
AGENDA - REGULAR MEETING
 February 2, 2016 – 7:00 p.m.
 District Headquarters
 999 Rush Creek Place
 Novato, California

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Est. Time	Item	Subject
7:00 p.m.		CALL TO ORDER
	1.	APPROVE MINUTES FROM REGULAR MEETING , January 19, 2016
	2.	GENERAL MANAGER'S REPORT
	3.	OPEN TIME: (Please observe a three-minute time limit) This section of the agenda is provided so that the public may express comments on any issues not listed on the agenda that are of interest to the public and within the jurisdiction of the North Marin Water District. When comments are made about matters not on the agenda, Board members can ask questions for clarification, respond to statements or questions from members of the public, refer a matter to staff, or direct staff to place a matter of business on a future agenda. The public may also express comments on agenda items at the time of Board consideration.
	4.	STAFF/DIRECTORS REPORTS
		CONSENT CALENDAR The General Manager has reviewed the following items. To his knowledge, there is no opposition to the action. The items can be acted on in one consolidated motion as recommended or may be removed from the Consent Calendar and separately considered at the request of any person.
	5.	Consent - Approve Proposed FY16/17 Budget Review Schedule
	6.	Consent – Approve Proposed FY16/17 Rate Hearing Schedule
		ACTION CALENDAR
	7.	Approve: Award Contracts for On-Call Construction and Repair Services – Team Ghilotti and Ghilotti Construction
		INFORMATION ITEMS
	8.	Urban Water Management Plan Update
	9.	Mid-Year Progress Report - Engineering Department
	10.	SWRCB Extended Emergency Urban Water Conservation Regulations
	11.	WAC/TAC Meeting - February 1, 2016
	12.	NBWA Meeting – February 5, 2016
	13.	Service Charge Analysis

All times are approximate and for reference only.
 The Board of Directors may consider an item at a different time than set forth herein.

(Continued)

14. **MISCELLANEOUS**

Disbursements

FY16 2nd Quarter Labor Cost Report

Reimbursement Program 2015

Equipment Inventory Summary

Increase In Directors' Compensation

Calling the Bay Area Home: Tackling the Affordable Housing and Displacement Challenge

Marin LAFCO – Save the Date, 2/17/16 Workshop

Reservoirs rising thanks to El Nino

MCL Business Breakfast

News Articles:

Water reports rankles Marshall, ponders sewers

Frank Egger runs for Ross Valley Supervisor

In Your Town: Water board names Koehler president

8:00 p.m.

15. **ADJOURNMENT**

1

1 July 1st, on a monthly time step and stated that the proposed regulations wouldn't change
2 necessarily the reporting frequency, but the timing would be moved up by 3 months. Mr. DeGabriele
3 advised the Board that the District currently maintains daily data on diversion and that will continue
4 to suffice in West Marin, but at Stafford Lake the District will be required to keep an hourly record.
5 He noted that it's not likely the District will have to report on that time scale unless there is some
6 acute shortage, where there is not enough water to meet all diverter needs, thus he does not think it
7 is a likely scenario in West Marin or Novato.

8 Emergency Urban Water Conservation Regulations

9 Mr. DeGabriele advised the Board that late Friday the State Water Resources Control Board
10 (SWRCB) issued their proposed regulatory changes to extend the Emergency Urban Water
11 Conservation Regulation. He noted that comments are due by noon next Thursday and the
12 SWRCB hearing will be on February 2nd. He informed the Board that the only previous District
13 comment reflected in the proposed changes is that savings in excess of the conservation standard
14 from June 15 through February can be carried over into the extended period. He stated that even
15 though it appears the District will have sufficient water supply this year, the State required
16 conservation mandate will likely continue.

17 Oceana Marin Homeowners Association Meeting

18 Mr. DeGabriele advised the Board that he and Mr. McIntyre attended the Oceana Marin
19 Homeowners Association meeting on Saturday and commented on the great attendance. He
20 advised the Board that they provided the homeowners with a financial update and talked about the
21 Thanksgiving Day force main break and spill. Mr. McIntyre updated the homeowners about the
22 Master Plan Update and a pertinent question by Ocean Marin Association Board member Dick
23 Kapash asked how they can afford the projects identified. Mr. DeGabriele responded that the
24 projects would be scheduled over a number of years depending on priority and likely be debt
25 financed either through a bank loan or loan from the Novato treasury.

26 Marin Conservation League

27 Mr. DeGabriele informed the Board that he and Mr. McIntyre will attend the Marin
28 Conservation League breakfast next Friday where Armando Quintero from Marin Municipal Water
29 District will be the speaker.

30 OPEN TIME

31 President Schoonover asked if anyone in the audience wished to bring up an item not on the
32 agenda and there was no response.

1 **STAFF / DIRECTORS' REPORTS**

2 President Schoonover asked if staff or Directors wished to bring up an item not on the
3 agenda and there was no response.

4 **QUARTERLY FINANCIAL REPORT**

5 Mr. Bentley provided the Quarterly Financial Report to the Board. He informed the Board
6 that in the Novato System there was a net income of \$463K and that the District was in the black
7 through the first 6 months of the Fiscal Year. He noted that reduced water sales impacted the
8 revenue (down 13% from the budget for first 6 months in Novato). Mr. Bentley stated that 33% of the
9 Capital Improvement Project budget was expended and the Central Service Area Recycled Water
10 Project will not expend all of budgeted money this Fiscal Year. He stated that Novato cash balance
11 was down \$2.4M from one year ago, principally for Aqueduct Energy Efficiency Project costs, but
12 CalTrans owes the District that much in project reimbursement costs.

13 Mr. Bentley stated that in the Recycled Water system, consumption was down 3% and that
14 the revenue has stayed flat. He informed the Board that the cash balance was \$1.3M at the end of
15 December.

16 Mr. Bentley advised the Board that in the West Marin system, consumption was down 7%
17 and expenses were down 6%. He noted that 50% of the Capital Improvement Project was expended
18 and that at the end of December, West Marin had a cash balance of \$1.1M.

19 Mr. Bentley informed the Board that in the Oceana Marin system, revenue went up 5%
20 because of the rate increase and expenses increased 23% over the last year. He stated that at the
21 end of December there was a cash balance of \$416K due to sewer service charges collected with
22 property taxes.

23 **MONTHLY PROGRESS REPORT**

24 Mr. DeGabriele reviewed the Monthly Progress Report for December. He stated that water
25 production in December is down 25% compared to December 2013 and for the fiscal year to date
26 down 30%. He advised the Board that West Marin water production also meets the State's required
27 25% reduction. Mr. DeGabriele informed the Board that as of Monday, Stafford Lake held just over
28 2,500AF (60% of capacity), Lake Sonoma nearly 210,000AF (86% of water supply pool) and Lake
29 Mendocino at 59,000AF (90% of the target storage curve). He advised that in Oceana Marin, the
30 effluent flow is down by one half compared to last year, due to less rainfall this December than last.
31 He noted that freeboard in both the storage and treatment pond are in good shape in this winter
32 season. Mr. DeGabriele informed the Board that during December the District has had several

1 brown water complaints in Novato and that staff believes hydrant use may be the culprit. He stated
2 that the Engineering Department has initiated conversations with both the City of Novato and Novato
3 Sanitary District so they use District hydrants appropriately.

4 Mr. Bentley reported the District's treasury portfolio holds \$11.8M, earning 0.6% interest.

5 **ACTION CALENDAR**

6 **QUITCLAIM EXISTING UNUSED EASEMENT IN TRADE FOR NEW EASEMENT AT 825**
7 **DELONG**

8 Mr. McIntyre advised the Board that staff is proposing quitclaiming an existing unused
9 easement; in trade for a new easement at 825 DeLong Ave. He stated that the original easement
10 was conveyed to the District from the Novato Water Company in 1948 and contains an abandoned
11 pipeline that has not been used for over 50 years. He noted that the property owner is retrofitting the
12 historic Silva-Kuser house, constructed in 1903 and the abandoned pipeline and easement conflicts
13 with approved grading plans for the renovation project. Mr. McIntyre stated that the old 6-ft wide
14 easement was quitclaimed in trade for a new 10-ft wide easement, which avoids the construction
15 work.

16 On motion of Director Petterle, seconded by Director Fraites, the Board approved quitclaim
17 for APN 153-064-21 and authorized the General Manager to execute said quitclaim and approved
18 Resolution 16-05 entitled: "Authorization of Execution of Quitclaim Deed to Elayne Miller" by the
19 following vote:

20 AYES: Directors Baker, Fraites, Petterle, Rodoni and Schoonover

21 NOES: None

22 **NEW HIRES FOR THE ASSISTANT DISTRIBUTION AND TREATMENT PLANT OPERATOR**
23 **POSITION**

24 Mr. DeGabriele advised the Board that staff is recommending the hiring of two Assistant
25 Distribution and Treatment Plant Operators to backfill the position of recent retiree Vernon Stafford.
26 He noted that staff initially solicited for a journeyman treatment plant operator but there was not a
27 good candidate response. He informed the Board that Robert Clark and his staff interviewed many
28 candidates for the Assistant Distribution and Treatment Plant Operator Position and also took each
29 candidate on a tour of the Treatment Plant with staff employees, Jeff Corda and Dan Garrett, which
30 provided a chance to get to know the candidate better. He advised the Board that Robert feels he
31 has two good candidates for the position.

32 Director Baker asked about the response of the initial posting of the journeyman treatment
33 plant operator. Mr. DeGabriele explained that the qualifications of the operator, such as a Grade 3

1 treatment and distribution certificate from the State is probably asking more than the pay scale
2 provided and the cost of living in Marin has some impact as well.

3 On motion of Director Fraithe, seconded by Director Baker, the Board authorized
4 employment of two Assistant Distribution & Treatment Plant Operators by the following vote:

5 AYES: Directors Baker, Fraithe, Petterle, Rodoni and Schoonover

6 NOES: None

7 **PIPEWORKER PROMOTION**

8 Mr. DeGabriele advised the Board that Adam Breit, who currently is Assistant Pipeworker, is
9 a solid worker and is very qualified in his position. He stated that he is available for a step increase
10 and staff is requesting the Board authorize promotion of Adam to Pipeworker beginning step as he
11 is already completing the duties of such position. He noted that with the promotion there will be a
12 Pipeworker on each construction crew.

13 On motion of Director Baker, seconded by Director Rodoni, the Board promoted Adam Breit
14 to the Pipeworker position by the following vote:

15 AYES: Directors Baker, Fraithe, Petterle, Rodoni and Schoonover

16 NOES: None

17 **OCEANA MARIN MASTER PLAN UPDATE (PRESENTATION BY CONSULTANT ED NUTE)**

18 The Board received a presentation from Ed Nute of Nute Engineering on the Oceana Marin
19 Waste Water System 2015 Master Plan Update. Mr. Nute reviewed build out projections, the
20 discharge requirements and issues for the District to consider in planning for the future. He reviewed
21 statistics, conditions and recommended improvements including cost estimates and priority of
22 collection system, pump station, force main, treatment/storage pond and disposal field
23 improvements. The cost of the recommended improvements total \$3.1M. Mr. McIntyre advised that
24 District staff will use the information to develop a 5-year Capital Improvement Plan and annual
25 budgets to be approved by the Board and that the projects would be spread out to use available
26 funds in the most effective way possible. He recommended that the 8th disposal trench be the first
27 priority, followed by pond improvements and to continue the annual infiltration and inflow
28 investigation and repair.

29 Director Baker asked if there may be any grant funding available to support the work. Staff
30 replied that grant funding for sewer improvements is administered through the Regional Board and
31 is usually subsequent to some corrective order and that to-date District staff has not pursued grant
32 solicitation but will explore the opportunity in the future.

1 On motion of Director Rodoni, seconded by Director Baker, the Board accepted the Oceana
2 Marin Wastewater System 2015 Master Plan Update final report by the following vote:

3 AYES: Directors Baker, Fraites, Petterle, Rodoni and Schoonover

4 NOES: None

5 The Board thanked Mr. Nute for his presentation and completion of the report.

6 **INFORMATION ITEMS**

7 **MARIN LAFCO COUNTYWIDE WATER SERVICE STUDY FINAL REPORT – NMWD COMMENTS**

8 Mr. DeGabriele provided the Board information on the Marin LAFCo Countywide Water
9 Service Study Final Report. He stated that comments are consistent with those submitted to LAFCo
10 in September 2015, as limited changes have been made to the final report. He informed the Board
11 that the final report does reference documentation provided by the District that overall system water
12 demands have decreased over the past 20 years both in Novato and West Marin. Mr. DeGabriele
13 advised that last Thursday, Marin LAFCo tentatively accepted the final report as written, subject to
14 any additional written comments received and continued the public hearing on the recommendations
15 and determinations included in the report to be considered on February 11th. He noted that the
16 recommendations do include deannexation of District territory in the Marshall area of West Marin
17 and the overlapping territory in Inverness with Inverness Public Utilities District. He stated that
18 additionally, the report recommends extending the District's sphere of influence to include the
19 District's outside service customers both in West Marin and into Sonoma County. He noted that the
20 report recommends that LAFCo consider advocating for community wastewater systems in the small
21 West Marin communities. Mr. DeGabriele informed the Board that District staff has argued that this
22 water study did not evaluate any wastewater issues and that last recommendation is out of place in
23 this process.

24 Director Rodoni advised that Marin LAFCo and the District may hear more from the East
25 shore Planning Group about the LAFCo recommendation to deannex the District's territory in the
26 Marshall area, as it is now recommended in the LAFCo water study.

27 **WEST MARIN WATER OUTSIDE DISTRICT WATER CONSUMPTION (2011-2015)**

28 The Board received an update on water service provided to customers residing outside the
29 West Marin water service boundaries. There are 13 West Marin customers residing outside the
30 District's boundaries and cumulatively they use 7% of the West Marin potable water supply. These
31 outside water customers are subject to a commodity rate that is 40% higher than the rate paid by
32 customers within the District boundaries.

1 Director Rodoni thanked staff for the report and advised that he is pleased to see water use
2 reduced among outside service area customers in West Marin. He advised there is noticeable
3 expansion of improvements on the Giacomini/Doughty/Bianchini properties and suggested a
4 development baseline be developed to confirm existing uses.

5 **MISCELLANEOUS**

6 The Board received the following miscellaneous information: Disbursements, Self-Insured
7 Workers' Comp – 2nd Quarter Status Report, and Renewal of Oceana Marin Liability Insurance.

8 The Board received the following news articles: Marin's Board of Supervisors, Marin makes
9 goals for December, Dick Spotswood: Race begins to take form to succeed Kinsey, HSU studies to
10 examine how Eel River dams impact salmon, Former state legislator Noreen Evans enters race for
11 Sonoma County supervisor, Marin IJ launches new public affairs program with focus on open space
12 trails conflict, Petition to label water additives, \$12 parcel tax proposed for Marin, Bay Area counties
13 for bay restoration, and Federal emergency services official seeks Kinsey's supervisorial seat.

14 The Board also received the following news articles at the meeting: Supervisor candidate
15 Brian Staley likes Marin's status quo and Supervisor candidate Dominic Grossi calls for more frugal
16 county government.

17 **ADJOURNMENT**

18 President Schoonover adjourned the meeting at 8:21 p.m.

19 Submitted by

20
21
22
23 Katie Young
24 District Secretary

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MEMORANDUM

To: Board of Directors

January 29, 2016

From: David L. Bentley, Auditor-Controller Subj: Proposed FY16/17 Budget Review Schedule
L:\actword\budget\17\proposed budget review sched fy17.docx**RECOMMENDED ACTION:** Approve**FINANCIAL IMPACT:** None**PROPOSED BUDGET REVIEW SCHEDULE FY 2016-17**

Date	Novato Potable and Recycled Water Budgets			West Marin Budgets ¹	
	Location	Equipment & Improvement Projects	Operations	West Marin Water	Oceana Marin Sewer
April 19	Novato	IR			
May 3	Novato		IR		
May 17	Novato	AR ²	AR ²		
June 7	Novato			IR	IR
June 21	Novato	H/A	H/A	AR ²	AR ²
June 28	Pt Reyes			H/A	H/A

ACTIVITY CODE

IR - Initial Review

AR - Additional Review

H/A - Hearing, final changes and approval

¹ Capital Improvement Projects and Operations² Department Heads presentApproved by GM CDDate 1/29/2016

6

MEMORANDUM

To: Board of Directors

January 29, 2016

From: David L. Bentley, Auditor-Controller Subj: Proposed FY16/17 Rate Hearing Schedule
I:\actword\budget\17\proposed rate hearing sched fy17.docx**RECOMMENDED ACTION:** Approve**FINANCIAL IMPACT:** None***PROPOSED RATE HEARING SCHEDULE FY 2016-17***

Action	Novato Potable & Recycled Water	West Marin Water & Oceana Marin Sewer
Consider Proposed Rates	March 1, 2016	April 19, 2016
Approve Letter to Customers	March 15, 2016	May 3, 2016
Customer Letter Postmark Deadline ¹	April 2, 2016	May 14, 2016
Rate Hearing	May 17, 2016	June 28, 2016
Rate Effective	June 1, 2016	July 1, 2016

¹ To meet minimum 45-day hearing notice requirement letters must be postmarked on or before the date shown.

Approved by GM CDDate 1/29/2016

7

MEMORANDUM

To: Board of Directors
 From: Drew McIntyre, Assistant General Manager/Chief Engineer 
 Subject: Approve – On-Call Construction and Repair Services Contracts with Team Ghilotti and Ghilotti Construction

January 29, 2016

R:\NON JOB No ISSUES\On-Call\OnCall Services Approve Contract Award BOD Memo 2-2-16.doc

RECOMMENDED ACTION: Board authorize General Manager to execute agreements with Team Ghilotti and Ghilotti Construction.

FINANCIAL IMPACT: \$150,000 each for a total amount of \$300,000

Background

On April 7, 2015, the Board authorized staff to proceed with solicitation of a Request for Proposal for on-call construction services. The On-Call Construction and Repair Services RFP was developed to provide District staff with the flexibility to hire local third party contractors in the event of an emergency and also to accommodate more efficient completion of small District projects in a timely and cost effective manner. The District's traditional advertise-bid-award procedure for hiring contractors will continue to be utilized for most projects.

The RFP solicitation process was developed to identify minimum qualifications including construction firm's experience, project manager's experience, satisfactory references, acceptable safety compliance record, adequate licensing and pricing schedule. The RFP format is similar to that used successfully for other local agencies including Contra Costa Water District and Dublin San Ramon Services District. Prior to advertisement the RFP was also reviewed by District legal counsel.

A Request for Proposal for this project was posted on Ebidboard November 12, 2015 and three companies returned proposals on December 22, 2015. The companies that submitted proposals are listed as follows:

NAME	LOCATION
Ghilotti Construction	Santa Rosa
Maggiora & Ghilotti	San Rafael
Team Ghilotti	Petaluma

Selection Process

A selection committee, including myself, Chris DeGabriele, Robert Clark and Tony Arendell, participated in the proposal review. The qualifications of each firm were ranked separately by each committee member against the following selection criteria:

- Company's Qualifications and Experience
- Safety Record
- Project Manager Qualifications
- Licensing
- Pricing Schedule

The firms were ranked with 60% of the scoring based on qualifications and 40% based on proposed pricing. Upon completion of the proposal review, Team Ghilotti and Ghilotti Construction were ranked the highest. Both firms were ranked highest because they demonstrated the strongest experience, good safety records, highly qualified project managers and lowest pricing.

Staff recommends entering into contracts with the two highest ranked contractors for individual contracts not to exceed \$150,000 (for a total authorization of \$300,000). Work will be approved based on negotiated task orders with the contractor that can most efficiently complete each task based on type of work and availability of resources. Pricing for projects under \$50,000 will be based on the proposed hourly rates and mark-ups. For projects over \$50,000, pricing will be obtained from both contractors with the lowest price selected to ensure strong price competition. The maximum value for individual task orders will be \$100,000. This contracting approach will minimize the District's administrative costs associated with developing multiple construction contracts and allows the smaller Capital Improvement Projects (CIPs) to be implemented more quickly and cost effectively.

Financial Impact

Except for unplanned emergency situations, most of the projects will be for small CIPs (with approved budgets) that District crews are not able to complete due to other workload demands. Current FY16 approved projects that may be utilized for construction and repair services in the Novato Water System include, but are not limited to:

1. Zone Area Pressure Improvements - \$150,000
2. Polybutylene (PB) Service Line Replacements - \$70,000
3. Backflow Device Upgrade in Bel Marin Keys - \$30,000
4. Stafford Dam Concrete Repair - \$50,000
5. DCA Repair/Replacement - \$90,000

RECOMMENDATION

Board authorize General Manager to execute agreements with Team Ghilotti and Ghilotti Construction for on-call construction and repair services with a not to exceed limit of \$150,000 each.

8

MEMORANDUM

To: Board of Directors
From: Drew McIntyre, Assistant General Manager/Chief Engineer
Subject: 2015 Urban Water Management Plan Status Update
T:\GM\UWMP 2015\BOD update 2-2-16.doc

January 29, 2016



RECOMMENDED ACTION: Information
FINANCIAL IMPACT: None at this time

At the December 2, 2014 meeting, the Board approved a Letter Agreement between the City of Santa Rosa and eight participating Water Contractors (Windsor, Santa Rosa, Sonoma, Valley of the Moon, Rohnert Park, Cotati, Petaluma and NMWD) and Marin Municipal Water District. The purpose of the Letter Agreement was to share the costs of a contract with Maddaus Water Management (Maddaus) to update the Water Demand Analysis and Water Conservation Measures for the 2015 Urban Water Management Plan (UWMP). For NMWD, the approved cost share was \$23,753. Maddaus' final work product was completed in July 2015 at a total cost to NMWD of \$23,729. An Executive Summary of the report is provided in Attachment 1. The gross water demand estimates are now projected at the year 2040 to comply with the 2015 UWMP requirements and total 11,298 acre feet per year (AFY) without any new conservation applied. This is a reduction of 3,209 acre feet in gross demand from the 2010 UWMP calculations also done by Maddaus. The reduction is due to slightly lower population and job growth estimates pursuant to updated ABAG projections over the next 25 year planning period as well as lower 2015 starting year demands when compared to estimated 2015 demands in the 2010 UWMP. The lower 2015 demands are likely due to NMWD's continued aggressive water conservation programs coupled with plumbing code and Cal-Green measures.

NMWD's 2040 demand, conservation and supply numbers are summarized in Attachment 2 with a comparison to the 2010 and 2005 UWMP projections. With implementation of an optimized water conservation program (aka Program B in Table ES-3 and Figure ES-1 in Attachment 1), NMWD's 2040 net demand (i.e., gross water demand less plumbing code and conservation projections) is calculated at 10,062 acre feet. This is approximately 2,500 acre feet less than the net demand projected in the 2010 UWMP. When considering NMWD's local supply (1000 acre feet) and new recycled water offset (500 acre feet), it's expected that NMWD's required Russian River deliveries will be in the range of 9,178 (high) to 8,562 (low) acre feet in the year 2040. A range was developed to better signal the level of uncertainty in future water demand projections given the

multitude of assumptions. The high Russian River demand number of 9,178 acre feet is estimated using local supply/recycled water offsets plus water conservation savings strictly from new plumbing code requirements. The estimated lower Russian River demand value of 8,562 acre feet uses a combination of water conservation savings from both new plumbing code requirements and NMWD's water conservation program. This range is 1,734 – 2,350 acre feet less than the value of 10,912 acre feet previously used in the 2010 UWMP for 2035 (and agreed to by SCWA).

A chart showing the 2015 UWMP projections beginning in 2015 through the year 2040 is shown on Attachment 3. For the sake of simplicity, this chart only shows the high range of the estimated Russian River deliveries. This chart also includes population projections during the planning period. Attachment 4 shows a more likely scenario wherein a full 2,000 acre feet per year supply from Stafford Treatment Plant is assumed along with additional recycled water pursuant to our master plan projections. This more likely scenario would result in a high Russian River supply demand of 7,908 acre feet. A comparison of the 2040 options (Likely Scenario vs 2015 UWMP) is shown in Attachment 5.

The 2015 UWMP must be submitted to Department of Water Resources by July 1, 2016 and a public hearing must be held prior to its adoption. We are currently noticing other water suppliers, wastewater agencies and planning agencies to provide the 60-day notification prior to hearing. Staff proposes to request noticing the public hearing at the April 19th meeting and to hold the public hearing on June 21st along with the regular Board meeting on that date.



**NORTH MARIN
WATER DISTRICT**



**North Marin Water District
NMWD Job No. 1 4050.00**

**2015 Urban Water Management Plan Water Demand
Analysis and Water Conservation Measures Update**

FINAL

July 1, 2015



**MADDAUS
WATER
MANAGEMENT INC.**

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LIST OF ACRONYMS

AB	Assembly Bill	ILI	Infrastructure Leakage Index
ABAG	Association of Bay Area Governments	IRR	Irrigation
ACS	American Community Survey	MF	Multi-family
AF	acre-foot/acre-feet	MG	Million gallons
AFY	acre-foot/acre-feet per year	MMDD	Master measure design database
AMI	Automated Meter Infrastructure	MMWD	Marin Municipal Water District
AWWA	American Water Works Association	MWM	Maddaus Water Management, Inc.
AWWARF	American Water Works Association Research Foundation	ND	New Development
BMP	Best Management Practice	NMWD	North Marin Water District
CCR	California Code of Regulations	NRW	Non-revenue water
CII	Commercial, Industrial, and Institutional	PV	Present value
CPI	Consumer Price Index	PWSS	Public Water System Statistics
CUWCC	California Urban Water Conservation Council	SB	Senate Bill
DWR	Department of Water Resources	SCWA	Sonoma County Water Agency
DSS	Decision Support System	SF	Single Family
FY	Fiscal Year	SMSWP	Sonoma-Marin Saving Water Partnership
GPCD	Gallons per capita per day	UHET	Ultra High Efficiency Toilet
gpf	Gallons per flush	ULFT	Ultra Low Flow Toilet
HE	High Efficiency	UWMP	Urban Water Management Plan
HEU	High Efficiency Urinal	WF	Water factor
		WSA	Water Supply Assessment

EXECUTIVE SUMMARY

Introduction

To prepare for the submission of the 2015 Urban Water Management Plan, a demand and conservation technical analysis was conducted by Maddaus Water Management, Inc. (MWM) for North Marin Water District (NMWD or Water Contractor). The primary purpose of this analysis was to:

1. Calculate a demand forecast for the years 2015 to 2040.
2. Calculate the range of conservation costs and savings for the years 2015 to 2040. This effort included:
 - Evaluating twenty-five existing and new conservation programs that can possibly reduce future water demand.
 - Estimating the costs and water savings of these measures.
 - Combining the measures into increasingly more aggressive programs and evaluating the costs and water savings of these programs.

Long-Term Demand and Conservation Program Analysis Results

The MWM project included analysis for all the Sonoma and Marin County Water Contractors receiving Russian River Water Supply from Sonoma County Water Agency, including NMWD, and consisted of two main parts: (1) create a demand and conservation analysis for 2015 to 2040, and (2) evaluate conservation savings potential for the years 2015 to 2040 with a variety of different measures and conservation programs.

The first step in the analysis was to review and analyze historical water use production and billing data. Building on MWM's previous year 2010 demand and conservation technical analysis effort, for most Water Contractors, billing data was provided for the years 2010 to 2014. The data was graphically analyzed and discussed with the individual Water Contractors.

The historical water use, the selected population and employment projections, the plumbing code information, and discussions with the Water Contractors were used to create a demand forecast for the years 2015 to 2040, as further described in Section 3.

Once the demands were completed, the conservation measures were analyzed for a total of 25 measures shown in Table ES-1. The conservation analysis included all the measures selected by the Sonoma-Marin Water Contractors via electronic survey. The following important assumptions about the conservation measures were included in this analysis:

1. The measures reviewed for each Water Contractor is listed in the following table and described in Section 4.
2. New development ordinances were updated to reflect new local ordinances, the Model Water Efficient Landscape Ordinance, and the CALGreen building code (as of May 1, 2015). This can be found in Appendix A.

The following tables and figures present the water demands and conservation savings for this analysis. The Plumbing Code includes the new California State Law (Assembly Bill 715), which requires High Efficiency Toilets and High Efficiency Urinals as of 2014. The Plumbing Code also includes SB 407, which applies to all new construction and replacements as of 2017 for single family and 2019 for multifamily and commercial properties. The increase of projected growth in population and/or jobs will cause water demand to increase. For each Water Contractor the three conservation Program scenarios are organized as follows:

- **Program A:** "Existing Program" option includes the measures that the Water Contractor currently offers. These measures may not necessarily be designed the way they are currently implemented, having, in some cases, more aggressive annual account targets planned for the future.
- **Program B:** "Optimized Program" represents the measures that the Water Contractor currently offers plus Automated Meter Infrastructure (AMI). These measures are not necessarily designed the way they are currently implemented, having, in some cases, more aggressive annual account targets. .

- **Program C: “All Measures Analyzed”** presents a scenario where all 25 measures are implemented.

Table ES-1 presents the conservation measures modeled in this analysis sorted by utility, CII, landscape, and residential category.

Table ES-1 Conservation Measures Evaluated

Utility Measures	CII Measures	Landscape Measures	Residential Measures
Water Loss	Indoor and Outdoor Surveys - CII	Outdoor Large Landscape Audits & Water Budgeting/Monitoring	HE Faucet Aerator / Showerhead Giveaway - SF, MF
AMI	Replace CII Inefficient Equipment	Landscape Rebates and Incentives for Equipment Upgrade	Indoor and Outdoor Surveys - SF, MF
Pricing	Efficient Toilet Replacement Program - CII	Turf Removal - MF, CII	Efficient Toilet Replacement Program – SF
Public Info & School Education - SMSWP	Urinal Rebates – CII	Turf Removal - SF	Direct Install UHET, Showerheads, and Faucet Aerators - SF, MF
Public Info & School Education - Water Contractor	Plumber Initiated UHET & HEU Retrofit Program	Water Conserving Landscape and Irrigation Codes	HE Clothes Washer Rebate - SF, MF
Prohibit Water Waste	Require <0.25 gal/flush Urinals in New Development	Require Smart Irrigation Controllers and Rain Sensors in New Development	Submeters Incentive
	HE Faucet Aerator / Showerhead Giveaway – CII		

Sonoma Marin Saving Water Partnership (SMSWP) program includes all Sonoma and Marin County Water Contractors receiving water from Sonoma County Water Agency (SCWA). The conservation programs implemented in 2015 do vary among the individual water contractors.

Figure ES-1 presents the collective Water Contractors’ conservation measure program scenarios, indicating which measures have been selected by North Marin Water District for implementation within each program.

Figure ES-1. Conservation Measure Program Scenarios

Program Scenarios				
 Program Scenarios	Measures	Program A	Program B	Program C
	Water Loss	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	AMI	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Pricing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Public Info & School Education - SMWSP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Public Info & School Education - Water Contractor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Prohibit Water Waste	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Indoor and Outdoor Surveys - CII	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Replace CII Inefficient Equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Efficient Toilet Replacement Program - CII	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Urinal Rebates – CII	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Plumber Initiated UHET & HEU Retrofit Program	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Require <0.125 gal/flush Urinals in New Development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	HE Faucet Aerator / Showerhead Giveaway – CII	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	HE Faucet Aerator / Showerhead Giveaway - SF, MF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Indoor and Outdoor Surveys - SF, MF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Efficient Toilet Replacement Program – SF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Direct Install UHET, Showerheads, and Faucet Aerators - SF, MF	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	HE Clothes Washer Rebate - SF, MF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Submeters Incentive	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Outdoor Large Landscape Audits & Water Budgeting/Monitoring	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Landscape Rebates and Incentives for Equipment Upgrade	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Turf Removal - MF, CII	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Turf Removal - SF	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Water Conserving Landscape and Irrigation Codes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Require Smart Irrigation Controllers and Rain Sensors in New Development	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

The following table presents NMWD’s potable water use projections without plumbing code savings, with only plumbing code savings and no active conservation activity, and with plumbing code savings and Program A, Program B, and Program C active conservation program implementation savings.

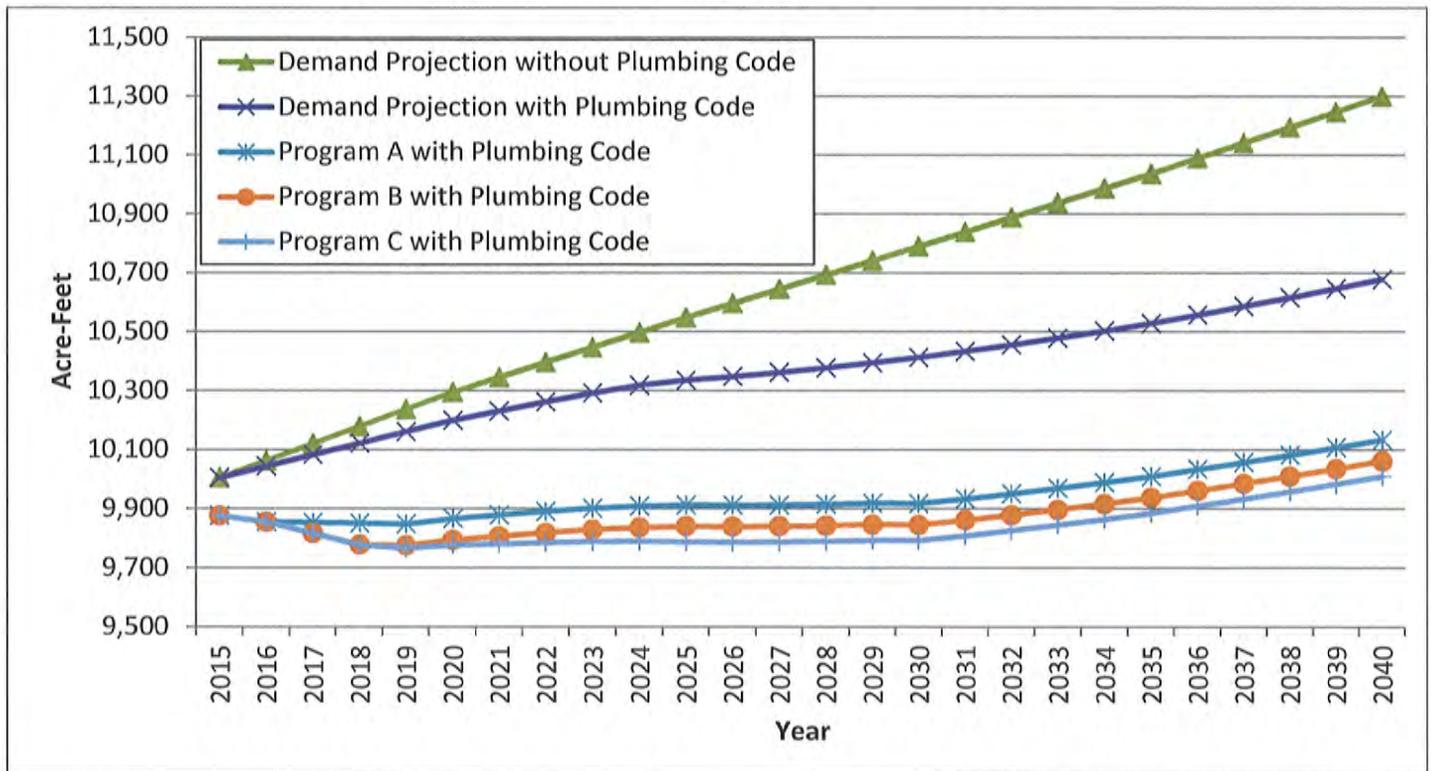
Table ES-2. Potable Water Use Projections (Acre-Feet/Year)*

	2015	2020	2025	2030	2035	2040
Demand without Plumbing Code (AFY)	10,004	10,294	10,547	10,789	11,036	11,298
Demand with Plumbing Code (AFY)	10,004	10,199	10,336	10,413	10,528	10,678
Demand with Plumbing Code and Program A	9,876	9,866	9,912	9,917	10,009	10,133
Demand with Plumbing Code and Program B	9,876	9,794	9,840	9,845	9,937	10,062
Demand with Plumbing Code and Program C	9,876	9,777	9,787	9,792	9,885	10,009

*Data is not weather normalized. Total water use is potable only. Does not include recycled water use. Recycled water use and projection are in a separate section in the UWMP.

Figure ES-2 exhibits NMWD’s long term demands without plumbing code savings, with only plumbing code savings and no active conservation activity, and with plumbing code savings and Program A, Program B, and Program C active conservation program implementation savings.

Figure ES-2. Long Term Demands with Conservation Programs*



Note: All line types shown in the legend are presented in the graph. The following demand scenarios, Program A, Program B, and Program C, are close in value and therefore may be indistinguishable in the figure.

Table ES-3 shows the annual water savings for plumbing codes only as well as plumbing codes with Program A, Program B, and Program C active conservation program implementation in five-year increments.

The benefit to cost ratio for each conservation program from the perspective of the Water Contractor (water utility) and the perspective of the Water Contractors and customers (community) is also presented.

Table ES-3. Water Demand Program Savings Projections

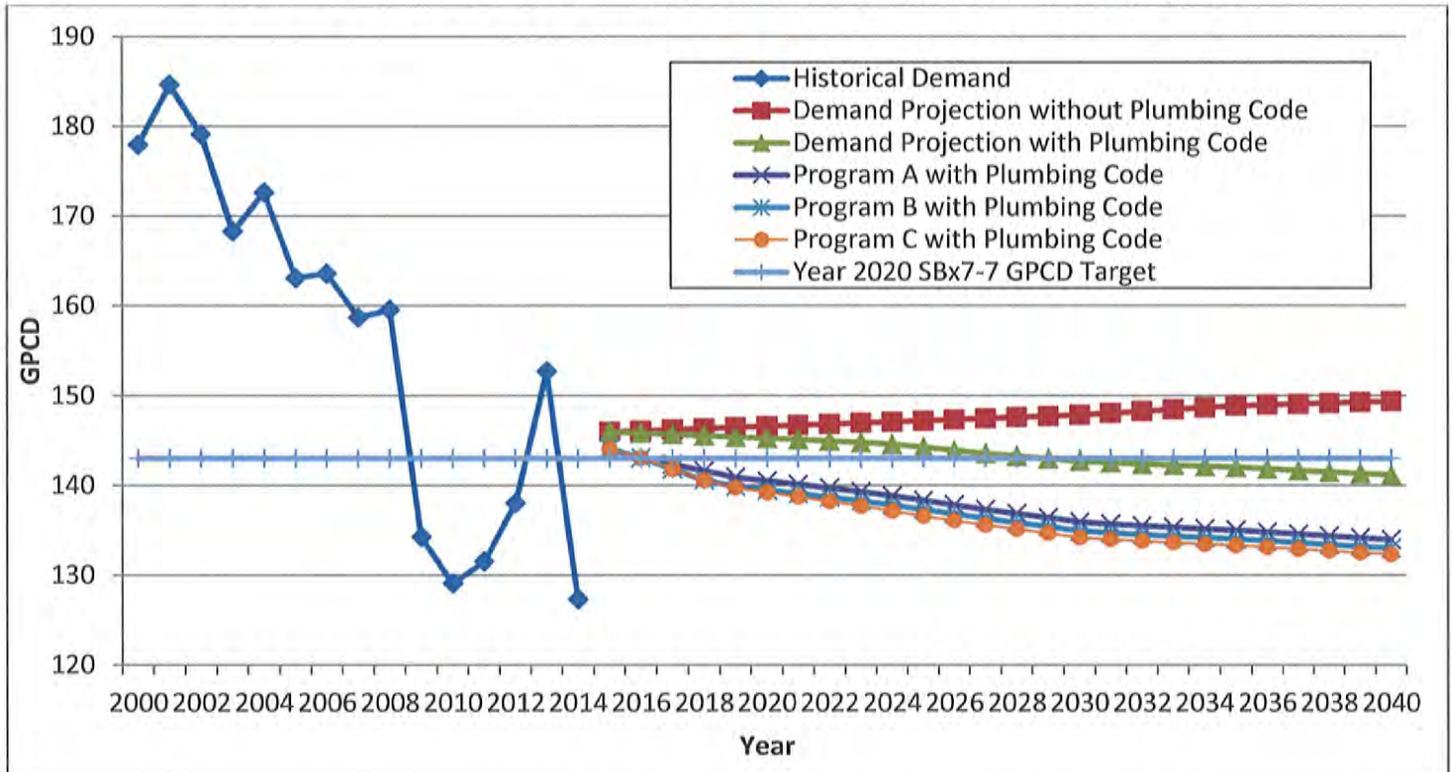
Conservation Program Water Savings (AFY)	2015	2020	2025	2030	2035	2040	Water Utility Benefit to Cost Ratio	Community Benefit to Cost Ratio
Plumbing Code	-	95	212	376	508	620	N/A	N/A
Program A with Plumbing Code	128	428	635	871	1,026	1,165	2.07	0.90
Program B with Plumbing Code	128	500	707	944	1,098	1,237	1.55	0.87
Program C with Plumbing Code	128	517	760	996	1,151	1,289	1.35	0.85

Table ES-4 and Figure ES-3 present the SB X7-7 target GPCD and year as well as projected GPCD demand estimates with plumbing codes alone, and with plumbing codes with Program A, Program B, and Program C for North Marin Water District. NMWD has elected to track their year 2018 CUWCC GPCD target, which is also 143 GPCD, the same value as the SB X7-7 target.

Table ES-4. Water Conservation Program Savings Projections - SB X7-7 Target GPCD

GPCD Target Source	SB X7-7
GPCD Goal	143
GPCD Goal Year	2020
GPCD with Plumbing Code in 2020	145
GPCD Program A with Plumbing Code in 2020	140
GPCD Program B with Plumbing Code in 2020	139.5
GPCD Program C with Plumbing Code in 2020	139.2

Figure ES-3. Water Conservation Program Savings Projections – SB X7-7 Target, GPCD



Notes:

1. All line types shown in the legend are presented in the graph. The following demand scenarios, Program A, Program B, and Program C, are close in value and therefore may be indistinguishable in the figure.
2. Note the decline in water use in the 2014 dry year and 2008-2011 economic recession.

Table ES-5 shows the year 2040 indoor and outdoor water savings for the three conservation programs modeled; the present value of water savings and the present value of costs to the utility and community are also displayed. The cost of utility savings per unit volume of water is shown in the far-right column.

Table ES-5. Economic Analysis of Alternative Programs

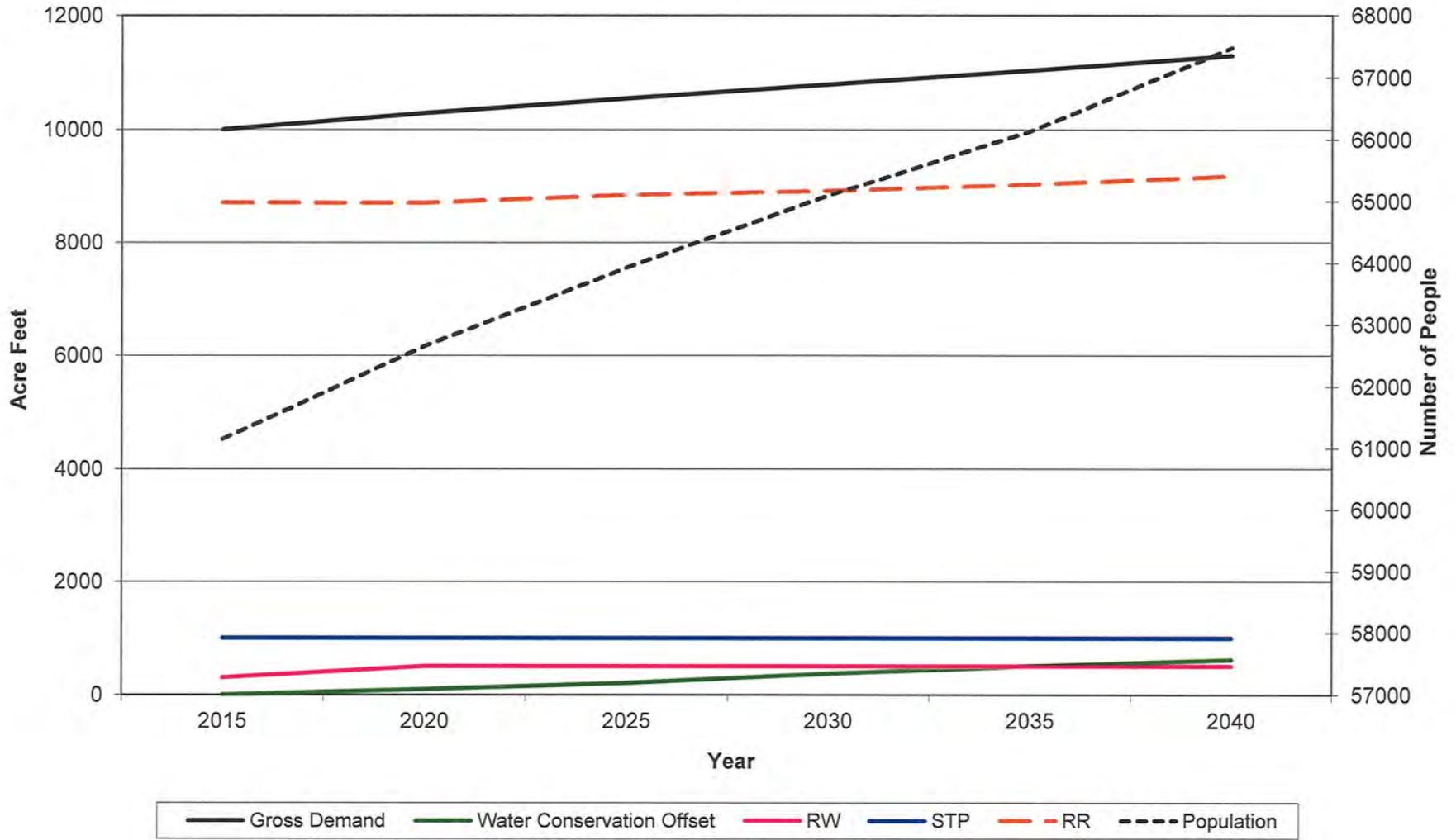
	2040 Indoor Water Savings (AFY)	2040 Outdoor Water Savings (AFY)	2040 Total Water Savings (AFY)	Present Value of Water Savings (\$)	Present Value of Utility Costs (\$)	Present Value of Community Costs (\$)	Cost of Utility Savings per Unit Volume (\$/AF)
Program A with Plumbing Code	672	493	1,165	\$10,429,611	\$5,043,185	\$12,988,745	\$461
Program B with Plumbing code	700	537	1,237	\$12,074,388	\$7,804,387	\$15,749,946	\$617
Program C with Plumbing Code	752	537	1,289	\$12,998,976	\$9,634,690	\$18,092,648	\$705

NMWD URBAN WATER MANAGEMENT PLAN DEMAND AND WATER CONSERVATION PROJECTIONS (AC-FT)

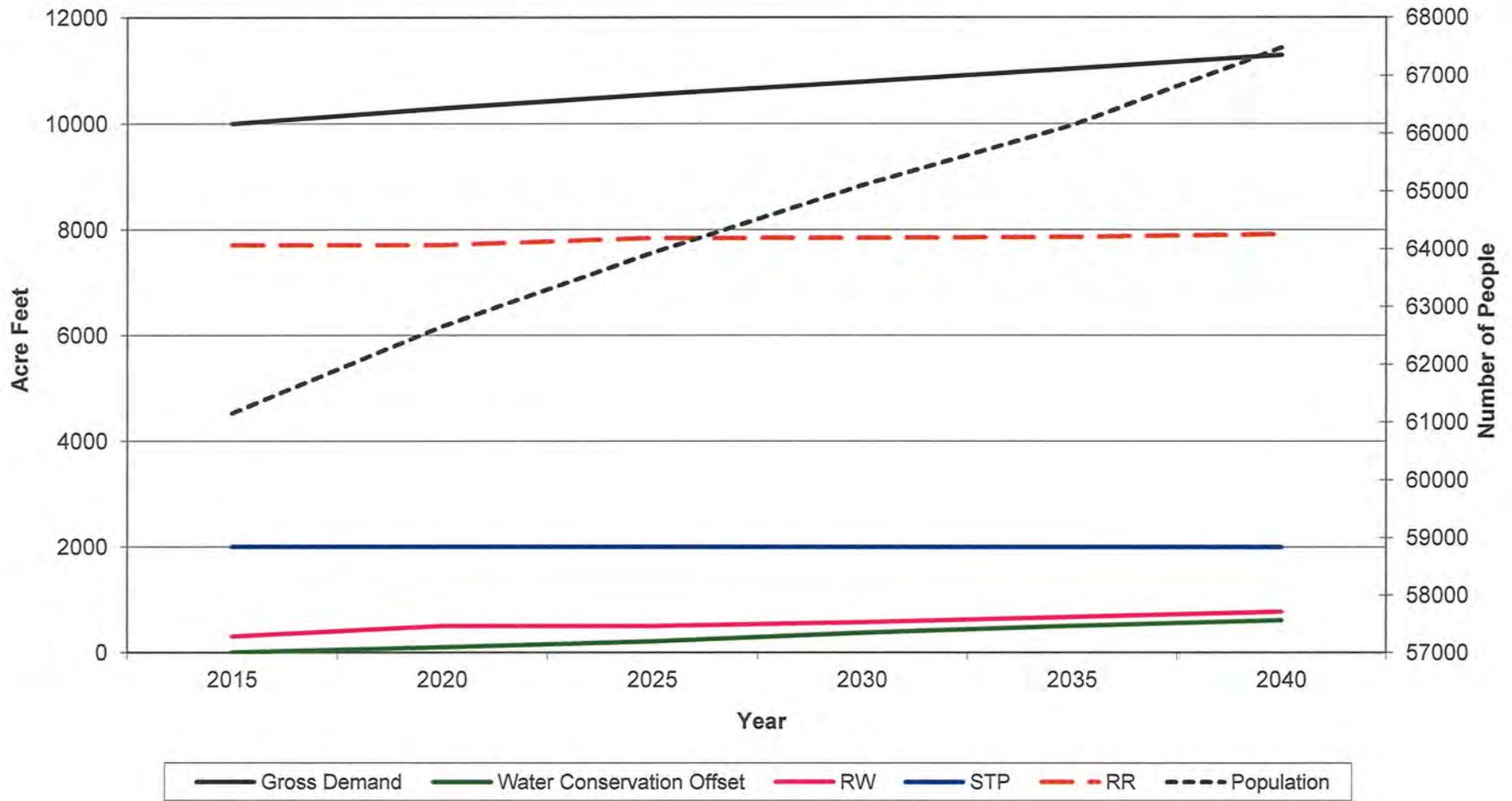
	Restruct. Agmt.	WSTSP FEIR	Gross Demand	Plumbing Code	Beyond Plumbing Code	Local Supply	Recycled Water	Net SCWA Water Demand
2015 UWMP ⁽¹⁾	14,100		11,298	620	616 ⁽⁵⁾	1,000	500 ⁽⁴⁾	9,178 – 8,562
2010 UWMP ⁽²⁾	14,100		14,507	794	1,128	1,000	673	10,912
2005 UWMP ⁽³⁾	14,100	14,100	15,992	548	970	800	673	13,000

- (1) 2015 UWMP figures shown are DRAFT and reflect water demand and water conservation in year 2040.
- (2) 2010 UWMP figures shown reflect water demand and water conservation previously estimated in year 2035.
- (3) 2005 UWMP figures shown reflect water demand and water conservation previously estimated in year 2030.
- (4) Represents new and future recycled water demand developed after 2010 (i.e., Recycled Water North, South, and Central Expansions)
- (5) Program B (optimized water conservation program which includes automated meter infrastructure)

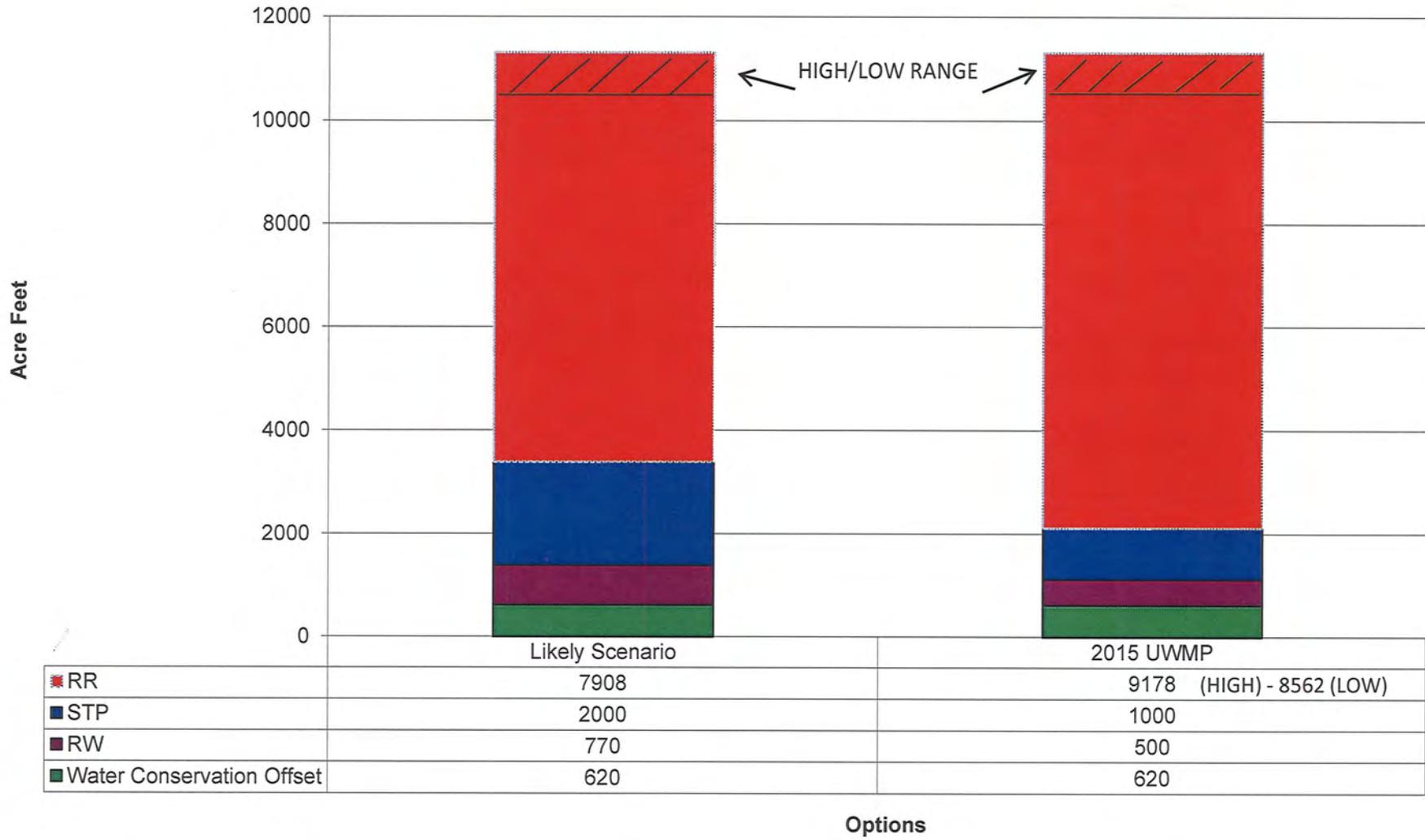
**2015 UWMP
Demand/Water Conservation Offset/Supply
w/ 1000AFA From STP & 500AFA RW**



**Likely Scenario
Demand/Water Conservation Offset/Supply
w/ 2000AFA From STP & Full RW**



Year 2040 Options Likely Scenario vs 2015 UWMP



9

MEMORANDUM

To: Board of Directors
 From: Drew McIntyre, Assistant General Manager/Chief Engineer
 Subject: FY15-16 Mid-Year Progress Report – Engineering Department

Date: January 29, 2016

R:\CHIEF ENGM\MCINTYRE\BUDGETS\FY15-16 Budget\Eng Dept Perf Recap-2nd Qtr 15-16.doc

The purpose of this memo is to provide a mid-year status report to the Board on the District's performance in completing budgeted FY15-16 Capital Improvements Projects (CIP) with a primary emphasis on planned (i.e., baseline) versus actual performance. The following information supplements the progress report summary provided to the Board each month.

SUMMARY

Service Areas	Project Costs (\$)		% Complete		Earned Value (\$)	
	Budget (\$)	Forecast (\$)	Planned	Actual	Planned	Actual
Novato Water	9,040,000	5,483,000	44	30	4,833,050	3,726,120
Novato Recycled	3,680,000	875,000	50	50	1,790,000	387,500
West Marin	345,000	340,000	40	26	161,600	156,900
TOTAL	13,065,000	6,682,000	45	35	6,784,650	4,270,520

The above table summarizes the detailed tabulation of CIPs for both Novato and West Marin (including Oceana Marin) systems provided in Attachment A. The above tabulation shows that year-end Novato CIP expenditures are forecasted to be \$3,557,000 and \$2,805,000 below the respective approved FY15-16 budgets for water and recycled water. The year-end forecast for all service areas combined above represents approximately 51% of combined budgets (versus a forecast of 97% at this time last year). For the Novato Water system, actual District performance in completing CIP projects (i.e., 30%) is below planned performance (i.e., 44%). Actual performance for the Novato Recycled Water system is right on track for planned performance for project completion (i.e., 50%). With respect to West Marin (including Oceana Marin), year-end CIP expenditures of \$340,000 are forecast to be slightly below (i.e., 99%) the approved FY15-16 budget value (versus a forecast of 94% at this time last year). Planned performance through mid-year for West Marin was projected to be 26% and actual completion performance is at 40%. Overall, for the Novato Water, Novato Recycled Water and West Marin water systems, combined actual performance is below (i.e., 35%) planned performance (i.e. 45%).

Performance Status for Improvement Projects

A detailed milestone schedule update is provided in Attachment B. As shown on the following table (Page 3), a total of 32 projects (versus 38 in FY14-15) were originally budgeted in FY 15-16 for the Novato, West Marin and Oceana Marin service areas. Three new projects have been added, one project has been carried over from FY14-15 and six projects have been deferred

resulting in a new total of 30 projects. Of the 30 Capital Improvement Projects budgeted, 15 (versus 30 in FY14-15) are under the lead responsibility of the Engineering Department for completion (13 in Novato and 2 in West Marin). The remaining 13 (versus 18 in FY14-15) CIP projects are under the responsibility of the other departments (i.e., 8– Maintenance, 5 – Operations and 1- Admin) (Refer to the tabulation in Attachment A for a complete line item listing).

Novato Service Area Project Costs Variances

As shown in Attachment A, all but two FY15-16 Novato CIPs are currently projected to be completed at or below original budget.

One project has been added, Office HVAC, and none deferred/dropped during the second quarter.

Novato Recycled Water Service Area Project Costs Variances

No recycled water projects have been added or deferred/dropped during the second quarter.

West Marin Service Area (including Oceana Marin) Project Costs Variances

As shown in Attachment A, all but one FY15-16 West Marin CIPs expenditures are currently projected to be within the original budget. One West Marin project has been added, Oceana Marin Force Main Repairs and none deferred/dropped during the second quarter.

Engineering Department Labor Hours

The Engineering Department provides a multitude of functions supporting overall operation, maintenance and expansion of water facilities. The major work classifications are: (1) General Engineering, (2) Developer Projects and (3) District (i.e., CIP) Projects. Out of the approximately 14,900 engineering labor hours available annually (less Conservation), the FY15-16 labor budget for Developer Projects and District Projects is 1,480 (10% of total) and 4,980 (33% of total), respectively. A chart of actual hours expended versus budgeted hours for both Developer and District projects during FY15-16 is provided in Attachment C. At the end of the second quarter, actual engineering labor hours expended for Developer work was 32% (478 hours) versus 50% (740 hours) budgeted. With respect to District Projects, 2,428 engineering labor hours (49% of budget) have been expended on Capital Improvement Projects which is right on track when compared against the mid-year estimate.

FY 15-16
 CAPITAL IMPROVEMENTS PROJECTS

PROJECTS BUDGETED	NOVATO SERVICE AREA	WEST MARIN/ OCEANA MARIN	TOTAL
Original Budget	26	6	32
Added	2	1	3
FY 14-15 Carryover	0	1	1
Deferred/Dropped	6	0	6
Adjusted Budget	22	8	30

FY14-15 CARRYOVER

Date Brought to Board

Novato
 None

West Marin
 Replace Pump in Well #2

First Quarter Report

DEFERRED/DROPPED

Novato
 San Mateo 24" Inlet/Outlet Pipe
 Electronic Document Management System
 Office Emergency Generator
 Office/yard Building Refurbish
 STP Emergency Power Generator
 Crest Pump Station/Reloc School Rd Pump Station

First Quarter Report
 First Quarter Report

West Marin
 None

PROJECTS ADDED

Novato
 PB Replacements: Grandview (14)
 Office HVAC Repairs

First Quarter Report
 Second Quarter Report

West Marin
 Oceana Marin Force Main Repairs

Second Quarter Report

**NOVATO SYSTEM CAPITAL IMPROVEMENT PROJECTS SUMMARY FY15-16
AS OF DECEMBER 31, 2015**

STATUS	DEPT	ITEM #	PROJECT NO.	DESCRIPTION	PROJECT COSTS		% COMPLETE		EARNED VALUE	
					Budget	Forecast	Baseline	Actual	Planned	Actual
1. PIPELINE REPLACEMENTS/ADDITIONS										
PC	Eng	1	1.a.1	So. Novato Blvd - Rowland to Sunset	\$400,000	\$213,000	99	99	\$396,000	\$210,870
PC	Eng	2	1.b.1	Zone A Pressure Improvements	\$150,000	\$150,000	50	35	\$75,000	\$52,500
			1.b.2	San Mateo 24" Inlet/Outlet Pipe DEFER	\$150,000	\$0				
			1.c.1	Repl PB in Sync w/City Paving	\$70,000	\$0				
C	Eng	3	1.c.2	PB Repl: Grandview (14)	\$0	\$45,000	100	100	\$0	\$45,000
			1.d.1	Other Relocations	\$80,000	\$0				
PC	Eng	4	1.e.1	AEEP - Hwy 101 Widening	\$4,890,000	\$4,000,000	82	82	\$4,009,800	\$3,280,000
				SubTotal	\$5,740,000	\$4,408,000				
2. SYSTEM IMPROVEMENTS										
PC	Maint	5	2.a	RTU Upgrades	\$15,000	\$15,000	50	10	\$7,500	\$1,500
PC	Eng	6	2.b	Flushing Taps at Dead Ends	\$50,000	\$50,000	0	10	\$0	\$5,000
	Eng	7	2.c	DCDA Repair/Replace	\$190,000	\$90,000	14	0	\$26,600	\$0
PC	Eng	8	2.d	Anode Installations	\$30,000	\$30,000	0	40	\$0	\$12,000
	Maint	9	2.e	Radio Telemetry	\$25,000	\$25,000	50	0	\$12,500	\$0
	Eng	10	2.f	Inaccurate Meter Replacement	\$10,000	\$10,000	14	0	\$1,400	\$0
	Maint	11	2.g	Backflow Device Upgrade - BMK (15)	\$30,000	\$30,000	50	0	\$15,000	\$0
C	Maint	12	2.h	Tank Access Hatch/Level Alarms (10)	\$35,000	\$45,000	50	100	\$17,500	\$45,000
	Eng	13	2.i	Automate Zone Valve (Slowdown Ct)	\$50,000	\$0	14	0	\$7,000	\$0
PC	Admin	14	2.j	Radio Read Meter Retrofit	\$500,000	\$500,000	25	5	\$125,000	\$25,000
				SubTotal	\$935,000	\$795,000				
3. BUILDINGS, YARD, & S.T.P. IMPROVEMENTS										
			3.a.1	Electronic Document Management System DEFER	\$150,000	\$0				
			3.a.2	Office/Yard Building Refurbish DEFER	\$1,500,000	\$0				
C	Maint	15	3.a.3	Office HVAC	\$0	\$30,000	100	100	\$0	\$30,000
			3.a.4	Office Emergency Generator-DEFER	\$150,000	\$0				
	Eng	16	3.b.1	Dam Concrete Repair	\$50,000	\$50,000	50	0	\$25,000	\$0
	Ops	17	3.b.2	Watershed Erosion Control	\$25,000	\$25,000	39	0	\$9,750	\$0
			3.b.3	STP Emergency Power Generator DEFER	\$150,000	\$0				
				SubTotal	\$2,025,000	\$105,000				
4. STORAGE TANKS & PUMP STATIONS										
	Ops	18	4.a	Hydropneumatic Tank Repairs	\$60,000	\$60,000	0	0	\$0	\$0
PC	Maint	19	4.b	Lynwood PS Motor Control Center	\$120,000	\$25,000	50	5	\$60,000	\$1,250
PC	Eng	20	4.c	Sunset Tank Cl2 Mixing System	\$90,000	\$90,000	50	20	\$45,000	\$18,000
			4.d	Crest PS (design/const)/Reloc School Rd PS DEFER	\$70,000	\$0				
				SubTotal	\$340,000	\$175,000				
				Novato Water Total	9,040,000	\$5,483,000	44	30	\$4,833,050	\$3,726,120
5. RECYCLED WATER FACILITY										
PC	Eng	21	5.a	NBWRG Grant Program Administration	\$80,000	\$75,000	50	50	\$40,000	\$37,500
PC	Eng	22	5.b-e	Recycled Water Central Service Area	\$3,500,000	\$700,000	50	50	\$1,750,000	\$350,000
			5.f	Other Recycled Water Expenditures	\$100,000	\$100,000				
				Novato Recycled Total	\$3,680,000	\$875,000	50	50	\$1,790,000	\$387,500
				Total Novato	\$12,720,000	\$6,358,000	47	40	\$6,623,050	\$4,113,620
¹ C - Completed PC - Partially completed PROJECT FORECAST REVISED Baseline projects with revised forecast budget increases (indicated by shaded box) Baselined projects to be deferred (indicated in strikeout) New projects added (indicated in bold) Prior year projects carried over indicated in italics and brackets <>										

ATTACHMENT A

**WEST MARIN CAPITAL IMPROVEMENT PROJECT SUMMARY FY15-16
AS OF DECEMBER 31, 2015**

STATUS	DEPT	ITEM #	PROJECT NO.	DESCRIPTION	PROJECT COSTS		% COMPLETE		EARNED VALUE	
					Budget	Forecast	Baseline	Actual	Planned	Actual
6. West Marin Water System System Improvements										
PC	Eng	23	6.a	Upsize 4" Pipe from Bear Valley Tanks	\$100,000	\$110,000	99	99	\$99,000	\$108,900
	Maint	24	6.b	Tanks #2 & #3 Seismic Piping Upgrade	\$30,000	\$30,000	0	0	\$0	\$0
	Ops	25	6.c	Replace PRE Tank #4A	\$50,000	\$25,000	40	0	\$20,000	\$0
			6.d	PB in Sync w/County Paving	\$50,000	\$0				
	Ops	26	6.e	Green Sand Filter Media Replace	\$75,000	\$75,000	36	0	\$27,000	\$0
PC	Eng	27	6.f	<Replace Pump in Well #2>	\$0	\$44,000 60,000	65	80	\$0	\$35,200
					\$305,000	\$284,000 300K				
7. Oceana Marin Sewer System										
	Ops	28	7.a	Infiltration Study & Repair	\$40,000	\$10,000	39	0	\$15,600	\$0
	Maint	29	7.b	Force Main Repairs	\$0	\$30,000	0	0	\$0	\$0
				SubTotal	\$40,000	\$40,000				
				Total West Marin	\$345,000	\$324,000 340K	40	26	\$161,600	\$144,100
				FY15-16 TOTAL	\$13,065,000	\$6,682,000	45	35	\$6,784,650	\$4,257,720
1C - Completed										
PC - Partially completed										
PROJECT FORECAST REVISED										
Baseline projects with revised forecast budget increases (indicated by shaded box)										
Baselined projects to be deferred (indicated in strikeout)										
New projects added (indicated in bold)										
Prior year projects carried over indicated in italics										

FY15_16 CAPITAL IMPROVEMENT PROJECTS

ID	Task Name	Start	Finish	% Complete	Resp	Qtr 1, 2016			Qtr 2, 2016			Qtr 3, 2016			Qtr 4, 2016		
						Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	1 A PIPELINE REPLACEMENTS/ADDITIONS	Wed 7/1/15	Thu 6/30/16	99%													
2	1A1 So. Novato Blvd - Rowland to Sunset (12"CI@1,000')	Wed 7/1/15	Thu 12/31/15	99%	ENG / CC												
3	1B MAIN/PIPELINE ADDITIONS	Wed 7/1/15	Thu 6/30/16	18%													
4	1B1 Zone A Pressure Improvements	Wed 7/1/15	Thu 6/30/16	35%	ENG / DJ												
5	1B2 San Mateo 24" Inlet/Outlet DEFER	Wed 7/1/15	Thu 6/30/16	0%	ENG / DJ												
6	1E AQUEDUCT REPLACEMENTS/ENHANCEMENTS	Wed 7/1/15	Thu 6/30/16	82%													
7	1E1 Aqueduct Energy Efficiency Project	Wed 7/1/15	Thu 6/30/16	82%	ENG / DM												
8	2 SYSTEM IMPROVEMENTS	Wed 7/1/15	Thu 6/30/16	18%													
9	2A RTU Upgrades	Mon 2/1/16	Thu 6/30/16	10%	MAINT/RC												
10	2B Flushing Taps at Dead-Ends	Fri 1/1/16	Thu 6/30/16	10%	ENG / CC												
11	2C DCA Repair/Replace (14/yr)	Tue 12/1/15	Thu 6/30/16	0%	ENG / DJ												
12	2D Anode Installations (150/yr)	Fri 1/1/16	Thu 6/30/16	40%	ENG / CC												
13	2E Radio Telemetry	Wed 7/1/15	Thu 6/30/16	0%	MAINT/RC												
14	2F Inaccurate Meter Replacement	Tue 12/1/15	Thu 6/30/16	0%	ENG / DJ												
15	2G Backflow Device Upgrade - BMK (14)	Mon 2/1/16	Thu 6/30/16	0%	MAINT/RC												
16	2H Tank Access Hatch/Level Alarms	Wed 7/1/15	Thu 6/30/16	100%	MAINT/RC												
17	2I Automate Zone Valve (Slowdown Ct)	Tue 12/1/15	Thu 6/30/16	0%	ENG / DJ												
18	2J Radio Read Meter Retrofit (Pilot Study/Install)	Sun 11/1/15	Thu 6/30/16	5%	ADMIN / DB												
19	2J Local Water Supply Enhancement Study DEFER	Wed 7/1/15	Thu 6/30/16	0%	ENG / DM												
20	3 BUILDING, YARD, STP IMPROVEMENTS	Wed 7/1/15	Thu 6/30/16	6%													
21	3A ADMIN BUILDING	Wed 7/1/15	Thu 6/30/16	0%													
22	3A1 Electronic Document Management System DEFER	Wed 7/1/15	Thu 6/30/16	0%	ADMIN												
23	3A2 Office Emergency Generator DEFER	Wed 7/1/15	Thu 6/30/16	0%	MAINT/RC												



Current Inactive Milestone Manual Summary Rollup Progress

Baseline Inactive Summary Manual Summary

Inactive Task Manual Task Start-only

Inactive Task Duration-only Finish-only

ATTACHMENT B

FY15_16 CAPITAL IMPROVEMENT PROJECTS

ID	Task Name	Start	Finish	% Complete	Resp	Qtr 1, 2016			Qtr 2, 2016			Qtr 3, 2016			Qtr 4, 2016		
						Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
24	3A3 Office/Yard Building Refurbish DEFER	Wed 7/1/15	Thu 6/30/16	0%	ADMIN / CD												
25	3B STAFFORD TREATMENT PLANT	Wed 7/1/15	Thu 6/30/16	12%													
26	3B1 Dam Concrete Spillway Repair	Wed 7/1/15	Thu 6/30/16	0%	ENG / DM												
27	3B2 STP Emergency Power Generator DEFER	Wed 7/1/15	Thu 6/30/16	0%	OPS / RC												
28	3B3 Watershed Erosion Control	Mon 11/2/15	Fri 4/1/16	0%	OPS / RC												
29	3C Stafford Dam Emergency Action Plan	Wed 7/1/15	Thu 6/30/16	100%	ENG / DM												
30	4 STORAGE TANKS/PUMP STATIONS	Wed 7/1/15	Thu 6/30/16	8%													
31	4A Hydropneumatic Tank Inspections	Mon 2/1/16	Thu 6/30/16	0%	ENG / DJ												
32	4B Lynwood Pump Station Motor Control Center	Fri 4/15/16	Thu 6/30/16	5%	MAINT/RC												
33	4C Sunset Tank C2 Mixing System	Wed 7/1/15	Thu 6/30/16	20%	ENG / DJ												
34	4D Crest PS (Design/Const)/Reloc School Rd PS DEFER	Wed 7/1/15	Thu 6/30/16	0%	ENG / DJ												
35	5 RECYCLED WATER	Wed 7/1/15	Thu 6/30/16	50%													
36	5A NBWRA Grant Program Admin	Wed 7/1/15	Thu 6/30/16	50%	ENG / DM												
37	5B Expansion to Central Area	Wed 7/1/15	Thu 6/30/16	50%	ENG / DM												
38	6 WEST MARIN WATER SYSTEM IMPROVEMENTS	Wed 7/1/15	Thu 6/30/16	15%													
39	6A Upsize 4" Pipe fom Bear Valley Tanks	Wed 7/1/15	Thu 12/31/15	99%	ENG / CC												
40	6B Tanks #2 & #3 Seismic Piping Upgrade	Fri 1/1/16	Thu 6/30/16	0%	ENG / JK												
41	6C Replace PRE Tank #4A	Tue 9/1/15	Thu 6/30/16	0%	ENG / CC												
42	6D PB Replace in Sync w/County Paving	Wed 7/1/15	Thu 6/30/16	0%	ENG / JK												
43	6E Green Sand Filter Media Replace	Fri 1/1/16	Thu 6/30/16	0%	OPS / RC												
44	7 OCEANA MARIN SEWER SYSTEM	Wed 7/1/15	Thu 6/30/16	0%													
45	7A Infiltration Study & Repair	Mon 2/1/16	Fri 4/1/16	0%	OPS / RC												



Current		Inactive Milestone		Manual Summary Rollup		Progress	
Baseline		Inactive Summary		Manual Summary			
Inactive Task		Manual Task		Start-only			
Inactive Task		Duration-only		Finish-only			

10

MEMORANDUM

To: Board of Directors

January 29, 2016

From: Chris DeGabriele, General Manager 

Subj: SWRCB Extended Emergency Urban Water Conservation Regulations

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RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None at this time

Attached is a letter from the Sonoma Marin Saving Water Partnership commenting on the latest proposed revision to the State Water Resources Control Board Emergency Urban Water Conservation Regulation, extending the term through October 2016. Changes included in the proposed regulation as outlined in the attached SWRCB Fact Sheet (Attachment 2) are:

1. A climate adjustment, which will reduce a water suppliers conservation standard by up to 4% for those suppliers located in warmer regions of the state;
2. A growth adjustment to reflect increased population, which may have occurred since 2013; and
3. A credit for new local drought resistant supply, which may have come online since 2013.

None of these proposed changes would impact North Marin Water District or any of the SMSWP. The SMSWP asks that the State Board again consider a regional compliance option and allow a 4% conservation standard when our region has available water storage at or above 90% of reservoir capacity on April 1st.

The State Board hearing will be on February 2nd. Representatives from the City of Santa Rosa plan to attend and comment.



commentletters@waterboards.ca.gov

January 28, 2016

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
PO BOX 100
Sacramento, CA 95812-10100

Re: 2/2/16 BOARD MEETING (Conservation Extended Emergency Regulation)

Dear Chair Marcus and Members of the State Board:

Thank you for the opportunity to provide input on the proposed extended Emergency Urban Water Conservation Regulation (Regulation). I am writing on behalf of the Sonoma Marin Saving Water Partnership (SMSWP), which consists of the following: the cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, and Petaluma; the Town of Windsor; the North Marin, Marin Municipal and Valley of the Moon Water District's; the Sonoma County Water Agency; and Cal American Water – Larkfield District. The SMSWP provides the following comments on the proposed Regulation:

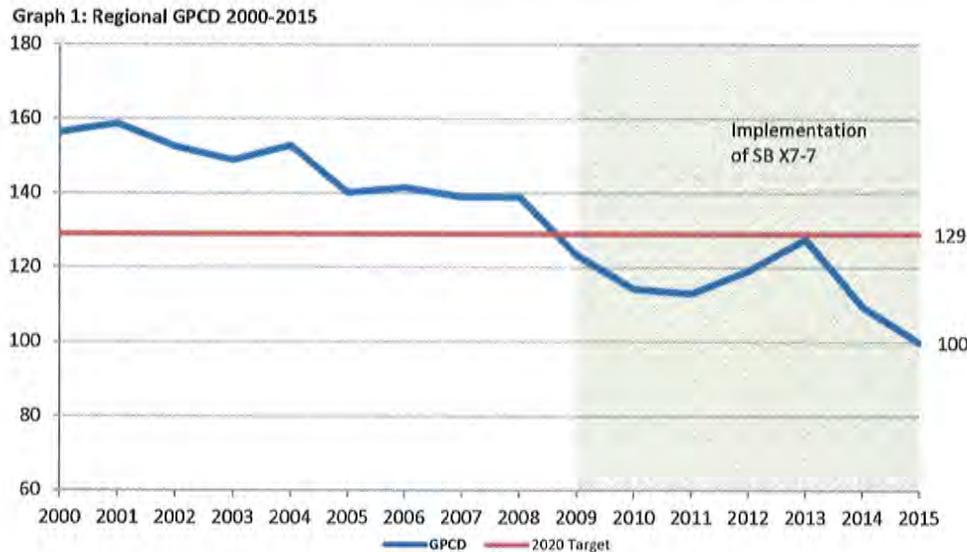
1. The SMSWP again requests that a regional compliance option be authorized in the Regulation. Details about the regional compliance option were presented to the State Board at your workshop on December 7, 2015 and we continue to believe that this option has merit and should be included in the Regulation.
2. The SMSWP requests the State Board include a 4% conservation standard pursuant to Regulation Section 865(c)(2) for agencies in regions that have water storage at or above 90% of reservoir capacity on April 1, 2016. The conservation standard for agencies in regions could be proportionately higher if water storage levels on April 1st are below 90%.

Regional Compliance

Established in 2010, the SMSWP maintains a regional commitment to work collaboratively on the implementation of appropriate water use efficiency, education and outreach programs in Sonoma and Marin counties. A regional alliance of SMSWP members was formed to comply with SBx7-7, the Water Conservation Act of 2009. SBx7-7 calls for a 20% reduction in water use by the year 2020. The regional alliance was developed pursuant to the Department of Water Resources methodology for calculating baseline and compliance urban per capita water use, for agencies that receive water from a common wholesale water supplier, in this case the Sonoma County Water

Agency (SCWA), also a SMSWP signatory.

The graph below demonstrates the long term progress that our region and the SMSWP have made towards incorporating water use efficiency in Sonoma and Marin counties.



Since the year 2000, the SMSWP has reduced per capita water use in the region by over 36%, while experiencing a 10% increase in population. To date, water production savings since June 2015 in accordance with the current Regulation among the SMSWP partners has exceeded the cumulative Conservation Standard on a regional basis by 5% (see table attached). We understand that compliance with the extended Regulation will continue to be measured from June 2015 and appreciate that the savings noted above which exceeds the Conservation Standard for individual agencies will be rolled over and credited during the extension period.

Water Supply Storage Conservation Standard

Water supply for the SMSWP region is derived from surface water reservoirs. Current water supply in local reservoirs as of January 26, 2016 is nearing capacity: Lake Mendocino (97%), Lake Sonoma (93%), Marin Municipal Water District reservoirs (97%) and Stafford Lake (75%). The SMSWP is pleased to know that State Water Board staff is committed to monitoring and evaluating available data on reservoir storage levels, intends to report back to the State Water Board in March and April 2016, and if conditions warrant, promptly bring a proposal to adjust or eliminate the Regulation. The SMSWP requests that the Regulation include a trigger enabling the Conservation Standard to be reduced to a 4% Conservation Standard when water supply, as determined by reported water storage levels, are sufficient to meet the region's needs. Since the SMSWP region is not hydraulically connected to any other area of the state, adherence to the Conservation Standard now proposed in the extended Regulation will reduce water sales revenue further, requiring

significant rate increases and add to the conundrum expressed by our retail water customers who have achieved significant water savings to date, yet will be faced with increased water costs to backstop the revenue loss; all while sufficient water storage is available.

Furthermore, the SMSWP and member agencies have expended significant resources to educate retail water customers to help them better understand the complexities of managing the region's water supplies. The results achieved from this effort are customers who are savvy and question the validity of a continued drought declaration when reservoirs are full in our region. Declarations of water shortage emergencies must be factual otherwise water suppliers risk losing credibility which can result in customer complacency and non-compliance.

The Sonoma Marin Saving Water Partnership respectfully requests you consider these items for inclusion in any extended Regulation.

Sincerely,

A handwritten signature in blue ink that reads "Chris DeGabriele". The signature is written in a cursive, flowing style.

Chris DeGabriele
General Manager
North Marin Water District,
Chair Technical Advisory Committee to SCWA

State Water Resources Control Board Conservation Standard Tracking for the Sonoma-Marin Saving Water Partnership

Table 1: Monthly Water Use Relative to 2013 Benchmark

Water Retailer	December 2015 (Gallons)	2013 Benchmark (Gallons)	Relative to 2013 Benchmark	Conservation Standard	December 2015 GPCD*
Cal Am	15,966,699	19,473,000	18%	25%	57
Cotati	18,305,462	20,919,634	12%	20%	81
Marin Municipal	465,693,215	615,207,494	24%	20%	80
North Marin	145,137,294	182,000,000	20%	24%	76
Petaluma	165,206,457	199,520,416	17%	16%	87
Rohnert Park	99,840,746	116,000,000	14%	16%	74
Santa Rosa	366,596,990	511,526,234	28%	16%	70
Sonoma	32,143,572	35,224,539	9%	28%	90
Valley of the Moon	46,221,964	75,151,115	38%	20%	66
Windsor	55,978,269	71,488,219	22%	16%	66
SMSWP Total	1,411,090,669	1,827,037,651	23%	19%	77

* GPCD is provided as information only

Table 2: Aggregate June 2015 to Current Month Relative to 2013 Benchmark

Water Retailer	Aggregate June 2015 to Date (Gallons)	2013 Benchmark (Gallons)	Relative to 2013 Benchmark	Conservation Standard
Cal Am	148,617,378	201,135,000	26%	25%
Cotati	158,875,992	210,239,065	24%	20%
Marin Municipal	4,629,632,355	5,895,307,276	21%	20%
North Marin	1,514,641,342	2,158,000,000	30%	24%
Petaluma	1,551,360,318	2,050,929,538	24%	16%
Rohnert Park	877,497,192	1,066,000,000	18%	16%
Santa Rosa	3,429,143,822	4,640,213,418	26%	16%
Sonoma	358,747,744	493,449,850	27%	28%
Valley of the Moon	491,867,848	693,796,341	29%	20%
Windsor	635,954,273	837,384,402	24%	16%
SMSWP Total	13,796,338,265	18,045,319,890	24%	19%



Fact Sheet

Extending the Emergency Water Conservation Regulation

Proposed Regulatory Changes to Achieve Statewide Reductions in Urban Potable Water Usage

On November 13, 2015, Governor Edmund G. Brown Jr. issued [Executive Order B-36-15](#) calling for an extension of urban water use restrictions until October 31, 2016, should drought conditions persist. Given the severity of the water deficits over the past four years many of California's reservoirs and groundwater basins remain depleted and the need for continued water conservation persists. The November executive order directs the State Water Resources Control Board (State Water Board) to consider modifying the restrictions on water use and incorporate insights gained from the existing restrictions.

The State Water Board's adoption of [Resolution No. 2015-0032](#) and its May 2015 Emergency Regulation addressed specific provisions of [Executive Order B-29-15](#), including mandating a 25 percent statewide reduction in potable urban water use between June 2015 and February 2016. To reach the statewide 25 percent reduction mandate and consistent with Executive Order B-29-15, the Emergency Regulation identified a conservation tier for each urban water supplier, between four percent and 36 percent, based on residential per capita water use for the months of July - September 2014. As directed under Resolution No. 2015-0032, State Water Board staff worked with stakeholders to develop and consider a range of factors that contribute to water use, including climate, growth and investment in drought-resilient supplies, to devise options for refining the proposed extended emergency regulation.

The proposed Emergency Regulation extends the requirements of the existing May 2015 Emergency Regulation and offers modest adjustments to help to respond to some of the reasonable concerns suppliers have raised to the State Water Board since it first considered the May 2015 Emergency Regulation.

Executive Order B-36-15 directs the State Water Board to extend restrictions to achieve a statewide reduction in urban potable water usage through October 2016, based on drought conditions known through January 2016. While the state has experienced some much-needed snow and rainfall in December and January, surface storage remains at or near historic lows, precipitation has been inconsistent, and snowpack is about average.



It is too early to tell whether or not additional rain and snowfall will put the State in the position where the existing restrictions are no longer necessary, or could be further tempered. State Water Board staff is committed to monitoring and evaluating available data on snowpack, reservoir storage levels and groundwater basin levels, and intends report back to the State Water Board in March and April 2016. If conditions warrant, State Water Board staff will promptly bring a proposal before the State Water Board to adjust or eliminate the Emergency Regulation.

Stakeholder Involvement

In the summer and fall of 2015, State Water Board staff convened a small workgroup, comprised of representatives from the water community, to receive preliminary input on issues to be considered should the emergency conservation regulation be extended due to continuing drought conditions into 2016. The State Water Board subsequently conducted a public workshop on December 7, 2015, and used the input it received from that workshop, the workgroup, and other available stakeholder input and insights gained since the May 2015 Emergency Regulation was adopted, to release a proposed regulatory framework for extending and adjusting the Emergency Regulation on December 21, 2015. The State Water Board solicited and received further public input on that framework; stakeholders - including water suppliers, local government, businesses, individuals, and non-governmental organizations - submitted more than 200 comments on the framework. The text of the proposed Emergency Regulation released on January 15, 2016, is part of a Notice of Proposed Emergency Regulation that will be released on January 22, 2016, which initiates the formal emergency rulemaking process. Formal public comments are due by January 28 and may be submitted as explained below. If approved, the State Water Board expects suppliers and their customers will save more than one million acre-feet of water, or about as much water as is currently in Lake Oroville, in response to the regulation. This savings will be in addition to the 1.2 million acre-feet the State is on track to have saved from June 2015 through February 2016.

What's Next

Release of the Notice of Proposed Emergency Rulemaking begins a formal comment period that will conclude just prior to the State Water Board's consideration of adoption of the proposed Emergency Regulation at its February 2, 2016, public meeting. During this formal notice period, **all comments must be received by 12 p.m. on Thursday, January, 28, 2016, and will not be accepted after that time.** Submittals are to be sent via e-mail to the Clerk to the State Water Board at commentletters@waterboards.ca.gov. Please indicate in the subject line, "2/2/16 BOARD MEETING (Conservation Extended Emergency Regulation)." All received comments will be immediately provided to the Board Members and posted on the State Water Board's [webpage](#).

Proposed Emergency Regulation - Key Provisions

The proposed Emergency Regulation will essentially extend the existing May 2015 Emergency Regulation and maintain many of the same requirements that apply now.

Proposed changes to the May 2015 Emergency Regulation include, but are not limited to:

- Credits and adjustments to urban water suppliers' conservation standards that consider the differences in climate affecting different parts of the state; growth experienced by urban areas; and significant investments that have been made by some suppliers toward creating new, local, drought-resilient sources of potable water supply;
- Penalties for homeowners' associations or community service organizations impeding homeowners from reducing or eliminating the watering of vegetation or lawns during a declared drought emergency, as described in existing Civil Code provisions;
- Further defining what agricultural uses may be subtracted from a supplier's potable water production total; and
- Updates to compliance and reporting timelines.

Conservation Standard for Urban Water Suppliers

As drought conditions persist, all water suppliers will need to continue to meet their individual conservation standards. Since June 2015, cumulative statewide conservation has eclipsed the 25 percent target. Everyone must continue to conserve, and the greatest opportunities to meet the conservation standards are in the warmer months when outdoor landscape irrigation typically increases. Often, but not always, water suppliers with higher per capita users are located in areas where the majority of water use is directed to outdoor irrigation due to lot size, climate and other factors; thus outdoor irrigation will continue to present the greatest opportunity for the highest reductions. The proposed Emergency Regulation maintains the current tiers of required water reductions, though with additional adjustments in response to stakeholders' concerns.

Overview of Conservation Tiers

The conservation standards for all urban water suppliers continue to be allocated across nine tiers of increasing levels of residential gallons per capita per day (R-GPCD) water use. This approach considers the relative per capita water usage of each water suppliers' service area and requires that those areas with high per capita use achieve proportionally greater reductions than those with low use, while lessening the disparities in reduction requirements between agencies that have similar levels of water consumption but fall on different sides of dividing lines between tiers. Suppliers have been assigned a conservation standard that ranges between eight percent and 36 percent based on their R-GPCD for the months of July - September, 2014. These three months reflect the amount of water used for summer outdoor irrigation, which provides the greatest opportunity for conservation savings. The proposed Emergency Regulation continues the reserved

four percent conservation tier for those suppliers meeting specific criteria relating to not experiencing drought conditions.

The larger urban water suppliers (serving more than 3,000 customers or delivering more than 3,000 acre feet of water per year), which account for more than 90 percent of urban water use, have previously been assigned a conservation standard, as shown in the following table:

Tier	R-GPCD Range		# of Suppliers in Range	Conservation Standard
	From	To		
1	reserved		4	4%
2	0	64.9	27	8%
3	65	79.9	22	12%
4	80	94.9	42	16%
5	95	109.9	61	20%
6	110	129.9	45	24%
7	130	169.9	81	28%
8	170	214.9	62	32%
9	215	612.0	67	36%

Adjustments to the Conservation Standards

The proposed Emergency Regulation allows urban water suppliers to update their conservation standards under certain situations, as explained below.

1. Climate Adjustment

The proposed Emergency Regulation allows a climate adjustment that, where applicable, will reduce a water supplier's conservation standard by up to four percentage points for those water suppliers located in the warmer regions of the State. The climate adjustment will be based on each urban water supplier's average service area evapotranspiration (ET_o) for the months of July through September, as compared to the statewide average for the same months. Statewide average ET_o will be calculated as the arithmetic mean of all urban water suppliers' service area ET_o for those months. The adjustment will range from a two to four percentage point decrease in an urban water supplier's conservation standard as follows:

Deviation of Urban Water Supplier Service Area's ET _o from the Statewide Average ET _o	Reduction in Conservation Standard
>20%	4%
10 to 20%	3%
5 to <10%	2%

Default service area average ETos are based on the California Irrigation Management Information System (CIMIS) [Mapped ETo Zone](#) for which the supplier's service area has the greatest overlap. In lieu of using the default service area ETo, each urban water supplier will have the opportunity to refine its service area ETo by using data from CIMIS stations within its service area, provided that each station used has a continuous period of record of at least five years. To qualify for the in-lieu climate adjustment, the supplier will be required to submit the following data for each CIMIS station used to the State Water Board by March 15, 2016: CIMIS station ID, CIMIS station location, and monthly ETo in inches per month for July, August and September, for the five-year continuous period of record. The table below provides an example of the climate adjustment calculation, using the default service area average ETo.

Example Calculation of Climate Adjustment	
Original Conservation Standard	32%
Statewide Average ETo July-September	6.33 inches
Service Area Average ETo July-September (Zone 17)	8.4 inches
Service Area % Deviation from Average ETo = $(8.4-6.33)/6.33$	0.33 or 33%
Climate Adjustment	-4%
Adjusted Conservation Standard	28%

2. Growth Adjustment

The proposed Emergency Regulation provides a mechanism to adjust urban water supplier conservation standards to account for water efficient growth since 2013. The adjustment is calculated as the product of the supplier's conservation standard and the supplier's reasonable percentage change in total potable water production since 2013, using a specific formula to calculate the percentage change, rounded to the nearest whole percentage point. To qualify for the growth adjustment a supplier will have to provide, at a minimum, the following data to the State Water Board by March 15, 2016: the number of new permanent residents added since January 1, 2013; the area of new residential landscaping, in square feet, served since January 1, 2013; the number of new commercial, industrial and institutional (CII) connections added since January 1, 2013; and the average volume of water served to each CII account from February 1, 2015 to October 31, 2015.

The volume of water added due to growth is calculated as the sum of:

1. Number of new permanent residents added since 2013 multiplied by 55 (the currently-identified per-person reasonable indoor water use standard) multiplied by 270 days; (the duration of the regulation);
2. Area of new residential landscaped area (square feet) served by new residents since 2013 multiplied by 55 percent of total service area Eto (inches) for the months of February through October multiplied by a conversion factor of 0.623 (converting inches to gallons); and

3. Number of new CII connections added since 2013 multiplied by the average CII water use per connection during February through October 2015.

The table below provides an example of the growth adjustment calculation.

Example Calculation of Growth Adjustment	
Step 1: Gather information needed for calculation	
a. Number of new permanent residents added since January 1, 2013	1,300
b. Residential landscaped area served by new residents since January 1, 2013	10,000,000 sq. feet
c. Total ETo February 2015 through October 2015	44 inches
d. Number of new CII connections added since January 1, 2013	700
e. Average use per CII connection February-October 2015	900,000 gallons
Step 2: Calculate volume of water attributable to new permanent residents	
= [1,300 * 55 * 270] + [10,000,000 * 44 * 0.55 * 0.623]	170,071,000 gallons
Step 3: Calculate volume of water from new CII connections	
= 700 * 900,000	630,000,000 gallons
Step 4: Calculate total volume of water attributable to growth since 2013	
Add together results from steps 2 + 3: = 170,071,000 + 630,000,000	800,071,000 gallons
Step 5: Percentage of water attributable to growth since 2013	
Baseline 2013 total water production February-October	16,000,000,000 gallons
Gallons of water attributable to growth	800,071,000 gallons
Percentage change in potable water production due to growth	5%
Step 6: Adjust conservation standard	
Original Conservation Standard	36%
Adjusted Conservation Standard = 0.36 * [1 - 0.05]	34%

3. New Local Drought-Resilient Supply Credit

Under the proposed Emergency Regulation, any urban water supplier that obtains at least four percent of its total potable water production from a qualifying new local, drought-resilient water supply will be eligible for a four to eight percent reduction to its conservation standard. This credit will be equal to the urban water supplier's actual percentage of total potable water production that comes from a qualifying new local, drought-resilient water supply up to a maximum of eight percent.

The State Water Board continues to encourage every effort by suppliers to ensure a safe and reliable water supply for their customers, especially through improving security of local water supply sources. However, under the proposed Emergency Regulation, the credit will apply only to urban water suppliers that certify the percentage of their total potable water production comes from a local, drought-resilient source of supply developed after 2013, and that the use of that supply does

not reduce the water available to another legal user of water or the environment (e.g., indirect potable reuse of wastewater in coastal regions where the water would not have otherwise been discharged into a water body that others use as a source of supply). To qualify for the drought-resilient source credit a supplier will have to submit its certification to the State Water Board by March 15, 2016. The table below provides an example of the local drought-resilient supply credit calculation.

Example Local Drought-Resilient Supply Credit	
Original Conservation Standard	32%
Baseline 2013 total water production February-October	16,000,000,000 gallons
Total potable water production comes from a drought resilient-source of supply (developed after January 1, 2013)	1,120,000,000 gallons
Percent of total potable water production from a drought-resilient source of supply	7%
Adjusted Conservation Standard	25%

The maximum reduction in a water supplier’s conservation standard through combined climate, growth and new resilient drought supplies adjustments described above is proposed to be capped at an eight percentage point reduction from any one supplier’s otherwise applicable conservation standard, with no suppliers dropping below an eight percent conservation standard.

Total monthly water production and specific reporting on residential use and enforcement as laid out in the May 2015 Emergency Regulation will remain in effect.

Commercial Agriculture Exclusion

Under the May 2015 Emergency Regulation, urban water suppliers are allowed to subtract water delivered for commercial agriculture from total potable water production if the supplier meets certain conditions and submits the agricultural water use certification to the State Water Board. The proposed Emergency Regulation extends and modifies the eligibility requirements for the commercial agricultural exclusion. Suppliers will be allowed to subtract the water delivered for commercial agriculture from total potable water production only for those users that produced at least \$1,000 of revenue in the previous year, or who would have but for circumstances beyond their control.

Self-Supplied Commercial, Industrial and Institutional (CII) Users

The proposed Emergency Regulation continues to require self-supplied CII users to either reduce their usage by 25 percent or restrict outdoor irrigation to no more than two days per week. CII facilities with an independent source of supply (i.e., not served by a water supplier) are still not required to submit a report. However, these facilities should be prepared to demonstrate their compliance with the two day per week watering restriction, or the 25 percent reduction in water use if requested to do so by the State Water Board.

Conservation Standard for All Other Water Suppliers

The proposed Emergency Regulation continues to require small water suppliers (serving 3,000 or fewer customers) to either achieve a 25 percent conservation standard, or restrict outdoor irrigation to no more than two days per week through October 2016. These suppliers will again be required to submit a small water supplier report that either (a) identifies total potable water production, by month, from December 2015 through August 2016, or (b) confirms compliance with the maximum two day per week outdoor irrigation restriction. The small water supplier report will be due to the State Water Board by September 15, 2016.

End-User Requirements

The proposed Emergency Regulation maintains the current prohibitions on water use. These include:

- Irrigation with potable water of ornamental turf on public street medians is prohibited; and
- Irrigation with potable water outside of newly-constructed homes and buildings not in accordance with emergency regulations or other requirements established in the California Building Standards Code is prohibited.
- Using potable water to wash sidewalks and driveways;
- Allowing runoff when irrigating with potable water;
- Using hoses with no shutoff nozzles to wash cars;
- Using potable water in decorative water features that do not recirculate the water;
- Irrigating outdoors during and within 48 hours following measureable rainfall; and
- Restaurants from serving water to their customers unless the customer requests it.

Additionally, hotels and motels must offer their guests the option to not have their linens and towels laundered daily, and prominently display this option in each guest room.

It continues to be very important that while these provisions are in effect existing trees remain healthy and do not present a public safety hazard. Trees and other non-turf vegetation within street medians may continue to be watered. Information on how to maintain trees while reducing outdoor water use is available at: www.saveourwater.com/trees.

Compliance Assessment

The State Water Board will continue to assess compliance on a cumulative basis, using suppliers' monthly reported data. Each month, State Water Board staff will reassess compliance based on the supplier's cumulative savings since June 2015. Cumulative tracking means that conservation savings will be added together from one month to the next and compared to the amount of water used during the same months in 2013.

The State Water Board will continue to use informational orders to request information from suppliers not meeting their conservation standards and, as appropriate, conservation orders that direct specific actions to correct non-compliance. Both tools are tailored to the

emergency circumstances that the State finds itself in as a result of continuing drought conditions. Violation of an informational order or conservation order carries a penalty of up to \$500 per day.

The State Water Board will continue to work with water suppliers along the way that are not meeting their targets to implement actions to get them back on track. These actions could include changes to rates and pricing, restrictions on outdoor irrigation, public outreach, rebates and audit programs, leak detection and repair and other measures. The State Water Board may use its enforcement tools to ensure that water suppliers are on track to meet their conservation standards at any point during the 270 days that the emergency regulation is in effect.

The alternative compliance process the State Water Board identified in Resolution No. 2015-0032 is not proposed to be modified.

Conclusion

No one knows how the future will unfold. While the State may return to “normal,” or even to above average hydrologic water conditions in 2016 or 2017, such an outcome is far from certain, nor is it certain that one year of average or above-average water conditions will relieve the State from these historic drought conditions. Continued water conservation is imperative. Moving forward, the State Water Board is committed to working with water suppliers on implementing the Emergency Regulation, assessing water conditions throughout the spring, and adapting requirements as appropriate based on water supply conditions in April.

The State is meeting the Governor’s 25 percent cumulative statewide conservation goal because Californians have risen to the occasion. As the State Water Board acts on the Governor’s Executive Order B-36-15, it will consider the lessons learned from the implementation of the current executive order and make adjustments to the Emergency Regulation as needed. The State Water Board will also begin to work with other agencies and stakeholders to develop longer term measures to ensure water continues to be used efficiently.

(This fact sheet was last updated on January 15, 2016)

11



**WATER ADVISORY COMMITTEE
AND
TECHNICAL ADVISORY COMMITTEE**

MONDAY, FEBRUARY 1, 2016

9:00AM

Utilities Field Operations Training Center
35 Stony Point Road, Santa Rosa, CA

This is a combined *WAC* and *TAC* meeting.

1. Check In
2. Public Comment
3. Election of WAC Chair and Vice Chair
4. 2016 WAC/TAC Meeting Schedule
5. Recap from the November 2, 2015 WAC/TAC Meeting and Approval of Minutes
6. Recap from the January 4, 2016 TAC Meeting and Approval of Minutes
7. Water Supply Coordination Council
8. Water Supply Conditions and Temporary Urgency Change Order
9. Sonoma Marin Saving Water Partnership
 - a. SMSWP Annual Report (available at meeting) and 2015 GPCD Memo
 - b. Water Production Relative to 2013 Benchmark
 - c. Extended SWRCB Emergency Urban Water Conservation Regulations
10. Safe Medicine Disposal Ordinance for Sonoma County – Support Letter
11. FY 2016/17 Draft SCWA Budget
12. Biological Opinion Status Update (Reminder: PPFC Meeting March 3, 2016 @ Westside Water Education Facility)
13. Integrated Regional Water Management Plan(s) Update
14. Items for Next Agenda
15. Check Out

Draft Minutes of Water Advisory Committee and Technical Advisory Committee
35 Stony Point Road, Santa Rosa, California
November 2, 2015

Attendees: Tom Schwedhelm, City of Santa Rosa
David Guhin, City of Santa Rosa
Jennifer Burke, City of Santa Rosa
Colin Close, City of Santa Rosa
Elise Howard, City of Santa Rosa
Linda Hall, City of Santa Rosa
Toni Bertolero, Town of Windsor
Mark Millan, Town of Windsor
Jim Smith, Town of Windsor
Susan Harvey, City of Cotati
Mark Landman, City of Cotati
Damien O'Bid, City of Cotati
Mark Heneveld, Valley of the Moon Water District
Dan Muelrath, Valley of the Moon Water District
Laurie Gallian, City of Sonoma
Dan Takasugi, City of Sonoma
Joseph Callinan, City of Rohnert Park
Jake Mackenzie, City of Rohnert Park
Mary Grace Pawson, City of Rohnert Park
Mike Healy, City of Petaluma
Dan St. John, City of Petaluma
Leah Walker, City of Petaluma
Dennis Rodoni, North Marin Water District
Jack Baker, North Marin Water District
Chris DeGabriele, North Marin Water District
Krishna Kumar, Marin Municipal Water District
Jack Gibson, Marin Municipal Water District
Carl Gowan, Marin Municipal Water District
James Gore, Board of Supervisors
Grant Davis, SCWA
Pam Jeane, SCWA
Mike Thompson, SCWA
Jay Jasperse, SCWA
Lynne Roselli, SCWA
Brad Sherwood, SCWA
Carrie Pollard, SCWA

Public Attendees: Brenda Adelman, RRWPC
Dietrich Stroeh, Stuber-Stroeh Engineering Group
David Keller, FOER
Deborah Tavares
Jim Downey
Margaret DiGenova, California American Water
Andy Rogers, Russian River Watershed Association

1. Check-in
Dennis Rodoni, WAC Chair, called the meeting to order at 9:05a.m.
2. Public Comment
None

3. Recap from the August 3, 2015 WAC/TAC Meeting and Approval of Minutes
Moved by Laurie Gallian, City of Sonoma, seconded by Mark Heneveld, Valley of the Moon, to approve the minutes of the August 3, 2015 WAC/TAC meeting; unanimously approved.
4. Recap from the October 5, 2015 TAC Meeting and Approval of Minutes
Moved by Damien O'Bid, City of Cotati, seconded by Dan Muelrath, Valley of the Moon, to approve the minutes of the October 5, 2015 TAC meeting; unanimously approved.
5. Water Supply Coordination Council
There were no comments.
6. Water Supply Conditions and Temporary Urgency Change Order
Grant Davis, SCWA, reported that Lake Mendocino is at 56% of capacity and Lake Sonoma is at 70% of capacity.
Pam Jeane, SCWA, reported the temporary urgency change order expired on October 27. Stream flows are being maintained pursuant to D1610. PG&E has requested variance from East Fork Russian River flows to perform penstock maintenance and may request another variance based on Lake Pillsbury storage. SCWA may petition for another temporary urgency change based on Lake Mendocino storage.
7. SMSWP – Water Production Relative to 2013 Benchmark
 - a. Water Production Relative to 2013 Benchmark
Chris DeGabriele reviewed the report sent to the members.
 - b. 2015 EPA WaterSense Certifying Organization Partner of the Year Award
The Professional Certifying Organization Partner of the Year Award was awarded to the Sonoma-Marin Saving Partnership. Carrie Pollard, SCWA, gave details of the award presentation.
 - c. Regional Compliance with SWRCB Emergency Water Conservation Regulations
Jennifer Burke, City of Santa Rosa, reviewed the conservation standard required by SWRCB. A regional compliance proposal has been submitted to SWRCB. The regional proposal must total the standard for conservation that is required for individual water agencies. Each agency would still individually report, but the proposal would allow for agencies within regions to combine to meet the emergency regulations. Questions followed from the committee and the public.
8. Approve 2016 WAC/TAC Meeting Schedule
The schedule was distributed and accepted.
9. Proposed Slate for 2016/2017 WAC Chair/Vice Chair
Mike Healy, City of Petaluma, has agreed to run as the new WAC chair, with Laurie Gallian, City of Sonoma as the Vice Chair. The election will be at the next WAC/TAC meeting on February 1, 2016.
10. Potential Safe Medicine Disposal Ordinance for Sonoma County
A PowerPoint presentation was made by Andy Rogers, RRWA, explaining safe medicine disposal for Sonoma County. Mark Landman, City of Cotati and RRWA chair, presented the proposal for the solution to the safe disposal of prescription medicines. Presentations are being made to City Councils for consideration to sign a letter of support for an ordinance that would detail safe disposal requirements. Questions followed the presentation.

11. Lake Mendocino Water Supply Reliability Report and Forecast Improved Reservoir Operations (FIRO) Update
Jay Jasperse, SCWA, made a PowerPoint presentation detailing the efforts to improve the reliability of the supply of water in our watershed. Lake Mendocino has been a long-term issue because of its low watershed productivity. The presentation gave in-depth options for resolutions to water reliability issues. Questions and comments followed from the committee and the public.
12. Biological Opinion Status Update
Pam Jeane, SCWA, reviewed the update that was sent to the members. Questions and comments followed her review.
13. 2015 SCWA Revenue Bond Issuance
Lynne Roselli, SCWA, reported that bond issuance was very successful and the rate on the bonds was reduced to 2.96% because the rating of SCWA was upgraded.
14. Integrated Regional Water Management Plan(s) Update
Supervisor James Gore reported on the last North Coast meeting, where spring plans were made. The ten year anniversary will be celebrated in April 2016.
\$12M will be received by the Bay Area IRWMP and funds will be distributed to multiple projects.
15. Items for next TAC Agenda on December 7
Water Supply Conditions
Biological Opinion Status Update
16. Items for next WAC Agenda on February 7
Election of Chair and Vice Chair
Water Quality
Water Supply Conditions
Biological Opinion Status Update
17. Check Out
Next TAC meeting is December 7
Next WAC/TAC meeting is February 1

Meeting was adjourned at 11:10a.m.

Draft Minutes of Technical Advisory Committee
35 Stony Point Road, Santa Rosa, California
January 4, 2016

Attendees: David Guhin, City of Santa Rosa
Jennifer Burke, City of Santa Rosa
Linda Reed, City of Santa Rosa
Rocky Vogler, City of Santa Rosa
Linda Hall, City of Santa Rosa
James Smith, Town of Windsor
Paul Piazza, Town of Windsor
Elizabeth Cargay, Town of Windsor
Mary Grace Pawson, City of Rohnert Park
Kent Carothers, City of Petaluma
Craig Scott, City of Cotati
Dan Takasugi, City of Sonoma
Dan Muelrath, Valley of the Moon Water District
Chris DeGabriele, North Marin Water District
Drew McIntyre, North Marin Water District
Mike Ban, Marin Municipal Water District
Grant Davis, SCWA
Pam Jeane, SCWA
Michael Thompson, SCWA
Jay Jasperse, SCWA
Michael Gossman, SCWA
Brad Sherwood, SCWA
Ann DuBay, SCWA
Lynne Roselli, SCWA

Public Attendees: Brenda Adelman, RRWPC
David Keller, FOER
J. Dietrich Stroeh
Dawna Gallagher Stroeh
Margaret DiGenova, California American Water
Hubert Morel-Seytoux, Hydropose International Consulting
Evan Jacobs, California American Water
Lloyd Iversen

1. Check-in
Chair Chris DeGabriele called the meeting to order at 9:05 a.m.
2. Public Comment
None
3. Recap from December 7, 2015 TAC Meeting and Approval of Minutes
Grant Davis, SCWA, moved to approve the minutes as published, seconded by Mary Grace Pawson, City of Rohnert Park; unanimously passed.
4. Water Supply Conditions and Temporary Urgency Change Petition
Grant Davis, SCWA, reported that reservoir levels and rainfall totals are now being published in the Press Democrat. Lake Mendocino is at 64% capacity and Lake Sonoma is at 70% capacity. Pam Jeane, SCWA, reported we are no longer operating under the Urgency Change Order.

Waiting to see what happens with Lake Mendocino before filing another petition that could include a minimum storage amount based on the storage curve for that reservoir. The PG&E variance from minimum flow of the East branch of the Russian River which flows into Lake Mendocino is still in place as repair on PVP tunnel continues. Questions followed from the committee.

5. Sonoma Marin Saving Water Partnership -

i. Water Use Relative to 2013 Benchmark

Chris DeGabriele, North Marin Water District, reviewed the table sent to the members via email.

ii. SWRCB Proposed Regulatory Framework for Extended Regulation for Urban Water Conservation

Jennifer Burke, City of Santa Rosa, reported that the proposed framework was released on December 21 by SWRCB. A comment is going to be submitted urging reconsideration of regional compliance being allowed. No adjustments will be allowed for recycled water use. Work continues to address the effects of El Nino. Draft regulations will come out in January. The next SWRCB meeting on this topic will be on February 2. Questions and comments followed.

6. SCWA Draft FY 2016/17 Budget

Michael Gossman, SCWA, reported that the TAC budget subcommittee is beginning work on the budget. The committee will meet on January 7 in Cotati. The budget will be considered at the Special April WAC/TAC meeting.

7. Biological Opinion Status Update

Pam Jeane, SCWA, reviewed the Biological Opinion Status Update distributed to the committee and interested parties at the meeting. Questions and comments followed from the committee and the public.

8. Items for Next Agenda

February 1 WAC/TAC Meeting

WAC/TAC Chair and Vice Chair Selection
Safe Medicine Disposal Proposal Update
Water Supply Conditions and Temporary Urgency Change Order
Sonoma Marin Saving Water Partnership
Biological Opinion Status Update

9. Check Out

Next WAC/TAC meeting is February 1, 2016
Next TAC meeting is March 7, 2016

Meeting was adjourned at 9:37a.m.

Summary
January 22, 2016
Water Supply Coordination Council Meeting

The WSCC is intended to coordinate activities of the Agency, WAC/TAC and other parties as necessary and to report on same pursuant to the Sonoma County Water Agency's September 15, 2009 Resolution #09-0871 to commence and continue development of new water supply projects, plans and strategies to meet the reasonably expected future water demands for the agency's water contractors. The WSCC makes no policy decisions. This WSCC summary is intended to disclose WSCC discussions with the WAC/TAC and other interested parties.

Attendees: Efren Carrillo, James Gore, Mike Healy, Grant Davis, Jay Jasperse, David Guhin, Chris DeGabriele

1. Review Summary of Last Meeting (October 27, 2015)

A summary of the October 27, 2015 WSCC meeting was briefly reviewed.

The parties agreed that the main topic in WSCC meetings is to set the upcoming WAC meeting agenda and heretofore WSCC meeting agendas will not be prepared and the Draft WAC meeting agenda will be used for discussion.

2. February 1st WAC/TAC Meeting

The agenda for the Water Advisory Committee and Technical Advisory Committee scheduled for February 1, 2016 was reviewed. It was noted that there may be new WAC members representing their agencies and requiring orientation. The TAC will be solicited to identify who the new members may be.

During the discussion Grant Davis reported that the USACOE Lake Mendocino operations allows a minor deviation from the storage rule curve enabling encroachment into the flood control pool up to 72,400AF through March 16th. The Water Agency has also requested a major deviation to enable storage up to 82,400AF. Current Lake Mendocino storage is ~65,000AF. The Water Agency does not contemplate a TUCP request until spring/summer and solely to comply with B.O. requirements.

3. Schedule Next Meeting

The next meeting will be scheduled prior to the May 2, 2016 WAC/TAC meeting.

4. Other

The parties discussed the PFFC meeting on March 3rd where representatives from NMFS Washington D.C. headquarters will be attending to sign the safe harbor agreement.

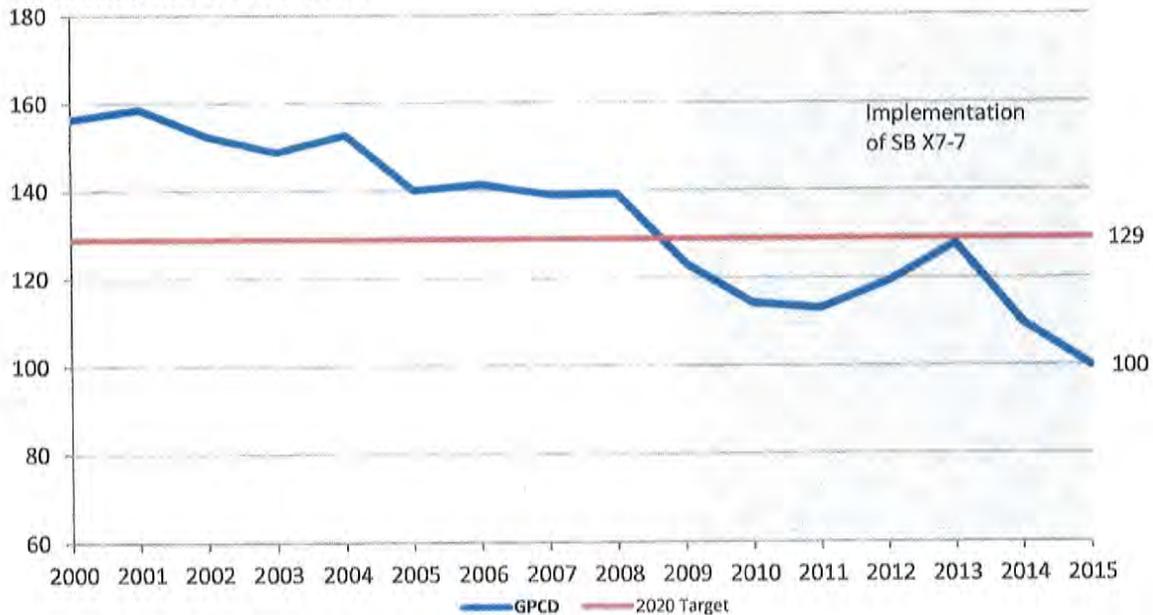
MEMORANDUM

To: Chris DeGabriele, Technical Advisory Committee Chair
From: Carrie Pollard, Principal Program Specialist, Sonoma County Water Agency
Subject: 2015 Gallon per Capita per Day (GPCD) January 26, 2016

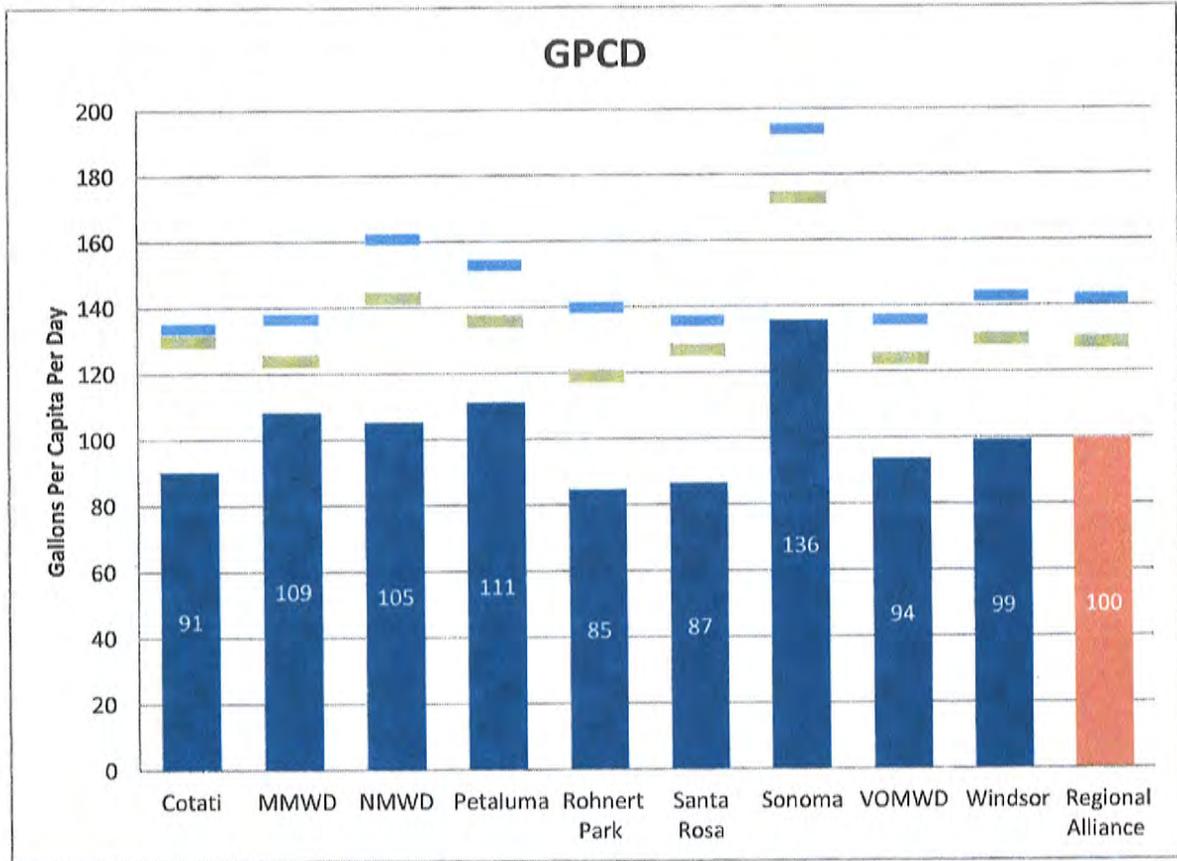
In 2010, the Sonoma-Marin Saving Water Partnership established a regional commitment to work collaboratively on the implementation of appropriate water use efficiency programs. The Department of Water Resources was then subsequently notified that a regional alliance had been formed between and among the cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, Petaluma, Town of Windsor and North Marin, Marin Municipal and Valley of the Moon Water Districts to comply with SBx7-7, the Water Conservation Act of 2009. SBx7-7 calls for a 20% reduction in water use by the year 2020. The regional alliance was formed pursuant to the Department of Water Resources Methodologies for Calculating Baseline and Compliance Urban Per Capita Water Use because the parties receive water from a common water wholesale supplier, the Sonoma County Water Agency.

Graph 1 below demonstrates the long term progress our region has made towards incorporating water use efficiency as a social norm to our customers. Since 2000 there has been a 36% reduction in per capita water use while experiencing a 10% increase in population. In addition it shows the dramatic response when a mandatory conservation call to action is made, as exhibited over the last few years.

Graph 1: Regional GPCD 2000-2015



The Partnership is the agreed upon mechanism used for tracking each water contractor's individual progress towards SBx7-7 compliance on an annual basis. This data is collected and utilized to calculate the regional status. Graph 2 below shows the reported 2015 per capita water use, the year 2015 SBx7-7 Target and the year 2020 SBx7-7 Target for each water contractor and the region as a whole. There are many factors that contribute to the range of per capita water use in our region including climate, tourism, water intensive industries and socioeconomic factors.



2015 GPCD	91	109	105	111	85	87	136	94	99	100
2015 Target	134	137	161	153	140	136	194	136	143	142
2020 Target	130	124	143	136	119	127	173	124	130	129

State Water Resources Control Board Conservation Standard Tracking for the Sonoma-Marín Saving Water Partnership

Table 1: Monthly Water Use Relative to 2013 Benchmark

Water Retailer	December 2015 (Gallons)	2013 Benchmark (Gallons)	Relative to 2013 Benchmark	Conservation Standard	December 2015 GPCD*
Cal Am	15,966,699	19,473,000	18%	25%	57
Cotati	18,305,462	20,919,634	12%	20%	81
Marin Municipal	465,693,215	615,207,494	24%	20%	80
North Marin	145,137,294	182,000,000	20%	24%	76
Petaluma	165,206,457	199,520,416	17%	16%	87
Rohnert Park	99,840,746	116,000,000	14%	16%	74
Santa Rosa	366,596,990	511,526,234	28%	16%	70
Sonoma	32,143,572	35,224,539	9%	28%	90
Valley of the Moon	46,221,964	75,151,115	38%	20%	66
Windsor	55,978,269	71,488,219	22%	16%	66
SMSWP Total	1,411,090,669	1,827,037,651	23%	19%	77

* GPCD is provided as information only

Table 2: Aggregate June 2015 to Current Month Relative to 2013 Benchmark

Water Retailer	Aggregate June 2015 to Date (Gallons)	2013 Benchmark (Gallons)	Relative to 2013 Benchmark	Conservation Standard
Cal Am	148,617,378	201,135,000	26%	25%
Cotati	158,875,992	210,239,065	24%	20%
Marin Municipal	4,629,632,355	5,895,307,276	21%	20%
North Marin	1,514,641,342	2,158,000,000	30%	24%
Petaluma	1,551,360,318	2,050,929,538	24%	16%
Rohnert Park	877,497,192	1,066,000,000	18%	16%
Santa Rosa	3,429,143,822	4,640,213,418	26%	16%
Sonoma	358,747,744	493,449,850	27%	28%
Valley of the Moon	491,867,848	693,796,341	29%	20%
Windsor	635,954,273	837,384,402	24%	16%
SMSWP Total	13,796,338,265	18,045,319,890	24%	19%



commentletters@waterboards.ca.gov

January 28, 2016

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
PO BOX 100
Sacramento, CA 95812-10100

Re: 2/2/16 BOARD MEETING (Conservation Extended Emergency Regulation)

Dear Chair Marcus and Members of the State Board:

Thank you for the opportunity to provide input on the proposed extended Emergency Urban Water Conservation Regulation (Regulation). I am writing on behalf of the Sonoma Marin Saving Water Partnership (SMSWP), which consists of the following: the cities of Santa Rosa, Rohnert Park, Sonoma, Cotati, and Petaluma; the Town of Windsor; the North Marin, Marin Municipal and Valley of the Moon Water District's; the Sonoma County Water Agency; and Cal American Water – Larkfield District. The SMSWP provides the following comments on the proposed Regulation:

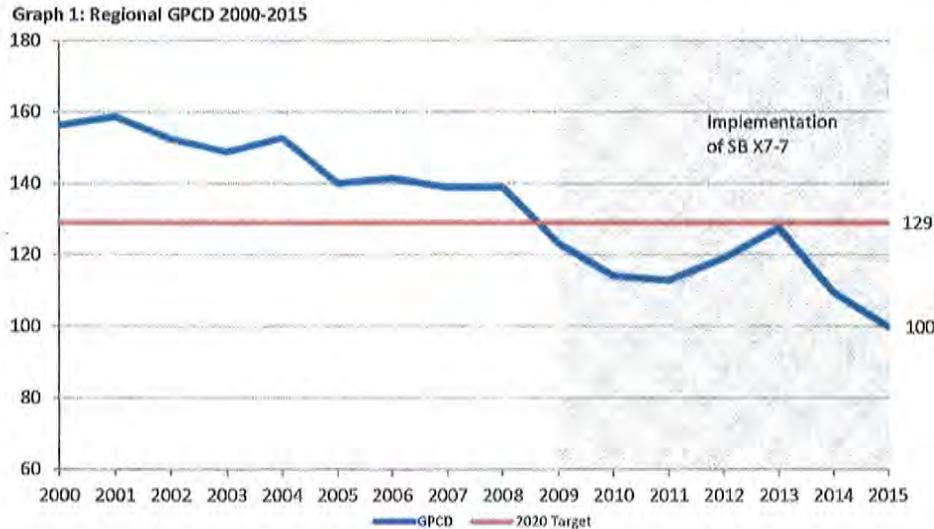
1. The SMSWP again requests that a regional compliance option be authorized in the Regulation. Details about the regional compliance option were presented to the State Board at your workshop on December 7, 2015 and we continue to believe that this option has merit and should be included in the Regulation.
2. The SMSWP requests the State Board include a 4% conservation standard pursuant to Regulation Section 865(c)(2) for agencies in regions that have water storage at or above 90% of reservoir capacity on April 1, 2016. The conservation standard for agencies in regions could be proportionately higher if water storage levels on April 1st are below 90%.

Regional Compliance

Established in 2010, the SMSWP maintains a regional commitment to work collaboratively on the implementation of appropriate water use efficiency, education and outreach programs in Sonoma and Marin counties. A regional alliance of SMSWP members was formed to comply with SBx7-7, the Water Conservation Act of 2009. SBx7-7 calls for a 20% reduction in water use by the year 2020. The regional alliance was developed pursuant to the Department of Water Resources methodology for calculating baseline and compliance urban per capita water use, for agencies that receive water from a common wholesale water supplier, in this case the Sonoma County Water

Agency (SCWA), also a SMSWP signatory.

The graph below demonstrates the long term progress that our region and the SMSWP have made towards incorporating water use efficiency in Sonoma and Marin counties.



Since the year 2000, the SMSWP has reduced per capita water use in the region by over 36%, while experiencing a 10% increase in population. To date, water production savings since June 2015 in accordance with the current Regulation among the SMSWP partners has exceeded the cumulative Conservation Standard on a regional basis by 5% (see table attached). We understand that compliance with the extended Regulation will continue to be measured from June 2015 and appreciate that the savings noted above which exceeds the Conservation Standard for individual agencies will be rolled over and credited during the extension period.

Water Supply Storage Conservation Standard

Water supply for the SMSWP region is derived from surface water reservoirs. Current water supply in local reservoirs as of January 26, 2016 is nearing capacity: Lake Mendocino (97%), Lake Sonoma (93%), Marin Municipal Water District reservoirs (97%) and Stafford Lake (75%). The SMSWP is pleased to know that State Water Board staff is committed to monitoring and evaluating available data on reservoir storage levels, intends to report back to the State Water Board in March and April 2016, and if conditions warrant, promptly bring a proposal to adjust or eliminate the Regulation. The SMSWP requests that the Regulation include a trigger enabling the Conservation Standard to be reduced to a 4% Conservation Standard when water supply, as determined by reported water storage levels, are sufficient to meet the region's needs. Since the SMSWP region is not hydraulically connected to any other area of the state, adherence to the Conservation Standard now proposed in the extended Regulation will reduce water sales revenue further, requiring

significant rate increases and add to the conundrum expressed by our retail water customers who have achieved significant water savings to date, yet will be faced with increased water costs to backstop the revenue loss; all while sufficient water storage is available.

Furthermore, the SMSWP and member agencies have expended significant resources to educate retail water customers to help them better understand the complexities of managing the region's water supplies. The results achieved from this effort are customers who are savvy and question the validity of a continued drought declaration when reservoirs are full in our region. Declarations of water shortage emergencies must be factual otherwise water suppliers risk losing credibility which can result in customer complacency and non-compliance.

The Sonoma Marin Saving Water Partnership respectfully requests you consider these items for inclusion in any extended Regulation.

Sincerely,

A handwritten signature in blue ink that reads "Chris DeGabriele". The signature is written in a cursive, flowing style.

Chris DeGabriele
General Manager
North Marin Water District,
Chair Technical Advisory Committee to SCWA

State Water Resources Control Board Conservation Standard Tracking for the Sonoma-Marín Saving Water Partnership

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MEMORANDUM

To: Water Advisory Committee

January 27, 2016

From: Chris DeGabriele, TAC Chair 

Subj: Safe Medicine Disposal Ordinance Support

t:\gm\scwa\wac agenda and minutes\2016\memo to wac safe medicine disposal support letter.docx

RECOMMENDED ACTION: Authorize letter of support for a Safe Medicine Disposal Ordinance in Sonoma County as proposed by RRWA

Russian River Watershed Association representatives made a presentation to the WAC at the November 2, 2015 meeting informing the WAC of the current status of safe medicine disposal programs in Sonoma County and requesting support for a county ordinance to require pharmaceutical producer responsibility for disposal options of expired and unwanted consumer medicine.

At the December 7, 2015 TAC meeting the TAC recommended the WAC signify support of the RRWA effort with a letter (attached).

RECOMMENDATION:

Authorize the WAC Chair to send a letter to RRWA signifying support of a safe medicine disposal ordinance in Sonoma County.

DRAFT

DATE

Mark Landman
Chair, Board of Directors
Russian River Watershed Association

Subject: Support of Concept: To evaluate the feasibility of an extended producer responsibility ordinance that addresses the long-term need for safe medicine disposal options for our communities

Dear Chairman Landman,

The Water Advisory Committee (WAC) to Sonoma County Water Agency appreciates the Russian River Watershed Association's (RRWA) strong support of the concept of pharmaceutical producer responsibility for the creation, funding, and management of a regional program that will provide safe and convenient disposal options of expired and unwanted pharmaceuticals for consumers.

Pharmaceuticals are collected in Sonoma and Mendocino Counties through the Safe Medicine Disposal Program. Funding for the Program is provided by RRWA, the City of Santa Rosa's subregional system, the Sonoma County Water Agency, and others. Since the Program's inception in 2007, over 90,000 pounds of pharmaceuticals have been collected and properly disposed, demonstrating a considerable demand for disposal options. The collection totals have increased every year, so it is logical to project that the collection totals will continue to increase. To-date the cost to manage the program and conduct outreach and education by RRWA, SCWA, City of Santa Rosa and others has totaled over \$2M and is also projected to increase year to year. Currently, there is no long term plan for funding.

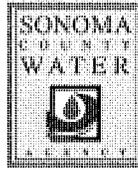
For too long, local government, by default, has carried the burden of financing and managing pharmaceutical take-back programs, broadly financed by taxpayers or utility ratepayers. Despite these efforts, pharmaceuticals are either being stockpiled in medicine cabinets, a prime target for drug abusers; or flushed down the toilet, threatening our water quality, as even the most advanced wastewater treatment processes cannot remove all pharmaceuticals. It is time for the producers to take the responsibility of properly managing the pharmaceutical products that they create.

In 2012, Alameda County became the first local government in the United States to pass legislation requiring pharmaceutical companies to design, fund, and operate a program to safely collect and dispose of unwanted drugs. Subsequently, in California, the City and County of San Francisco, the County of San Mateo and the County of Santa Clara have adopted similar drug stewardship programs. There is currently no mandatory statewide drug stewardship program for unwanted household drugs in California.

A manufacturer-funded collection and disposal program for unwanted drugs would significantly increase convenient disposal options for Sonoma County residents' unwanted drugs, enabling collection of larger quantities of unwanted drugs and reducing the risks to public safety, health, and the environment.

For these reasons, the WAC strongly supports the concept of pharmaceutical producers taking an active role in the creation, funding, and management of a regional program that will provide safe and convenient disposal options of expired and unwanted pharmaceuticals for consumers.

Mike Healy
Chair, Water Advisory Committee



Russian River Biological Opinion Update – February 2016

The Sonoma County Water Agency is continually planning and implementing the Russian River Biological Opinion requirements. The following project updates provide a brief synopsis of current work. For more detailed information about these activities, please visit www.sonomacountywater.org.

Dry Creek Habitat Enhancement Project

Site identification, environmental studies and topographic surveys are nearly complete for the second and third miles of habitat enhancement. Right-of-way staff are working closely with landowners on construction and maintenance easement issues. Two firms, Interfluve and ESA, are designing the second and third miles of habitat enhancement, respectively. The 90% plans for portions of Mile 2 have been submitted and are under review. The 90% plans for portions of Mile 3 are in progress.

Fish Monitoring

The inflatable dam is not in use this year, due to the work on the Mirabel Fish Passage Improvement Project. Without the dam, the Water Agency cannot use the video monitors traditionally deployed to count migrating adult Chinook, steelhead and coho. Instead, the agency installed a type of sonar technology (known as DIDSON) at the mouth of Dry Creek and has installed a video monitor at the Healdsburg fish ladder. Water Agency staff has observed about 3,931 Chinook.

Mirabel Screen and Fish Ladder Replacement

Construction has stopped and started several times during the winter, as the river has risen and fallen. It is anticipated that construction will be complete in late Spring.

Russian River Estuary Management Project

- The 2015 Lagoon Management Period ended on October 15. The Water Agency did not have an opportunity to implement an outlet channel during the management period. Since the management period ended, the estuary has closed three times. To reduce flood risks, Water Agency crews artificially breached the sand bar on November 2 (wave conditions closed the estuary later that day), November 5 and November 23. Dangerous beach conditions during a closure in December prevented the Water Agency from breaching the sand bar and water levels rose to approximately 12 feet, inundating the Jenner Visitors Center and briefly interrupting traffic on Highway 1. The estuary self-breached on December 12.
- Baseline monitoring of harbor seals and other pinnipeds is conducted regularly and prior, during and after every artificial breaching. Water quality monitoring at datasonde stations has ended for the season. The Annual Pinniped Monitoring Volunteer Training is scheduled for February 1 and 2.
- Field investigations of the jetty are complete. The purpose of the studies are to determine if and how the jetty impacts the formation of the barrier beach and lagoon water surface elevation. Consultants are currently analyzing data and preparing a report, which is expected to be released in February.

Fish Flow Project

Work is occurring internally on the preparation of the draft Environmental Impact Report for the Fish Habitat Flows and Water Rights Project. The EIR is being prepared by Water Agency staff, with assistance from consultants on some areas of impact analysis. A draft EIR is anticipated to be released in Spring 2016.

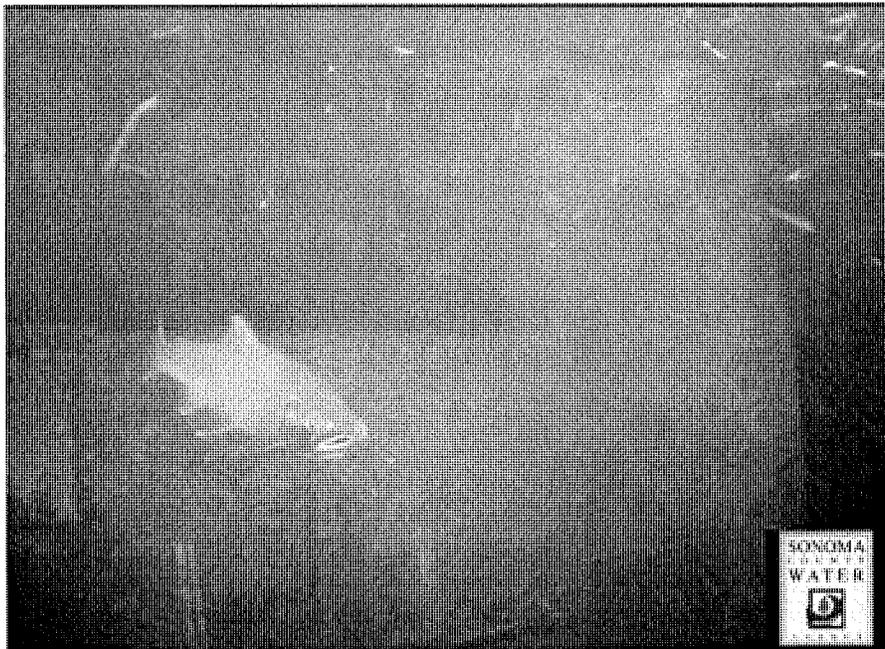
Interim Flow Changes

To preserve water in Lake Mendocino, the Water Agency went to the State Water Board to request additional reductions in releases from Lake Mendocino; on June 17, the State Water Board issued an amendment to the TUCO. As a result, the minimum flow requirement in the upper river was 25 cfs and 50 cfs in the lower river.

The TUCO expired on October 27. PG&E filed another variance with FERC to reduce flows in order to perform major maintenance on its penstock. Depending on levels in Lake Mendocino, the Water Agency may file another Temporary Urgency Change Petition (TUCP) with the State Water Board to preserve water in the lake. If a TUCP is not filed for hydrologic reasons, one will be filed in order to comply with the Biological Opinion.

Public Outreach, Reporting & Legislation

- The annual Dry Creek Community meeting was held on January 14 at the Lake Sonoma Visitors Center. Approximately 50 people attended.
- The annual Public Policy Facilitating committee meeting is scheduled for Thursday, March 3, 9 a.m. – 1 p.m. at Westside Water Education Center, followed by field trip to Mirabel Project and Dry Creek, with the signing of NOAA's first Safe Harbor Agreement.



Coho salmon detected by Water Agency equipment.

2016 TAC - WAC / TAC MEETING SCHEDULE
35 Stony Point Road, Santa Rosa, California

Month	Day	Body	Time
JANUARY	4	 TAC	9:00a.m.
FEBRUARY	1	WAC / TAC	9:00a.m.
MARCH	7	 TAC	9:00a.m.
APRIL	4	SPECIAL WAC/TAC	9:00a.m.
MAY	2	WAC / TAC	9:00a.m.
JUNE	6	TAC	9:00a.m.
JULY	11	TAC	9:00a.m.
AUGUST	1	WAC / TAC	9:00a.m.
SEPTEMBER	12	TAC	9:00a.m.
OCTOBER	3	TAC	9:00a.m.
NOVEMBER	7	WAC / TAC	9:00a.m.
DECEMBER	5	TAC	9:00a.m.

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**NOTICE OF MEETING OF
NORTH BAY WATERSHED ASSOCIATION**

Notice is hereby given that a meeting of the North Bay Watershed Association will be held as follows:

Date: Friday, February 5, 2016

Time: 9:30 a.m. – 11:30 a.m.

Location: Petaluma (Lucchesi) Community Center
320 N. McDowell Blvd. Petaluma, CA 94954 Conference Room 2

AGENDA and Item Recommendation

- | | |
|--|----------------------|
| I. Call to Order (Jack Gibson, Chair) | 9:30-9:35am |
| *Public Comment | |
| *Approval of the Agenda - Approve | |
| *Approval of Minutes - Approve | |
| II. Treasurer's Report | 9:35-9:40am |
| *Accept | |
| III. 2016 NBWA April 22nd Conference update | 9:40-9:45am |
| *Information from Judy Kelly | |
| IV. Game of Floods | 9:45-11:20am |
| *Flood management and sea level rise planning interactive workshop | |
| *Chris Choo, Marin County and Chair NBWA Joint Technical Committee | |
| *Roger Leventhal, Marin County | |
| V. Items of Interest | 11:20-11:25am |
| VI. Items for Next Agenda | 11:25-11:30am |

Next Meeting Information:

Novato Sanitary District
500 Davidson Street, Novato Ca. 94945
Friday, March 4, 2016

NORTH BAY WATERSHED ASSOCIATION

Minutes for the meeting of the North Bay Watershed Association (NBWA) Board of Directors.

Date: January 8, 2015
Time: 9:30 a.m.
Location: Marin Community Foundation, 5 Hamilton Landing,
Suite 200, Novato, CA 94949

Directors Present: Directors present included:

<u>Board Member</u>	<u>Agency/Organization</u>	<u>Board Member</u>	<u>Agency/Organization</u>
Jack Baker	North Marin Water District	Susannah Clark	County of Marin
Keith Caldwell	Napa Sanitation District	Madolyn Agrimonti	City of Sonoma
Judy Schriebman	Las Gallinas Valley Sanitary District	Paul Jensen	City of San Rafael
Brad Sherwood	Sonoma County Water Agency	Eric Lucan	City of Novato
Jack Gibson	Marin Municipal Water District	Pam Meigs	Ross Valley Sanitary District
Mike Healy	City of Petaluma	Sandeep Karkal	Novato Sanitary District

Directors present represented 12 out of the 18 agencies signatory to the Association MOU.

Board Actions:

1. **Call to Order.** Jack Gibson, Chair, called the meeting to order at 9:37 a.m.
2. **Public Comment.** None.
3. **Approval of the Agenda.** (See Handout) The Board unanimously approved the agenda.
4. **Approval of the Minutes of the Board Meeting held December 4, 2015.** (See Handout) The Minutes of the Board Meeting held on December 4, 2015 were unanimously approved.
5. **Treasurer's Report.** (See Handout) The Treasurer's Report was accepted as presented by Judy Kelly.
6. **Introduction of New Executive Director and 2016 Preview.** Judy Kelly, the new NBWA Executive Director, provided a PowerPoint and began with an overview of her education and work experience. She highlighted the fact that she has degrees pertaining to resource planning and water policy along with 30 plus years working in the fields of water resource planning and management at the national, state and regional levels. She then presented a short summary of what is planned for NBWA for the next few months and suggested that she and the Board engage in a series of conversations to set a course for the coming year with perhaps some new tools and products for NBWA.
7. **The San Francisco Bay Restoration Authority Update.** Amy Hutzal, Deputy Executive Director of the California State Coastal Conservancy, provided an overview of the status of the Restoration Authority and the ballot measure they are likely to bring to the ballot in 9 Bay Area counties this spring. She stated that the Authority was established in 2008 by state legislation and is guided by a 7-member board and a 30 member advisory committee. On January 13th, the Authority Board will decide if they will place a measure on the ballot for a \$12 parcel tax expected to raise \$25 million per year for 20 years. The money will be used to fund projects to restore the San Francisco Baylands, for flood protection, and to increase public access. The work would be accomplished by others; the Board staff would make grants to carry out the purposes of the Authority. Amy discussed a list of examples of projects anticipated to be eligible for Authority funding. The list was created by getting information about potential fundable projects from organizations and agencies around the region. Amy's handouts included a copy of a summary brochure about the Authority; an article from Bay Nature Magazine covering the Authority and its mission; a memo from FM3, a local polling firm, showing findings from a recent poll that seem to support a potential ballot measure; the example project list and copies of the pending resolutions for action by the Authority. All materials are on the Authority website. Amy mentioned that an outside committee has been formed to help fund the cost of a ballot campaign in support of the measure. Ballot costs are expected to come to nearly \$2 million that the Authority is obtaining through funding partners. She could not provide details on the committee since, by law, it is completely separate from the work of the Authority. NBWA Board Members had a number of questions. Would the Authority provide full funding or require match? (no set requirement now.) Will all parts of the region get the same amount of funding? (50% will be allocated to the sub-regions of the bay by population, the other 50% allocated without regard for geography) What is the relationship of these funds to other state water bonds? (Complementary and could be used as

match to state or federal funds) Is there support in D.C. for this? (Yes, both Senators support). Can funds be used for preservation and or maintenance of existing restored wetlands? (Yes)

8. **Baylands Habitat Goals Update.** Dr. Letitia Grenier, San Francisco Estuary Institute, presented a PowerPoint to update the Board on the 2015 Baylands Ecosystem Habitat Goals Science Update. The update reflects the work of over 100 scientists around the region who were tasked to look at how the baylands are expected to be impacted by climate change and to determine the best strategies for coping with the expected changes. Dr. Grenier reminded the Board about the many values of our baylands; they filter pollutants, provide natural flood protection, are critical habitat for a number of key species and are part of our valued landscapes. Our bay marshes and mudflats can be sustained but will need a bold approach to restoring their natural processes. Rising seas will cause the baylands to shrink if we do not act. We will need new policies for the bay and much will depend on getting sediment to the baylands as the sea rises so that the baylands can keep up. The report suggests 3 key strategies: restore complete bayland systems with their many interconnected habitat types, along with the physical processes that sustain them and reconnect the baylands to nearby upland to provide wildlife refuge areas during high-water events; Accelerate restoration of complete baylands systems by 2030; plan ahead for a dynamic future for these baylands and increase regional coordination. Detailed information and the full report are available at Baylandsgoals.org. Questions from the Board followed. How can we better manage local sediment supply while protecting stream water quality? (One way might be, according to new research, to allow pulses water that create a small flood - that lets the sediment move and settle). Should we be filling the bay now? (Possible fill for wetland creation is starting to be discussed now at a few of the regional agencies).

9. **Friends of the Petaluma River Project Proposal.** Judy Kelly presented to the Board a request for funding from the Friends of the Petaluma River for \$20,000 to support their Watershed Classroom Program. This Program works with teachers and students in the Petaluma area to support hands-on learning experiences centered on the river ecosystem. Funds would support 3-4 new data layers for the Petaluma River Watershed Atlas and update the Atlas, the purchase of 14 Water Quality Monitoring kits for loan throughout watershed; and a report on ways to replicate the program in other local watersheds. The Joint Technical Committee of the NBWA recommended approval at their December meeting. Board members wondered how the Atlas will be used and what happens to the water monitoring kits when the project is completed? (the Atlas is used by teachers, students and the public to learn more about the Petaluma River Watershed and will be expanded in Google maps- funds for the kits will be used to replenish contents and continue to be used in future projects). The NBWA Board unanimously approved the recommendation.

10. **Items for Next Agenda.**

- * Game of Floods, led by Chris Choo, County of Marin; Chair, NBWA Joint Technical Committee

Jack Gibson, Chair, adjourned the meeting at 11:20 a.m.

SUBJECT TO BOARD APPROVAL

Submitted By: Judy Kelly,
Executive Director

NEXT MEETING INFORMATION:

February 5 – Petaluma (Lucchesi) Community Ctr., 320 N. McDowell Blvd., Petaluma, CA 94954-Conf. Rm. 2

Game of Floods – North Bay Island Adapting to Sea Level Rise

What is the “Game of Floods”?

The Game of Floods is a sea level rise adaptation planning and education tool that promotes discussion of issues and adaptation strategies faced by many North Bay communities due to sea level rise. The game is played on a fictional island of small communities each with its unique vulnerabilities to sea level rise that mirror those faced by many real North Bay cities and towns. The intent of game playing on a fictional island is to allow for a more uninhibited discussion of these issues unconstrained by the realities of job titles, community ties or personal stakes in any specific communities. In future phases of the game and strategy planning, specific North Bay communities could be evaluated and specific focused solutions could be developed.

What is the Problem?

In many respects, sea level rise represents a perfect storm of planning difficulties. It's slow but widespread, crosses political and economic boundaries, expensive and the biggest impacts are in the future and down the road. Yet the very slowness of sea level rise is also an opportunity to begin to plan now before it's a crisis. This type of forward planning for long term costly future impacts is typically something our political system finds very difficult.

And the issues run deeper than just planning. There are numerous cultural barriers to adaptation planning and implementation such as private property rights, who pays for adaptation and even the environmental laws such as CEQA, bay fill laws or the endangered species act that were developed to protect or mitigate the existing condition – how should these laws be changed, if at all, to reflect a changing baseline condition. Even the look and experience of the shoreline is a major issue for discussion as many of the adaptation “solutions” such as walls or levees would fundamentally alter the experience of the shoreline as well as its habitat and ecological values for many generations. On this island, very taboo subjects like retreat and abandonment of built areas can be played out.

What is the Objective of the Game?

By dealing with a realistic set of challenges, the game hopes to stimulate discussion, highlight potential solutions, and heighten awareness of the various issues involved with adaptation. A major goal is to involve the community itself in a discussion of its future. Rather than a top-down approach, locals can be brought into these long term planning discussions and involved in the difficult decisions to be made. Perhaps new ideas will be generated and new solutions formulated. At the least, it will be recognized that planning for sea level rise is a long process that begins with understanding and education of the complexity of issues involved and begins to work towards solutions working together.

As the NBWA Board plays the game, it's important to think about: 1) who in their organization is (or which departments are) planning/strategizing around sea level rise? 2) What other organizations (or departments) are also planning / strategizing? 3) What are the benefits / drawbacks of interagency and/or interdepartmental discussion / planning / strategizing? 4) Is interagency / interdepartmental planning happening?

Understand the Community Issues:

North Bay Island

North Bay Island is one of the most beautiful places on earth. Blessed with an amazing climate, an informed, educated and highly attractive community of folks who all share a love of the environment as well as high standards for cultural and community. In particular, they expect their elected officials and public agencies to achieve many goals for fairness, environmental quality and protection all with a minimum of funds. For like most communities, the folks on NB Island don't like to pay extra taxes. They will have to be convinced that their money is going for real solutions. They also don't all agree on what is important in the specifics, some value ecology over all, some are most concerned over jobs and commerce, some value the historic character of the island and don't want it to change – most are a mixture of all three.

However, many local communities are currently impacted under the annual King Tides (red zones) which is raising concerns along with the news about shrinking glaciers and strange weather. Residents are concerned that some seaside homes will become permanently flooded and uninhabitable, while others may experience more frequent flooding causing electrical and septic systems to shut off occasionally. Concerns over drinking water due to saltwater intrusion, and property values are declining while federal flood insurance rates continue to rise. The City has concerns that many residents will relocate, causing a decline in the population needed to support the local economy leading to closing businesses and escalated prices for food, gasoline, and other supplies. Roads in the red area currently flood during high annual King Tides compromising emergency access increasing congestion and, in some cases, block accesses for hours at a time. Locals have noticed increased erosion of local beaches, resulting in loss of tourism and ecological functions. Tidal wetlands are eroding, removing important breeding grounds for marine life. Ag lands are showing gullying and as the groundwater becomes saltier agricultural operations become less productive and require deeper wells.

NB Island consists of seven small communities. The issues faced by each local community on the island may reflect slightly different aspects of sea level rise impact and adaptation options, but they are all united in needing to plan for both existing and future impacts of sea level rise.

West Side

1. Downtown Zappa (*historic, center of town, tourism, economic center*) – Downtown Zappa is the largest commercial community on the island. Bisected by the Zappa River which historically has flooded the downtown businesses repeatedly during periods of rains combined by high tides, the downtown area is highly vulnerable to sea level rise (SLR) flooding from the river. The current levee system does not provide the 100-year level of protection and requires significant upgrades to meet FEMA accreditation standards. – *Main Issues - Protection of important commercial areas*
2. Eroding Cliff Heights (*residential*) – This subdivision community is located on top of steep eroding bluffs with homes built right to the edge of the cliffs. The bases of the cliffs are experiencing active erosion which is expected to significantly worsen under SLR conditions. The community wants to install large sea walls and revetments at the base

of the cliff to stop the erosion. *Main Issues – Long term protection of housing as the cliff erodes. Zoning and building code issues.*

3. Mudflat Manor (*residential, well off*) – A low laying subdivision community in the low laying areas of the island. This is the single largest residential community of homeowners (and voters) who live on NB Island and the residents tend to be wealthy. Large tracks of this subdivision are very exposed to SLR and they are very vocal in demanding that local government do something. *Main Issues – Highly vulnerable large community of homeowners. How to adapt to rising tides.*
4. Desolation Road Residential Area (*residential, low and fixed income*) – A very small community of older and somewhat economically disadvantaged homeowners who live down this old road in a highly vulnerable area. *Main Issues – small threatened low income community. How to adapt to rising tides for isolated, poorer areas.*

East Side

5. Shoreline Marina Business and Tourism Community (*economic, tourism*) – This community is the Marina and the associated businesses such as bait and tackle shops, motels, diners that rely on a thriving marina and tourism industry associated with the water. *Main Issues –Single purpose commercial and tourist area threatened by sea level. Long term transportation access is also an issue for economic survival.*
6. Curvey Cove (*historic, small and agricultural*) – A narrow cove and small marina along the back of the Island that is the oldest community on the Island with significant cultural resources. Very rural and farm oriented community that serves the agricultural farming communities on the island. *Main Issues – small agriculture and historical cultural area threatened by SLR. How to adapt for rural areas.*
7. Seaspray Estates (*residential, tourism*) – A subdivision of mostly locals and rentals along the back side of the island primarily as a tourist vacation destination. This subdivision brings in a lot of tourist revenue to the island so it is of economic importance. *Main Issues – zoning and adaptation challenges for a tourist and second home community on the water.*

Roads

The main road around the Island is shoreline drive which is highly vulnerable in some locations as shown. In some SLR areas, the road is vulnerable and will require rebuilding/relocation to function.

Utilities

The wastewater plant is located in a vulnerable area down near Desolation Road. These types of facilities typically rely on gravity so they are most effectively located at the bottom of the hill to avoid pumping and are therefore more vulnerable to sea level rise. Many areas of the island are on well water and septic so they are more vulnerable to SLR impacts to groundwater.

Review Adaptation Strategies

There is a tool-box of various adaptation strategies and alternatives. The tool-box of available options has been somewhat simplified to reflect the broadest and most applicable categories of reasonable and effective options. An upfront presentation will go over the broad adaptation categories and how they could be implemented on the island.

There are numerous adaptation strategies available in the real world. To simplify the game to a manageable number, the following lists the available adaptation strategies:

Protect - Hard (traditional engineering)

- Sea walls and flood walls (may be expensive but can be implemented where there is limited right of way)
- Pump stations (required behind barrier type solutions – very expensive)
- Traditional levees (earthen levees that are built for flood protection)
- Tide gates (water control structures that limit the high tides that may cause flooding)

Protect - Soft (using more natural based alternatives)

- Eco-levees (so called horizontal levees) – Using tidal wetland and much more gradual side slopes to dissipate wave energy
- Tidal wetland restoration
- Sand and dune construction
- Engineered beaches
- Offshore structures (reefs, barrier islands)

Accommodate

- New floodable development
- Raise buildings (not so good in long term SLR tidal areas)
- New elevate roadways (very expensive but may be necessary to maintain road access)

Managed Retreat and Zoning Restrictions

- Managed retreat – usually implies buyouts of homeowners so expensive and opens up divisive political issues. Play the “retreat icon” and if rebuilding then play a “rebuild here” token to account for costs.
- Post storm rebuilding restrictions and stricter land use zoning – Important but political difficult tool available to local government to handle issues post-disaster and control development in potential SLR areas

SLR Exposure Scenarios

The island shoreline edge has been color coded to reflect the degree of sea level rise impacts

Green Exposure Zone: 12-inches of SLR. The extent of semi-annual “King Tide” flooding and equates to approximately 12 Inches of permanent SLR flooding expect in the next 30 years

Orange Exposure Zone: 24-inches of daily permanent SLR flooding and also equates to 12-inches of SLR flooding plus storm runup.

Yellow Exposure Zone: A 36-inch rise in sea level and also the extents of storm flooding under the previous scenarios of SLR with storm runup.

Playing the Game

Given the time constraints, we have divided the island into halves so one team will take the east side and the other the west side. The goal is to use the tool-box of “solutions” along with any real world experience to develop an adaptation strategy including phasing and funding.

One can start with the major community and associated assets (i.e. wastewater plant) and discuss what adaptation strategies are necessary for its protection. When choosing adaptation strategies, consider the following questions:

1. What are the pros and cons for this this strategy? Not just locally but regionally both in the local community and for the island.
2. Is this strategy financially feasible?

On the map, place a post-it with the strategy for the identified area and asset. Once all areas are identified with strategies, you will finalize your plan with the stickers.

Repeat this process for each community.

The following is a list of relevant criteria that may be used to evaluate and discuss the various adaptation strategies:

- Level of Flood protection from coastal and riverine both short and long term
- Project cost (both capital and long term maintenance and monitoring costs)
- Mitigation costs (impacts to existing ecological resources may require mitigation costs) – can a larger comprehensive plan be developed that addresses these concerns
- Ease of permitting
- Visual impacts
- Social/cultural impacts
- Habitat/wildlife benefits
- Public access/recreational values

Funding

The NB Island community collects enough property tax revenue to pay for road maintenance and some flood system maintenance. The total budget is one to two million dollars. Almost certainly, paying for significant adaptation will require new funding through bonds, sales taxes or property taxes. There may be grant opportunities but this will require packaging together an adaptation alternative with significant ecological benefits because most existing grant funding agencies require multi-benefit projects with significant environmental benefits to get funding as well as significant local match. It is also more difficult these days to get grant funding for planning since most grants want to target implementation.

Therefore, packaging of alternatives for grant funding may be a good discussion topic.

Table Discussion

Review the strategies on the post-its and discuss any conflicts. This could include: proposals which are excessively costly, negative private property impacts, negative environmental impacts, equity/social justice concerns, or other. If there are conflicts, can compromises be made? We are working towards comprehensive planning and consensus, if possible.

Are there areas that are just too expensive to protect in-place and should these people be encouraged and compensated to move or just allowed to deal with flooding on their own over time? Are there any creative ideas to help incentivize movement?

Costs

Once decisions have been made, stick the adaptation strategy on the map with the stickers. Each sticker has a specified length and value assigned to it. The pre-set values are assigned for the quick and ease of adding up the costs for adaptation cost for the game. The final costs will be the basis for adaptation discussions.

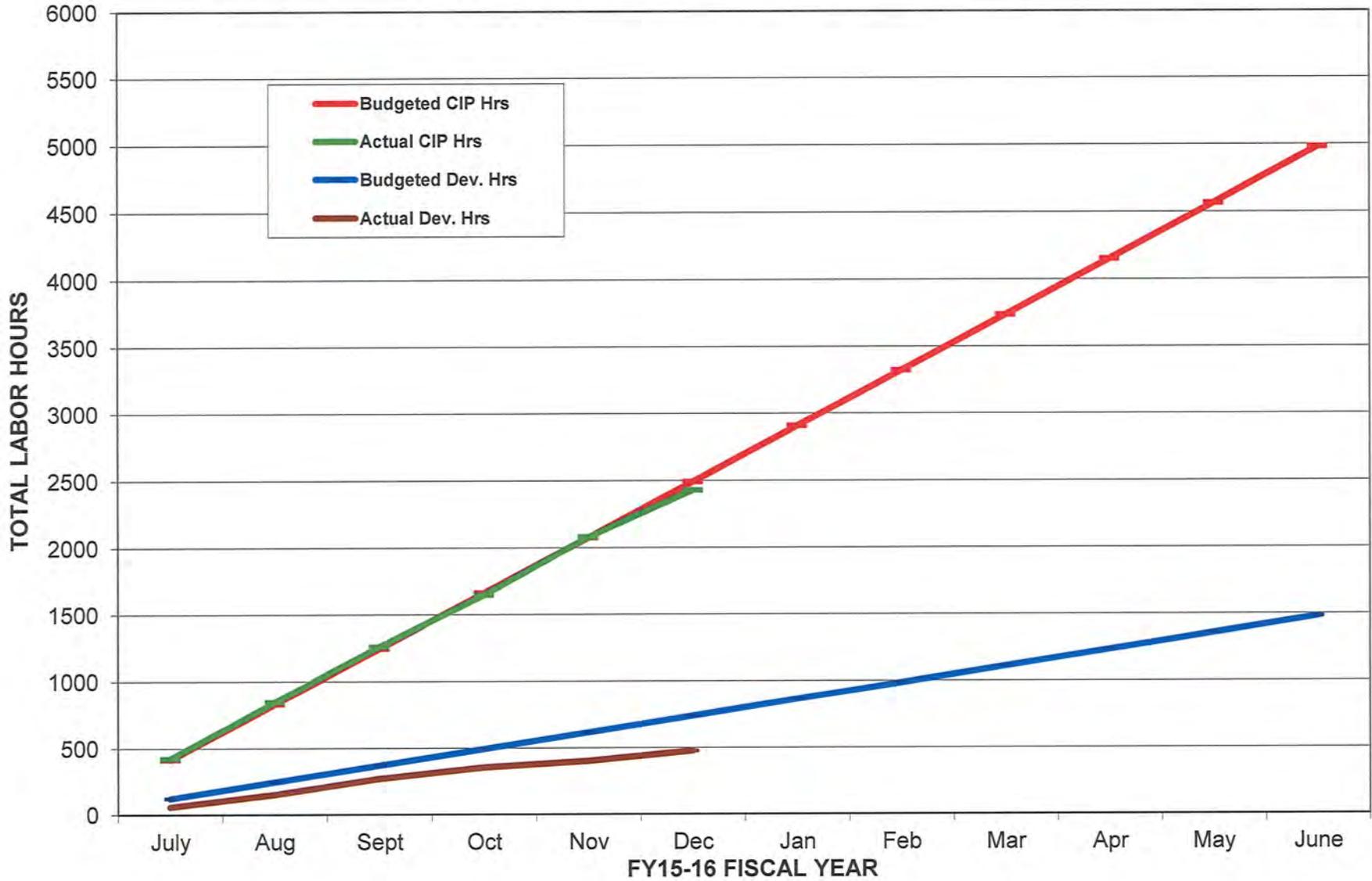
Finally, each table will add up the costs. Tally dollar signs for a final cost on your worksheet.

Group Discussion

Each table will present their discussion to the larger group. Folks can ask questions regarding the discussion of adaptation strategy and approach and costs.

Game over? Or just beginning?

ENGR. DEPT DEVELOPER & DISTRICT CAPITAL IMPROVEMENT PROJECTS (CIPs)



13

MEMORANDUM

To: Board of Directors
 From: David L. Bentley, Auditor-Controller
 Subj: Service Charge Analysis
I:\aclword\memol16\bimonthly service charge analysis 16.docx

January 29, 2016

RECOMMENDED ACTION: Information**FINANCIAL IMPACT: None at This Time**

The Service Charge covers fixed costs for debt service, billing and accounting, meter reading, and a portion of the cost to maintain and replace the service line to the customer water meter. Debt service pays for infrastructure which enables water delivery on-demand 24 hours per day, 7 days per week - such as Stafford Water Treatment Plant, pump stations, storage tanks and distribution pipelines. Annually the District updates its analysis of the costs that comprise the charge, which is \$30 bimonthly (just under 50¢ per day) for the 73% of District customers who are served with a 5/8" meter.

The Novato 5/8" Bimonthly Service Charge was increased from \$25 to \$30 on June 1, 2013. The District's bimonthly cost of a 5/8" service last fiscal year (FY15) was \$32.46, as shown on the attached analysis. Thus, the \$30 charge falls 8% shy of the amount required to fully recover the fixed cost associated with the Service Charge.

While many customers are under the impression that the Service Charge is for meter reading only, in fact meter reading comprises only a minor component of the charge. In summary, the cost components of the Service Charge, in percentage terms, are as follows:

Capital Replacement Cost	45%
Debt Service	33%
Billing & Accounting	17%
Meter Reading/Maintenance	6%
	<u>100%</u>

Finally, while this analysis shows that the Bimonthly Service Charge (\$30) for a 5/8" meter is 8% below actual cost, the Bimonthly Service Charge revenue generated on 1" and larger meters exceeds the calculated cost and offsets the loss on the 5/8" meters. Therefore, no increase in the Bimonthly Service Charge is recommended at this time.

North Marin Water District
Novato Service Charge Analysis
Annual Cost of Providing a Meter and Rendering a Bill
as of 12/31/15

1/27/16

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Active Meters 12/31/15 = 20,524

Capital Cost	1-Inch Fire		
	5/8-Inch Service	Sprinkler Service	1-Inch Service
Installation Labor & Vehicle Charges ¹	\$2,887.27	\$2,887.27	\$2,887.27
Backfill, Blacktop & Sand ¹	712.18	712.18	712.18
Copper Pipe (30') ²	158.17	158.17	158.17
Water Meter	73.08	191.18	191.18
Angle Meter Stop ²	56.25	56.25	56.25
Corporation Stop ²	52.22	52.22	52.22
Anode (12 lb.)	59.79	59.79	59.79
Service Saddle (6") ²	53.11	53.11	53.11
Fiberlite Meter Box Lid	27.84	47.78	47.78
Meter Box	24.77	30.52	30.52
Corporation Stop Adapter ²	22.86	22.86	22.86
Meter Spud	10.04	15.10	15.10
Grounding Clamp ²	3.96	3.96	3.96
Total Capital Cost ³	\$4,141.53	\$4,290.37	\$4,290.37

Capital Cost Amortization ⁴ \$87.43 \$94.27 \$94.27

Annual Expenses ⁵

Debt Service ⁶	\$1,299,183		
Billing and Accounting (net) ⁷	254,826		
General & Administrative ⁸	236,740		
Customer Service Expense	141,199		
Meter Reading	138,934		
Meter Maintenance	100,401		
Stationary & Supplies	60,032		
Uncollectible Accounts	14,818		
Office Equipment Expense	16,743		
Collection Agency Fees	2,315		
Distributed to West Marin ⁹	(16,233)		
Field Collection Expense (net) ¹⁰	(46,001)		
Total Annual Expense	\$2,202,957		

/ 20,524 =

Total Annual Cost per Meter \$107.34 \$107.34 \$107.34

\$194.77 \$201.61 \$201.61

Bimonthly Cost (Annual Cost / 6) **\$32.46** \$33.60 \$33.60

Current Bimonthly Charge \$30.00 \$34.00 \$60.00

Bimonthly Contribution to System Repair and Replacement (\$2.46) \$0.40 \$26.40

1 Average cost of last 5 years' installations.

2 Same 1" size is used for all three services shown.

3 Includes 9.0% sales tax & 15% material handling charge.

4 Annual capital cost amortization (capital recovery) is based upon estimated materials life of 50 years (except the meter which is amortized over 20 years) and assumes, in accordance with the Federal government's directive on discount rates specified in OMB Circular No. A-94 (revised November 2015), a nominal interest rate of 3.5% and an inflation rate of 2.0%.

5 Based on costs reported in the Audited FY2015 financial statement.

6 Debt service includes Principal & Interest for the STP SRF Loan, EDA Drought Loan and AEEP Bank of Marin Loan less MMWD \$245,000 AEEP Capital Contribution

7 Billing and Accounting amount shown is net of new account charge revenue.

8 G&A is 37% of labor expense.

9 Billing & Accounting expense is allocated to Recycled Water and West Marin customers based on the number of active accounts.

10 Field Collection Expense amount shown is net of account turn-on charge revenue.

14

DISBURSEMENTS - DATED JANUARY 28, 2016

Date Prepared 1/26/16

The following demands made against the District are listed for approval and authorization for payment in accordance with Section 31302 of the California Water Code, being a part of the California Water District Law:

Seq	Payable To	For	Amount
P/R*	Employees	Net Payroll P/E 1/15/16	\$122,231.30
EFT*	US Bank	Federal & FICA Taxes PPE 1/15/16	55,098.50
EFT*	State of California	State Taxes & SDI PPE 1/15/16	9,712.94
EFT*	CalPERS	Pension Contribution PPE 1/15/16	32,345.36
EFT*	US Bank	December Bank Analysis Charge (Lockbox \$912, Credit Card Processing \$758 & Other \$641) (Less Interest of \$159)	2,152.83
1	Aberegg, Michael	Drafting Services: RW Central Service Area-East (Balance Remaining on Contract \$14,390)	4,345.00
2	Allied Heating & Air Condition	Quarterly Maintenance on HVAC System	400.19
3	Alpha Analytical Labs	Lab Testing	60.00
4	Atherton Associates	Reimbursement Program-Atherton Estates	277.09
5	AT&T	Leased Lines	66.58
6	AWWA CA-NV SEC	Water Leak Workshop, Castellucci and Reed	50.00
7	Borges & Mahoney	Chlorine Feed Regulator Service & Maintenance	623.99
8	BPG Development	Refund Overpayment on Closed Account	54.00
9	Calif Board of Equalization	State Sales & Use Tax 2015	12,889.00
10	California Water Service	November 2015-Jan 2016 (O.M.) (0 ccf)	142.63
11	Cobblestone Homes	Reimbursement Program-Tamalpais Hill Subdivision	658.63

Seq	Payable To	For	Amount
12	Comcast	Jan Office Internet Connection	149.02
13	Dalmon Property Mgt	Refund Overpayment on Closed Account	104.38
14	FedEx	Freight for Vac Trailer Suction Hose	73.38
15	Golden Gate Petroleum	Gas (\$2.26/gal) & Diesel (\$2.2 Gas (\$2.49/gal)	2,077.31
16	Goldstein, Kathleen	Refund Overpayment on Closed Account	47.34
17	Harrington Industrial Plastics	Electronic Actuator (STP)	407.77
18	InfoSend	December Processing Fee for Water Bills (\$1,345) & Postage (\$3,971)	5,316.81
19	Intellaprint Systems	Quarterly Maintenance on Wide-Carriage Engineering Copier/Scanner	417.00
20	Keyes, Peter	Novato "Toilet" Rebate	200.00
21	Lehman, Barbara & Joe	Reimbursement Program-Lehman Land Division	116.26
22	Marion Heights Development	Reimbursement Program-Marion Heights	419.24
23	McEwan, William	Novato "Toilet" Rebate	100.00
24	McMaster-Carr Supply	Electrical Outlets (4) & Vacuum Trailer Suction Hose (30ft)	399.80
25	Mutual of Omaha	February Group Life Ins Premium	828.58
26	National Fire Protection Assoc	Membership Dues (McIntyre) (1/16-1/17) (Budget \$170)	175.00
27	Neopost USA	Jan Postage Meter Rental	85.92
28	N Dorje Nordrup	Replacement Check-Original Lost by Customer	100.00
29	Novato Community Partners	Reimbursement Program-Pointe Marin Ph II and III	703.65

Seq	Payable To	For	Amount
30	Pace Supply	Coupling (4), Hydrant (3), Nipple (18) & Meter Spud (16) Nipple (2), Valve, & Meterspud (14)	4,633.96
31	PG&E	25 Giacomini Rd (\$14.77), Power: Bldgs/Yard (\$3,077.31), Treatment (\$151.94), Rectifier/Controls (\$481.73), Pumping (\$13,808.00) & Other (\$95.37)	17,629.16
32	Point Reyes Prop Mgmt Assn	Jan HOA Fees (25 Giacomini Rd)	75.05
33	Prandi Property Mgt	Refund Overpayment on Closed Account	38.34
34	Rainin Instrument	Maintenance & Calibration of Micropipettes	183.00
35		Cafeteria Plan: Uninsured Medical Reimbursement	332.66
36	Ryder Novato Invest	Refund Overpayment on Closed Account	149.71
37	Schoepp Construction	Reimbursement Program-Oak Park Estates	79.28
38	Shapiro, Jack	Reimbursement Program-Channel Drive Water Main Extension	87.75
39	Shea Homes	Reimbursement Program-Pointe Marin (aka Rafael Village) Phase 1	34.39
40	Sonoma County Water Agency	December Contract Water	418,215.00
41	SPG Solar Facility	December Energy Delivered Under Solar Service Agreement	5,094.64
42	State Water Resources Control Board	D3 Certification Renewal (K. Lemos) (Budget \$60) (6/16-6/19)	120.00
43	St James Napa Development	Reimbursement Program-Somerston Park	21.70
44	Stoll, Richard & Karine	Refund Overpayment on Closed Account	170.78
45	Township Building Services	Dec Janitorial Services	1,822.84
46	USA BlueBook	Dispensers (8) (\$174) & Sample Cell Glasses	300.26
47	Verizon California	Leased Lines	561.39

DISBURSEMENTS - DATED JANUARY 21, 2016

Date Prepared 1/19/16

The following demands made against the District are listed for approval and authorization for payment in accordance with Section 31302 of the California Water Code, being a part of the California Water District Law:

Seq	Payable To	For	Amount
1	Ackerman, Gerald	Retiree Exp Reimb (2016 Health Ins)	\$1,088.28
2	Alpha Analytical Labs	Lab Testing	48.00
3	Asbury Environmental Services	Used Oil & Gas Filter Removal	55.00
4	AT&T	Data Lines	57.29
5	Backflow Distributors	Backflow Device (District Admin Office Cooling Tower)	246.46
6	Bakalar, Michael	Retiree Exp Reimb (2016 Health Ins)	547.80
7	Bank of Marin	Bank of Marin Loan Principal & Interest (Pymt 51 of 240)	46,066.67
8	Bender, Matthew	Annual Govt Codes (2016) (1/16-12/16) (\$528) & Water Supplemental (2016) (Budget \$950)	968.92
9	Berry, Allison	Refund Application Fee	30.00
10	Bino, Gene	Retiree Exp Reimb (2016 Health Ins)	21.12
11	Bradbery, Ronald	Retiree Exp Reimb (2016 Health Ins)	1,065.84
12	Caetano, Shauna	Novato "Cash for Grass" Rebate	400.00
13	California State Disbursement	Wage Assignment Order	859.87
14	Caltest Analytical Laboratory	Lab Testing	35.00
15	Cardno	Progress Pymt#2: Consulting Services for NMFS Draft Coastal Multi-Species Recovery Plan (Balance Remaining on Contract \$0)	4,172.50
16	Clark, Robert E.	Exp Reimb: Annual Dues for the Rotary Club of West Marin (Budget \$130)	130.00

Seq	Payable To	For	Amount
17	Clipper Direct	Commuter Benefit (1)	23.00
18	Costamagna, Miguel	Novato "Toilet" Rebate	100.00
19	Cruz, Francisco	Novato "Washer" Rebate	50.00
20	California Sanitation Risk Mgmt	2016 Ocean Marin Liability Insurance (Budget \$2,000) (12/31/15-12/31/16)	1,887.27
21	CSW/Stuber-Stroeh Engineering	Progress Pymt#3: Hwy 101 & SMART Borings Design Plans (Balance Remaining on Contract \$38,702)	14,846.25
22	Cummings Trucking	Rock (50 yds) (\$1,797), Sand (31 yds) (\$1,628) & Drain Rock (24 tons) (\$826) (Bear Valley Tank Pipe Upsize Project)	4,251.76
23	Derby, Richard	Retiree Exp Reimb (2016 Health Ins)	1,088.28
24	Diggs, James	Retiree Exp Reimb (January Health Ins)	306.09
25	Eyler, John	Retiree Exp Reimb (2016 Health Ins)	1,088.28
26	Fremouw Environmental Service	Auto Shop Solid Oily Waste Disposal	357.23
27	Friedman's Home Improvement	Tees (2), Caps (2) & Couplings (2)	38.54
28	Fritz, James	Retiree Exp Reimb (2016 Health Ins)	1,088.28
29	Ganzhorn, Joan	Novato "Toilet" Rebate	100.00
30	Giari, John	Retiree Exp Reimb (2016 Health Ins)	21.12
31	Golden Gate Petroleum	Gas (\$2.41/gal) & Diesel (\$1.93/gal)	1,021.49
32		Cafeteria Plan: Unreimbursed Medical Reimbursement	60.00
33	Grainger	Tool Tote & Broom Head (6)	70.19
34	Hale, Larry	Retiree Exp Reimb (2016 Health Ins)	547.80
35	Johnstone, Daniel	Retiree Exp Reimb (2016 Health Ins)	1,088.28

Seq	Payable To	For	Amount
36	Leiken, Jeffrey & Robyn	Refund Overpayment on Closed Account	170.37
37	Lincoln Life	Deferred Compensation PPE 1/15/16	13,839.26
38		Childcare Reimbursement	416.66
39	Marin County Ford	Oil Filters (2), Air Filters (2), Oil (12 qts) & Seat Cover ('15 F250) (\$158)	254.78
40	Marin County Council	Review Bold Polisner Agreement to Provide Legal Counsel to Silveira	461.25
41	Marrett, Therese	Novato "Toilet" Rebate	200.00
42	McBride, Rosalind	Novato "Cash for Grass" Rebate	400.00
43	McLellan, WK	Misc Paving	12,049.03
44	Mello, John	Retiree Exp Reimb (January Health Ins)	949.78
45	Meyer, Philip	Novato "Toilet" Rebate	187.00
46	Moore, Doug	Retiree Exp Reimb (January Health Ins)	949.78
47	Moretti, Linda	Retiree Exp Reimb (2016 Health Ins)	21.12
48	Mostoufi, Darab	Novato "Toilet" Rebate	300.00
49	Nationwide Retirement Solution	Deferred Compensation PPE 1/15/16	1,400.00
50	Nelson, John O.	Retiree Exp Reimb (2016 Health Ins)	1,088.28
51	Newirth, Frederick	Novato "Washer" Rebate	50.00
52	New Pig	Mechanics Gloves (3) (\$83) & All Purpose Towels (\$105) (STP)	187.66
53	City of Novato	Street Excavation Moratorium Fee (1305 Chase St)	500.00
54	Novato Disposal Service	December Trash Removal	432.54

Seq	Payable To	For	Amount
55	Origin Micro	Firewalls for Radio Telemetry Expansion Upgrade (11)	3,189.89
56	Pace Supply	Vault Hub Adapter	684.71
57	NMWD Petty Cash	Petty Cash Reimbursement: Safety Bucks, Safety Snacks, Parking, Calendar, Bridge Toll, Lab Supplies & Coffee	85.11
58	PG&E	Energy Bill for 101 Ocean Blvd	92.00
59	PG&E	New PG&E Service at the Redwood Landfill for the AEEP Rectifier	2,911.61
60	Point Reyes Light	Notification of Public Hearing for Approval of Changes to Water Conservation Regulations 15 & 17 (12/23 & 12/30)	144.00
61	Sebastopol Bearing & Hydraulic	Hydraulic Hose Assembly	101.81
62	Smalley, Gayle	Retiree Exp Reimb (2016 Health Ins)	547.80
63	Sonosky, Norma	Retiree Exp Reimb (2016 Health Ins)	1,065.84
64	Staples Advantage	Calendar, Copy Paper-Letter Size (32 reams) (\$136) & Legal Size (8 reams) (\$38)	199.87
65	State Water Resources Control	Wastewater Operator-in-Training Application (Garrett)	170.00
66	SWRCB Accounting Office	FY16-Small Water System Fees (Pt. Reyes)	4,590.00
67		Cafeteria Plan: Uninsured Medical Reimbursement	330.42
68	Syar Industries	Asphalt (6 tons)	1,004.51
69	Synectic Technologies	Repair Voice Mail Server	456.20
70	United Parcel Service	Delivery Service: Returned Pipet for Lab	21.74
71	US Bank	Dec Safekeeping Fee-Treasury Securities	126.50
72	Vasconcellos, Joan	Retiree Exp Reimb (2016 Health Ins)	547.80

MEMORANDUM

To: Board of Directors
From: Nancy Williamson, Senior Accountant
Subj: Information – FY16 2nd Quarter Labor Cost Report
t:\aclword\memo\16\2nd qtr labor cost rpt.doc

January 29, 2016

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None

Total labor cost increased \$78,961 (2.3%) from the prior year, same period. Attached in graphical format is a five-year comparative summary of total labor cost (Attachment A), overtime cost (Attachment B) and temporary employee cost (Attachment C) expended during the 1st half of each fiscal year. Also attached is a summary of total labor cost vs. budget (Attachment D), which shows that labor cost came in 10% under budget for the fiscal year-to-date, due primarily to the decision to leave the Chief Engineer position vacant through the fiscal year, and have those duties performed by the newly created Assistant GM Position.

Department	Increase / (Decrease) in Labor Cost vs prior FY	% Change
Administration	\$100,769	11.8%
Engineering	(\$58,047)	(8.8%)
Operations/Maint	(\$4,302)	(0.4%)
Construction/Maint	\$40,541	6.1%
Net Increase/(Decrease)	\$78,961	2.3%

Comment on Change from Prior Year

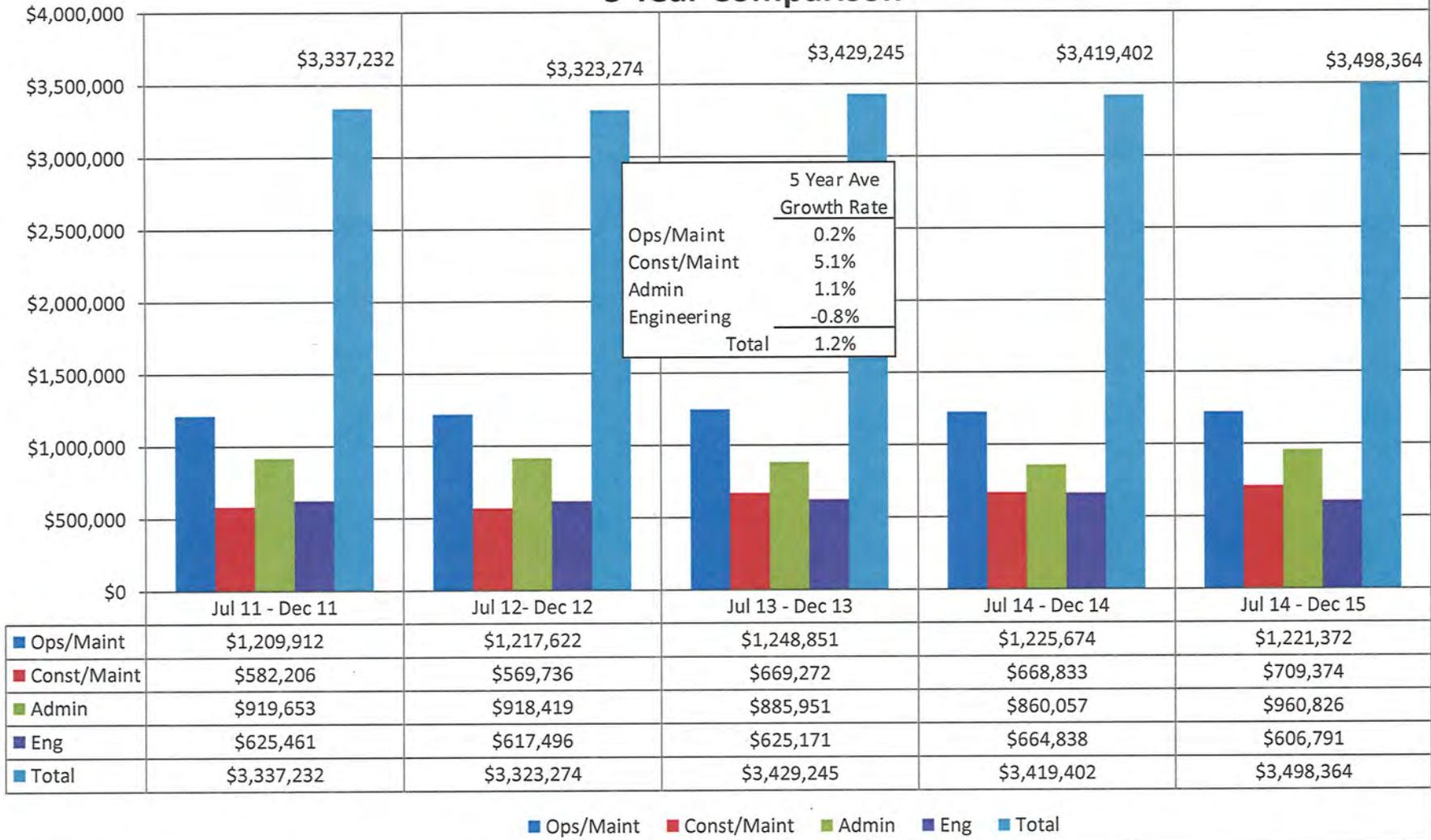
Administration: Labor Cost increased \$100,769, or 11.8%. The increase is primarily due to the addition of Shawn Kane to the Storekeeper position as of April 1, 2015, replacing an Engineering Department employee who had been performing those duties, and Chris Frazer to the Field Service Representative position at May 18, 2015, replacing a FSR who was out on disability during the prior year period, 9 step/spot adjustment increases and the 2.16% labor cost increase effective October 1 of 2015.

Engineering: Labor Cost decreased \$58,047, or 8.8%. The decrease is primarily due to the retirement of John Mello at June 30, 2015 and that position remaining vacant. The decrease is offset by the aforesaid 2.16% labor cost increase and the salary increase and promotion of Drew McIntyre to the newly created Assistant General Manager/Chief Engineer position.

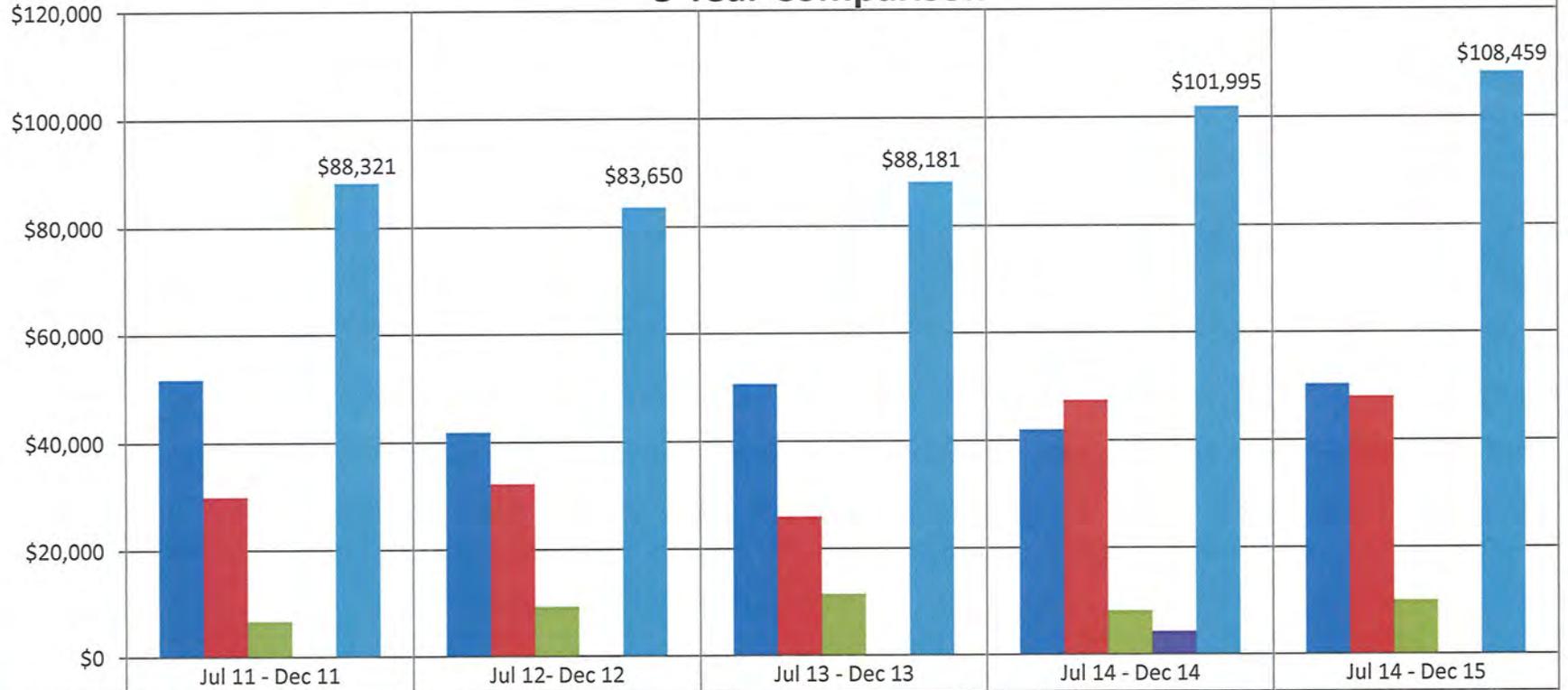
Operations/Maintenance: Labor Cost decreased \$4,302, or 0.4%. The decrease was primarily due Sue Kessler's absence due to injury beginning February 26th, 2015, offset by the addition of David Ladd to the Operations/Maintenance Program Assistant I position on October 19th, 2015, 6 step increases, increased use of Overtime and Temporary labor and the 2.16% labor cost increase.

Construction/Maintenance: Labor Cost increased \$40,541, or 6.1%. The increase was due to the addition of laborer Nicholas Barrilleaux to the crew, 7 step-increases and the 2.16% labor cost increase.

Total Labor Cost NMWD Fiscal Year through December 5 Year Comparison



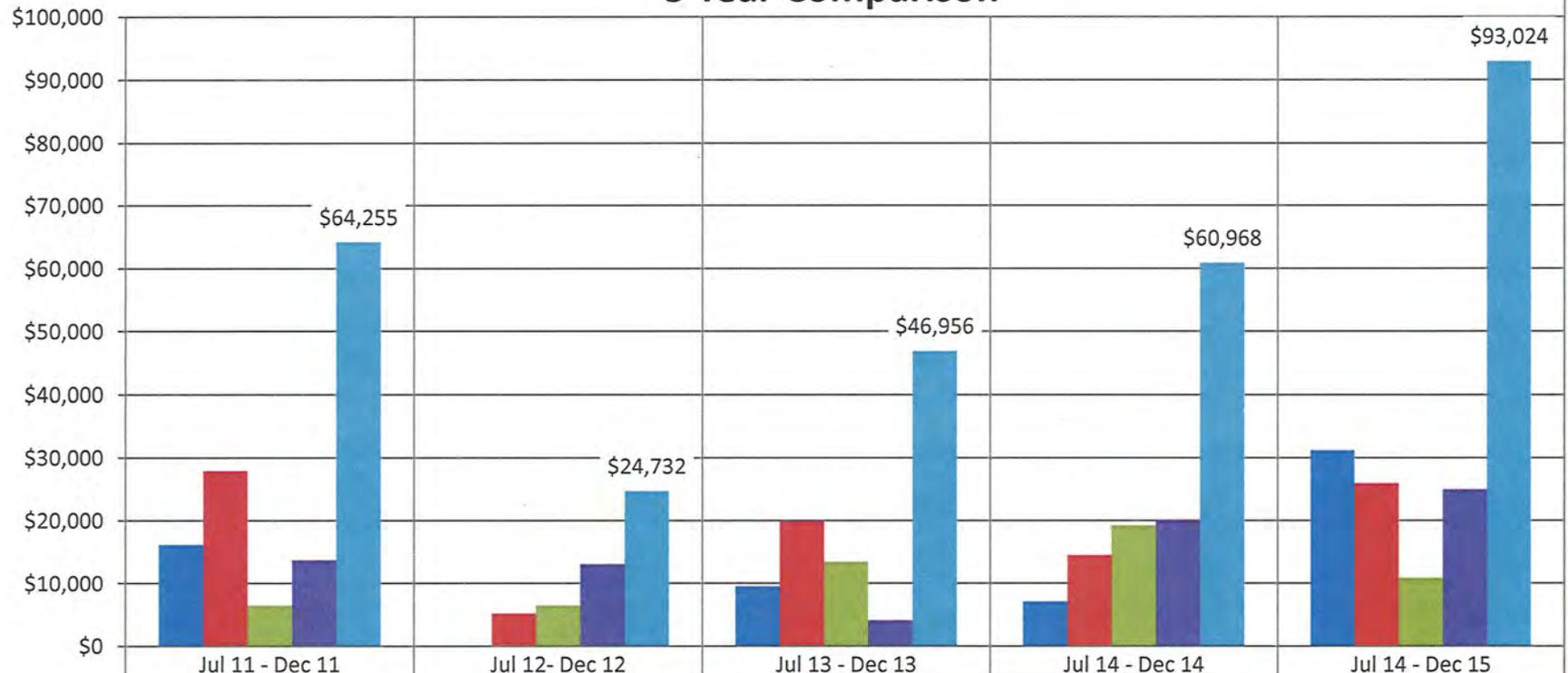
Overtime Cost NMWD Fiscal Year through December 5 Year Comparison



Ops/Maint	\$51,723	\$41,824	\$50,651	\$41,993	\$50,406
Const/Maint	\$29,914	\$32,186	\$25,988	\$47,382	\$47,979
Admin	\$6,684	\$9,422	\$11,543	\$8,268	\$10,074
Eng	\$0	\$219	\$0	\$4,353	\$0
Total	\$88,321	\$83,650	\$88,181	\$101,995	\$108,459

■ Ops/Maint
 ■ Const/Maint
 ■ Admin
 ■ Eng
 ■ Total

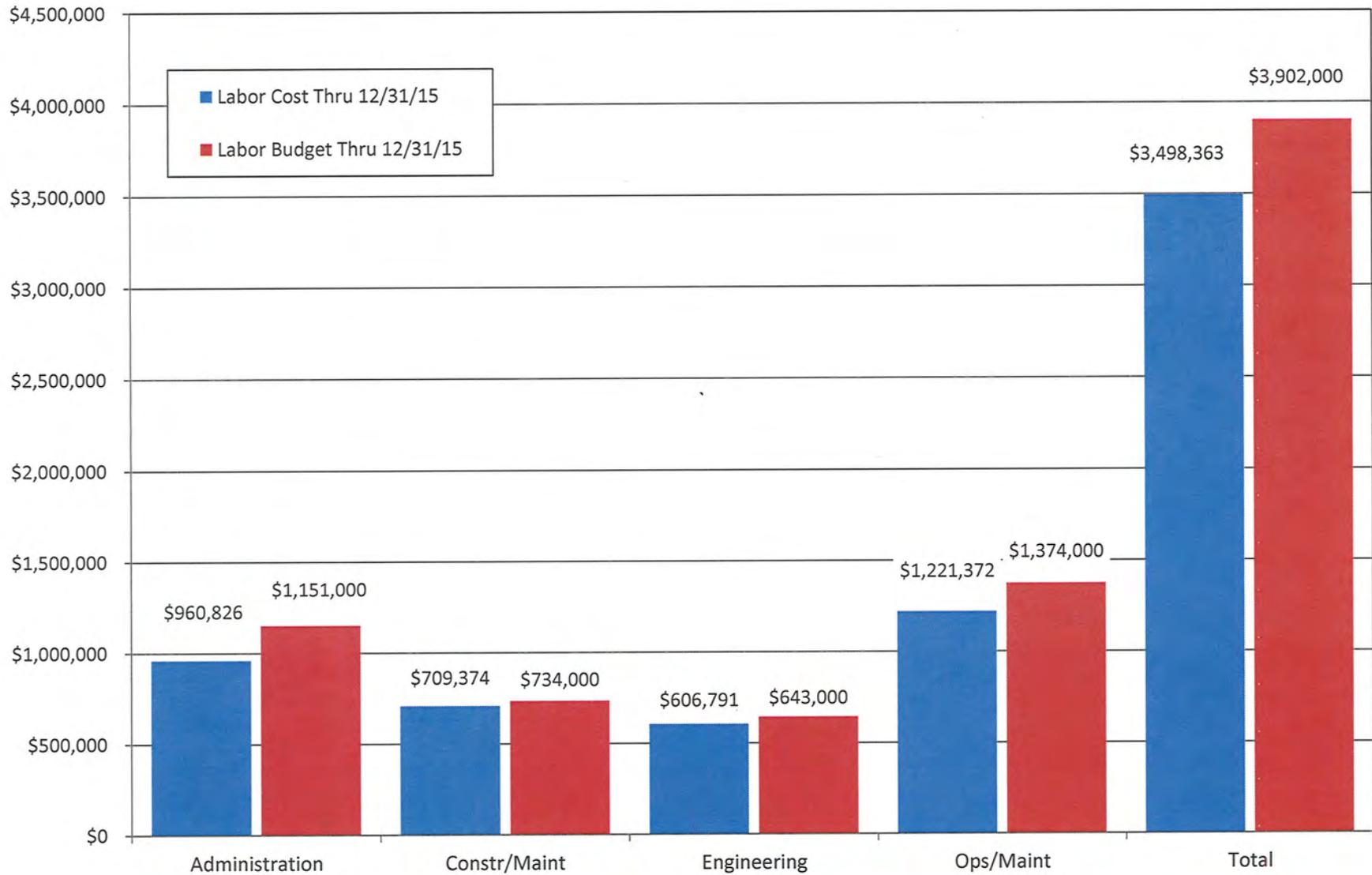
Temporary Employee Cost NMWD Fiscal Year through December 5 Year Comparison



■ Ops/Maint	\$16,204	\$0	\$9,555	\$7,136	\$31,218
■ Const/Maint	\$27,855	\$5,152	\$19,835	\$14,471	\$25,894
■ Admin	\$6,485	\$6,536	\$13,461	\$19,257	\$10,954
■ Eng	\$13,711	\$13,044	\$4,105	\$20,104	\$24,959
■ Total	\$64,255	\$24,732	\$46,956	\$60,968	\$93,024

■ Ops/Maint
 ■ Const/Maint
 ■ Admin
 ■ Eng
 ■ Total

Total Labor Cost vs. Budget NMWD Fiscal Year through December



MEMORANDUM

To: Board of Directors
From: Nancy Williamson – Sr. Accountant
Subj: Reimbursement Program 2015
t:\finance\reimb program\reimbmemo2015.doc

January 29, 2016

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: \$5,250 Reimbursement Payment to Developers

Regulation 30 (attached), Reimbursement for Extension of Pipelines that Benefit Others, allows developers to receive reimbursement for pipelines they are required to install which are not within the developers property. Reimbursement eligibility is determined by the District prior to execution of the Water Service Agreement, and is based upon the benefit to be derived from other potential users of the extended pipeline. The reimbursement entitlement is available only for installation of six-inch diameter pipeline and larger, and the first one hundred feet of said pipeline and fittings are not eligible for reimbursement.

Regulation 30 provides that each year following the first full year after completion of the extension, the District pays to each developer having a reimbursement entitlement a pro-rata share of all Reimbursement Fund Charges held by the District in its Reimbursement Fund Account. Reimbursement fund charges in Novato are \$420 for a 5/8" residential meter and \$1,055 for a 1" residential meter. Reimbursement fund charges in West Marin are \$1,950 for a 5/8" residential meter and \$4,950 for a 1" residential meter. Reimbursement Fund Charges received and reimbursement entitlements are accounted for separately for the Novato and West Marin Service Areas (the current year schedule is attached). A developer's reimbursement entitlement expires upon payment thereof by the District in full without interest, or on the tenth year of payment, whichever occurs first.

There were twelve participants in the Novato Reimbursement Program in 2015 representing \$1,534,742 in original reimbursement entitlements. We collected \$5,250 in Reimbursement Fund Charges during calendar year 2015 (versus \$16,055 in 2014) and that total was applied against the remaining reimbursement obligation of \$978,570, leaving a zero balance in the Reimbursement Fund Account. After this year's payment there remains an entitlement balance of \$303,527 in Novato due to 5 of the entitlements with a total remaining balance of \$669,792 expiring after being in the program for 10 years.

There were two participants in the Reimbursement Program for West Marin in 2015 representing \$216,183 in original reimbursement entitlements. The remaining reimbursement obligation of \$154,971 at the end of calendar year 2014 remains unchanged as the District did not collect any West Marin Reimbursement Fund Charges during calendar year 2015.

NORTH MARIN WATER DISTRICT

REGULATION 30

REIMBURSEMENT FOR EXTENSION OF PIPELINES THAT BENEFIT OTHERS

a. Reimbursement Entitlement for Off Tract Pipelines

The Reimbursement Entitlement for pipelines paid for by the Applicant but not within the Applicant's property shall be based upon the benefit to be derived by other potential users of said pipelines as estimated and determined by the District in its sole discretion. Reimbursement Entitlement will be considered only for pipelines and fittings of six-inch diameter and larger. The first one hundred feet of said pipelines and fittings except for the oversized portion are not eligible for Reimbursement Entitlement. In determining the Reimbursement Entitlement any pipeline footage traversing land in other water service zones or paralleling an existing water main shall not be considered eligible for reimbursement unless the District determines that such footage can reasonably be expected to be of benefit to abutting lands. The maximum Reimbursement Entitlement shall not exceed the maximum potential benefit to be derived by other users of the facilities paid for by the Applicant as determined by the District in its sole discretion.

b. Reimbursement Payments

In January of each year following the first full year after completion of the extension, the District will pay to each Applicant having a Reimbursement Entitlement, a portion of the total amount of Reimbursement Fund Charges established by Regulation 1.c. and received by the District from Applicants located within the same service area during the previous calendar year. Said portion shall be determined by multiplying said total amount of Reimbursement Fund Charges received by the quotient obtained by dividing the Applicant's unexpired reimbursement entitlement by the total of all unexpired reimbursement entitlements within the same service area. For the purpose of this Regulation, the Point Reyes and Paradise Ranch Estates Service Areas shall be considered one service area called the West Marin Service Area. Reimbursement Fund Charges received and unexpired Reimbursement Entitlements shall be accounted for separately for the Novato and West Marin Service Areas.

c. Expiration of Reimbursement Entitlement

The Applicant's unexpired Reimbursement Entitlement for a given year shall be determined by subtracting all prior reimbursement payments made to said Applicant from said Applicants' Reimbursement Entitlement. An Applicant's Reimbursement Entitlement shall expire and become invalid upon payment thereof by the District in full without interest, or on December 31 of the tenth year of payment on account thereof pursuant to Regulation 30.b. whichever shall first occur.

d. Acknowledgment of Necessity

Anyone who pays, deposits or agrees to pay all or part of the cost of any extension or improvement of the District's Water Distribution system hereby acknowledges that such extension or improvement is necessary and reasonable and releases the District from any liability based on a claim that a determination made by the District pursuant to Regulation 21 is or was unnecessary or unreasonable.

e. Assignment of Reimbursement Entitlement

The District will not recognize any assignment or attempted assignment of a Reimbursement Entitlement unless the assignment is in a form satisfactory to and approved in writing by the District and is signed and

acknowledged by the assignor. The District will furnish forms of assignment on request. Except with the prior written approval of the District, no assignment of a Reimbursement Entitlement shall be effective until the first payment thereon from the reimbursement fund is paid or payable.

f. Liens of Reimbursement Entitlement

The District shall have a lien upon all money payable as a Reimbursement Entitlement for any indebtedness to the District of the holder of said entitlement. The District may exercise said lien without notice by transferring the appropriate amount from Reimbursement Fund Charges paid to the District at the time annual reimbursement payments are made.

g. Non-Applicability

This Regulation 30 shall not apply to extension or construction of recycled water facilities. The District may, however, enter into reimbursement arrangements for recycled water systems it deems reasonable and fair on a case by case basis.

**NORTH MARIN WATER DISTRICT
REIMBURSEMENT PROGRAM - 2015
Allocation Calculations
GL Acct 22700-01**

1/20/2016

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Job Number	PROJECT	FIRST YEAR	FINAL YEAR	ORIGINAL ENTITLEMENT	TOTAL PRIOR REIMB PAID	ENTITLEMENT REMAINING 12/31/2015	REIMB PAID THIS YEAR	GRAND TOTAL REIMB PAID	ENTITLEMENT REMAINING 12/31/2016	% REIMB TO DATE
NOVATO:										
1.2546.00	Point Marin (aka Rafael Village)- Phase 1	2006	2015	\$11,395.00	\$4,985.38	\$6,409.62	\$34.39	\$5,019.77	\$6,375.23	44.05%
1.2574.00	Tamalpais Hill Subdivision	2006	2015	\$218,250.00	\$95,485.62	\$122,764.38	\$658.63	\$96,144.24	\$122,105.76	44.05%
1.2576.00	Cherryhill Pipeline Extension	2006	2015	\$642,542.00	\$281,115.78	\$361,426.22	\$1,939.04	\$283,054.82	\$359,487.18	44.05%
1.2597.00	Point Marin Phases 2 & 3	2006	2015	\$233,170.00	\$102,013.20	\$131,156.80	\$703.65	\$102,716.85	\$130,453.15	44.05%
1.2598.00	Atherton Estates	2006	2015	\$91,820.00	\$40,171.78	\$51,648.22	\$277.09	\$40,448.87	\$51,371.13	44.05%
1.2659.00	Lehman Land Division	2007	2016	\$24,492.00	\$2,822.17	\$21,669.83	\$116.26	\$2,938.43	\$21,553.57	12.00%
1.2635.00	Channel Drive Water Main Extension	2007	2016	\$18,486.00	\$2,130.11	\$16,355.89	\$87.75	\$2,217.86	\$16,268.14	12.00%
1.2617.00	Marion Heights	2007	2016	\$88,322.00	\$10,177.18	\$78,144.82	\$419.24	\$10,596.43	\$77,725.57	12.00%
1.2282.00	Oak Park Estates	2008	2017	\$16,319.00	\$1,541.12	\$14,777.88	\$79.28	\$1,620.40	\$14,698.60	9.93%
1.2576.01	Cherryhill Pipeline - Phase 2	2008	2017	\$143,341.00	\$13,536.71	\$129,804.29	\$696.40	\$14,233.10	\$129,107.90	9.93%
1.2692.00	Whole Foods	2010	2019	\$42,368.00	\$1,999.96	\$40,368.04	\$216.57	\$2,216.54	\$40,151.46	5.23%
1.2614.00	Somerston Park	2011	2020	\$4,237.00	\$192.84	\$4,044.16	\$21.70	\$214.54	\$4,022.46	5.06%
				\$1,534,742.00	\$556,171.85	\$978,570.15	\$5,250.00	\$561,421.85	\$973,320.15	36.58%
	Total Invested			\$1,534,742.00	\$556,171.85	\$978,570.15	\$5,250.00	\$561,421.85	\$973,320.15	36.58%
	% Earned			0.34%						
									Entitlements Expiring this year	(\$669,792.45)
									Remaining Entitlement Balance	\$303,527.71

Amt Remaining in Reimb Acct from 2014	\$0.00
Reimb collected 1/1/15 - 12/31/15 (22700-01)	5,250.00
Balance in Reimb Fund at 12/31/15	5,250.00
Paid out this year	(5,250.00)
Remaining in Reimb Acct after payments	\$0.00

WEST MARIN:

2.2530.00	Vallejo Avenue Extension	2007	2016	\$51,183.88	\$14,492.71	\$36,691.17	\$0.00	\$14,492.71	\$36,691.17	28.31%
2.2529.00	Pt. Reyes Affordable Housing	2007	2016	\$165,000.00	\$46,719.72	\$118,280.28	\$0.00	\$46,719.72	\$118,280.28	28.31%
	Total Invested			\$216,183.88	\$61,212.43	\$154,971.45	\$0.00	\$61,212.43	\$154,971.45	
	% Earned			0.00%						

Amt Remaining in Reimb Acct from 2014	\$0.00
Reimb collected 1/1/15 - 12/31/15 (22700-02)	0.00
Balance in Reimb Fund at 12/31/15	0.00
Paid out this year	0.00
Remining amount in reimbursement account	\$0.00

MEMORANDUM

To: Board of Directors

January 29, 2016

From: Nancy Williamson, Senior Accountant

Subj: Information – Equipment Inventory Summary

t:\finance\assets\2015 asset results.doc

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: \$ 65,800 Reduction in Capital Equipment Assets
 \$ 0 "Book Loss" on Disposition of Equipment

As part of the District's internal control, the accounting staff periodically conducts an inventory of the District's 270 pieces of capitalized equipment. The minimum threshold for capitalizing equipment is \$5,000. The 2015 inventory of equipment is now complete.

The inventory revealed that 8 pieces of equipment had been disposed of in 2015. The purchase cost of the 8 items was \$65,800 (one item, the Ion Chromatograph, with a purchase cost of \$45,073, had prior Board approval to surplus). This compares to 2014's \$25,773 in discarded equipment.

All equipment items that were disposed of were fully depreciated and had \$0 book value (book value is original cost less accumulated depreciation), so there is no gain or loss to be recognized on the District's income statement.

MEMORANDUM

To: Board of Directors
From: David L. Bentley, Auditor-Controller
Subj: Increase in Directors' Compensation
t:\acl\word\directors\comp incr 2016.docx

January 29, 2016

RECOMMENDED ACTION: None - Information Only

FINANCIAL IMPACT: \$1,000 Annually

In accordance with Ordinance No. 27 pertaining to Director's Compensation, said compensation amount shall be escalated annually on each January 1st based upon the change in the San Francisco Bay Area Consumer Price Index for the prior 12 month period, but by no greater than 5% per year, pursuant to California Water Code section 20200 et seq. The change in the SF Bay Area CPI in 2015 was 3.18%. Therefore, effective January 1, 2016, each director shall receive compensation of two hundred and twelve dollars (\$212) per day for each day's attendance at meetings of the Board, or for each day's service rendered as a director with prior approval of the Board.

Director's compensation for the five-member Board is budgeted at \$32,000 annually, thus a 3.18% increase will add approximately \$1,000 in cost to the District annually.

BOD MISC

Chris DeGabriele

From: MTC <mtc.updates@service.govdelivery.com>
Sent: Tuesday, January 26, 2016 9:18 AM
To: Chris DeGabriele
Subject: Calling the Bay Area Home: Tackling the Affordable Housing and Displacement Challenge Feb. 20



You're Invited!

Special Forum

Calling the Bay Area Home: Tackling the Affordable Housing and Displacement Challenge

Saturday, February 20, 2016, 9 a.m. to 1:30 p.m.

Oakland Marriott City Center 1101 Broadway, Oakland (at 12th St. City Center BART Station)

Please join us at a half-day event bringing together community and business leaders, housing developers, elected officials and city planners for a timely and important dialogue on the role that Bay Area local governments and regional agencies — as well as the state and federal government — can play in

addressing skyrocketing housing costs and displacement of long-time residents.

Who should attend?

- Elected officials and local agency staff
- Community and business leaders
- For-profit and affordable housing developers
- Advocates

This half-day forum will focus on:

- Regional trends and community impacts
- Common challenges and barriers
- Local and regional strategies, solutions and implementable actions
- Appropriate role for local jurisdictions, regional agencies, and state and federal government

Participants will also break out into four smaller groups to discuss specific challenges and strategies for (1) San Francisco, (2) the Peninsula and South Bay, (3) the East Bay and (4) the North Bay. Your comments will help inform future discussions and actions.

To learn more and register, click [here](#).

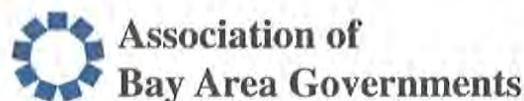
This forum is provided at no charge; we need your registration information to ensure sufficient space and lunches.

Sponsored by the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), as part of the update to Plan Bay Area 2040.

Do you need an interpreter or any other assistance to participate? Please call 510.817.5757 or 510.817.5769 for TDD/TTY three days in advance.

¿Necesita un intérprete u otra asistencia para participar? Por favor llámenos con tres días de anticipación al 510.817.5757 o 510.817.5769 para TDD/TTY.

您是否需要翻譯員或任何其他幫助才能參加呢？請提前三天致電510.817.5757或聽障專線 (TDD/TTY) 510.817.5769



This email was sent to cdegabriele@nmwd.com using GovDelivery, on behalf of: Metropolitan Transportation Commission · 101 Eighth Street · Oakland, California 94607
510.817.5700 · www.mtc.ca.gov



BOD MISC

Chris DeGabriele

From: Keene Simonds <KSimonds@marinlafco.org>
Sent: Monday, January 25, 2016 4:47 PM
To: Keene Simonds
Cc: Rachel Jones
Subject: Marin LAFCO / Save the Date for Wednesday, February 17, 2016 Workshop

Save the Date...

Marin LAFCO has scheduled the agency's annual workshop for Wednesday, February 17th at 555 Northgate Drive in San Rafael. Doors will open at 8:30 A.M. with light breakfast offerings for all attendees. The workshop will formally begin at 9:00 A.M and facilitated by William Chiat with the Alta Mesa Group. A final agenda program will be separately distributed shortly. Anticipated session items include all of the following.

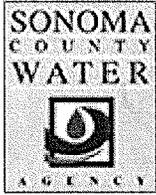
- **LAFCO Primer 2.0 (9:00 am to 10:00 am)**
This session will provide a big-picture overview of LAFCOs' existing and emerging duties/responsibilities in providing regional growth management services as prescribed under State law. The session expands on the primer provided at the prior year's workshop with additional focus on municipal service reviews and related activities therein.
- **Strategic Planning | 2015 Review and 2016 Preview (10:00 am to 11:00 am)**
This session will review progress made in addressing Commission goals and implementing objectives in the strategic plan adopted for 2015. The Commission will also discuss potential changes in advance of adopting a new strategic plan for 2016.
- **Study Schedule (11:00 am to 11:30 am)**
This session will review the current study schedule calendaring municipal service reviews and sphere of influence updates through 2017/18. This review will provide the Commission an opportunity to discuss potential changes – if any – to the current schedule as well as related items of importance now and going forward in meeting its directive to regularly prepare studies that independently assess the availability, performance, and need of governmental services.
- **Regular Meeting Options (11:30 am to 12:00 pm)**
This session will review options with regard to setting the date, time, and location of regular meetings going forward.

All interested parties are invited to attend all or parts of the workshop. With this in mind, and in order to help plan accordingly, please let LAFCO staff know if you plan on attending the workshop by emailing Analyst Rachel Jones at rjones@marinlafco.org. You are also welcome to contact me with any questions on the workshop. Thank you.

Keene

Marin Local Agency Formation Commission
Regional Service Planning / Subdivision of the State of California
555 Northgate Drive, Suite 230
San Rafael, California 94903
415-446-4409 Main
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ENews

A periodic electronic newsletter

Securing our Future by Investing in our Water Resources, Environment & Community



January 2016

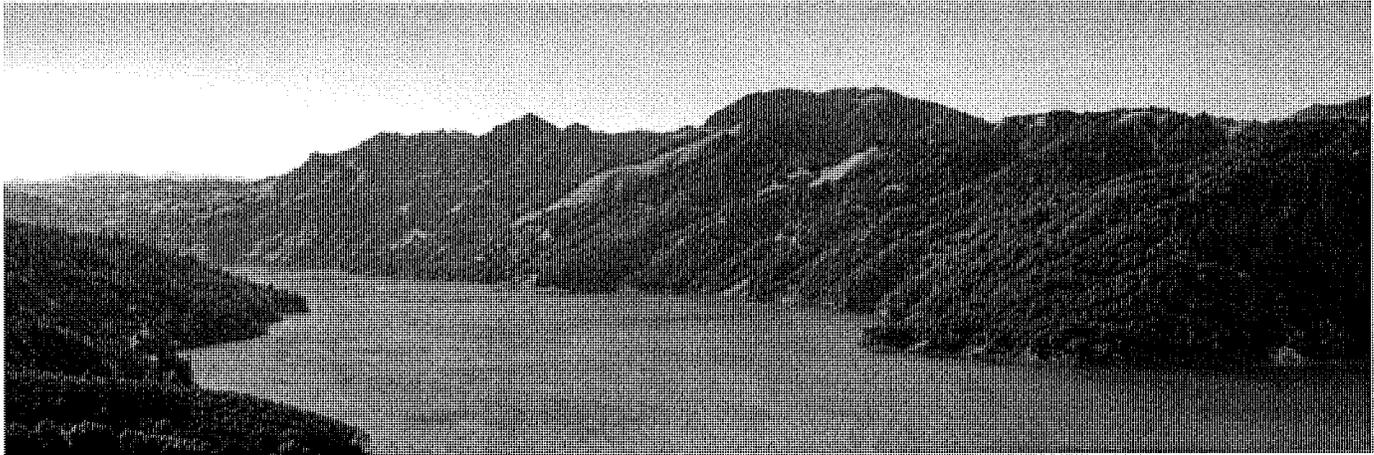


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Meetings & Events

Board of Directors meetings

2/02/16
2/09/16

Lake Sonoma Steelhead Festival

Reservoirs rising thanks to El Nino

The new year has brought with it a series of atmospheric river systems influenced by El Nino which has helped increase water supply levels in local reservoirs and rainfall totals. The question on everyone's mind is whether or not the drought is over in the North Bay. If wet conditions continue and water supply levels in both Lake Sonoma and Lake Mendocino continue to increase, it is possible that the emergency drought declaration called by the county could be lifted. However, a statewide drought declaration may still exist and therefore our region would still be held accountable to statewide drought regulations, including water conservation goals.

Below are the latest water supply and rainfall totals since Monday, January 25:

Water Supply:

Lake Sonoma: 93.3% of water supply capacity

Lake Mendocino: 99.3% of targeted water supply capacity

Rainfall to date:

Ukiah:

Average (1894-2015 water years) 19.91"

Current Water Year: 21.98" which is 110.4% of average

Santa Rosa:

2/13/16

Average (1950-2015 water years) 16.57”
Current Water Year: 19.16” which is 115.7% of average

Offices Closed

Lincoln's Birthday:
2/12/16

President's Day: 2/15/16

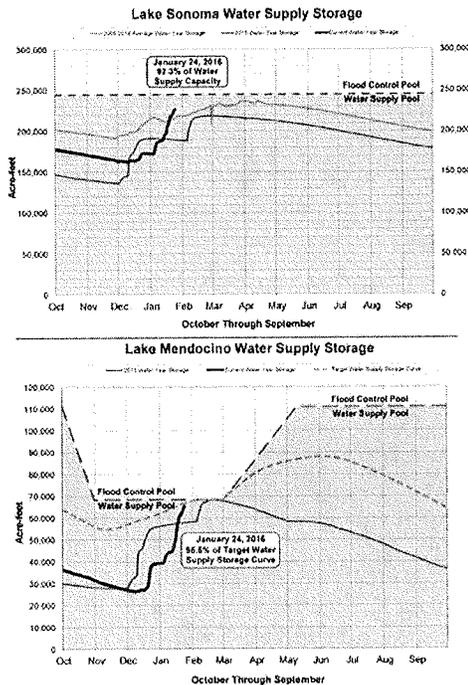
To view updated water supply data, please visit our website, www.sonomacountywater.org.

Keeping water in Lake Mendocino, Army Corps implements storage curve deviation

Recent storms have increased Lake Mendocino’s target water supply capacity to over 99 percent. Keeping as much water in the reservoir without compromising flood protection or dam safety is now the goal of reservoir operators including the Sonoma County Water Agency and the U.S. Army Corps of Engineers. When water rises enough to enter the flood control pool of the reservoir, the Corps takes charge of releasing water. The Water Agency manages reservoir releases when water levels remain in the water supply pool.

It is anticipated that water will enter the flood control pool in the very near future, pending future storms. In order to maximize that additional water storage, the Corps has agreed to store an additional 5,800 acre-feet of water in the flood control pool – the Corps calls this action a minor deviation from its flood control manual. This manual that was written in the 1950s and mandates when and how much water must be released from the reservoir for flood control and dam safety purposes. The Water Agency is extremely thankful for the Corps agreeing to implement the minor deviation. The Water Agency is hoping that given drought conditions and the unknown of what the rest of winter and spring rainfall may look like, that the Corps will also implement a major deviation, which would increase holding additional water in the flood control pool. This additional water can help protect our communities and environment from devastating drought conditions if Mother Nature decides to turn off the rain spigot for the rest of the year. The Water Agency is awaiting to hear from the Corps on this additional request.

Learn more about how our reservoirs are managed by visiting our website.



Sen. Feinstein's new drought bill includes drought tools for North Bay

From how reservoirs are operated in order to maximize water supply, to developing innovative financial tools to build more recycled water storage ponds, Senator Feinstein this month unveiled legislation that would help local water managers better prepare for and manage current and future droughts.



Specifically for the North Bay, the legislation includes:

1) Recycled water innovative funding: Authorizes \$200 million for the Reclamation Infrastructure Finance and Innovation Act, known as RIFIA. This loan-guarantee program will help water districts and municipalities fund long-term solutions to store water and provide clean water. The bill also authorizes \$10 million through 2019 for EPA's WaterSense program to provide information on water-efficient products that reduce household water use.

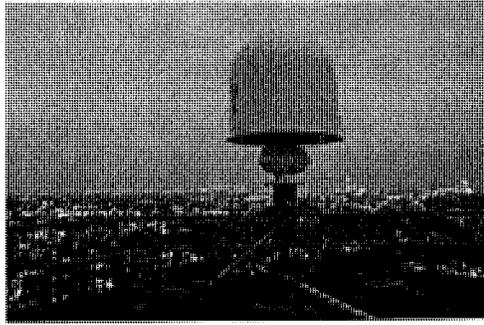
2) Reservoir operation improvement: Authorizes up to 15 pilot projects to implement revisions of water operations manuals, including flood control rule curves, based on the best available science, which may include—(A) forecast-informed operations; (B) new watershed data; and (C) if applicable, in the case of non-Federal projects, structural improvements.

The Water Agency and its stakeholders are encouraged by the inclusion of these and other tools that will help address drought conditions and support ongoing strategic water supply management practices.

[Read more about the legislation here.](#)

Bay Area Atmospheric River Forecasting Project Receives \$19 Million

The California Department of Water Resources on January 13 announced statewide Proposition 84 (The Safe Drinking Water, Water Quality and Supply, Flood



Control, River and Coastal Protection Bond Act of 2006) grant awards that include over \$43 million for water resources-related projects in the San Francisco Bay Area. Nearly half, or \$19 million, will go towards funding the Advanced Quantitative

Precipitation Information system which the Sonoma County Water Agency helped develop along with a coalition of local and federal agencies.

The funding will be used to place up to five new X-band radar units throughout the Bay Area, specifically to provide more precise rainfall forecasting for atmospheric rivers. It is estimated that over the last few decades more than 50 percent of major flooding in the Bay Area, and closer to 70 percent in the North Bay, has come from atmospheric rivers that often are not detected with conventional, high-aiming S-band, or NEXRAD, radar units that were originally designed for thunderstorms in the Midwest. The new radar system also will give flood control managers, emergency responders, transportation officials and media outlets more precise information on just where, when and the intensity of expected rainfall.

Learn more here.

MCL's Business Members
provide ongoing support of the
Business-Environment Breakfast series.

A.A. Rich & Associates	Kamman Hydrology & Engineering	Nute Engineering
Agricultural Institute of Marin	Dotty LeMieux	Outdoor Art Club
Angel Island Conservancy	Lukens Law Group	Perry's Art Supplies & Framing
ATCO Pest Control	Marin Clean Energy	R & J McClelland Dairy
Bank of Marin	Marin Garden Club	Roost Home Furnishings
Bartlett Tree Experts	Marin Municipal Water District	Santa Venetia Neighborhood Association
Bellam Self Storage & Boxes	Marin Sanitary Service	Seagate Properties, Inc.
Book Passage	Marin Theatre Company	Serenity Knolls
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Cagwin & Dorward Landscape	MarinLink	Taste Marin
California Native Plant Society	Markoff / Fullerton Architects	Tom Harrison Maps
Equinox Landscape	McPhail Fuel Co.	Tomatina
Evo Spa	Morre & Company, LLP	Weinress & Associates
ExtraFood.org	Moylan's / Marin Brewing	Law Offices of David J. Weinsoff
Fairfax Lumber & Hardware	North Marin Water District	Yoga Tree
Gardeners' Guild, Inc.	Linda J. Novy & Associates	

We cordially invite businesses and organizations to become Business Members of the Marin Conservation League. For information, contact MCL at 415-485-6257 or mcl@marinconservationleague.org.



Protecting Marin Since 1934

Friday, January 29, 2016

7:30 - 9:00 a.m.

McInnis Park Club Restaurant
San Rafael, California

Business-Environment Breakfast

WATER: STATEWIDE + MARIN ARMANDO QUINTERO

PROGRAM

7:30 Buffet Breakfast

7:50 Welcome

KATE POWERS, President, MCL

Introduction

LINDA J. NOVY, Director, MCL

8:00 Presentation

ARMANDO QUINTERO

Q & A

9:00 Adjourn

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Door Prize Donated by:
Armstrong Nursery, San Anselmo

Twig & Moss Birdhouse
\$30 Value

Recent Business-Environment Breakfasts

Congressman Jared Huffman
Speaker

United States Congressman, California 2nd District

"State Legislation Update"

Speaker: Senator Mike McGuire

California Senate District 2, North Coast/North Bay

"The Effects of Pesticides on Bees"

Speaker: Dr. Susan Kegley

Principal and Founder, Pesticide Research Institute

*We invite your suggestions for future topics and speakers.
Contact the MCL office with your ideas at 415-485-6257
or email mcl@marinconservationleague.org.*



Protecting Marin Since 1934

The Marin Conservation League was founded in 1934
to preserve, protect and enhance
the natural assets of Marin County.
175 N. Redwood Dr., Suite 135, San Rafael, CA 94903
(415)485-6257
marinconservationleague.org

Armando Quintero

Armando Quintero served as a national park ranger for 24 years, which included roles at Point Reyes National Seashore and Golden Gate National Recreation area. He was an "at home" father for 10 years in Marin, during which time he taught science, art and spanish in San Rafael Schools as a consultant. An avid naturalist he has led walks and programs in Marin, the



East Bay, Sequoia National Park and Baja California for over 30 years.

Currently the Executive Director of the Sierra Nevada Research Institute at UC Merced, Armando also serves on the Board of the Marin Municipal Water District. He was

appointed by Governor Brown to the California Water Commission in June of 2014. He and his wife live in San Rafael. They have two daughters, one is an RN and the other is pursuing a degree in Chemistry at UC Santa Cruz.

Armando will speak about new research on water and climate, the challenges of planning for the designated portion of the Water Bond for water storage projects in California, and water management and the new rate structure at MMWD.

Water report rankles Marshall, ponders sewers

By Samantha Kimmey
01/21/2016

A county commission's recommendation to excise Marshall from the North Marin Water District has drawn hearty protest from the East Shore Planning Group, which says the long-term impacts of climate change could force the area, which now relies on wells and spring water, to require the district's services in the future.

"We're not worried about the near term. In fact, the mid-term may not even be our concern. Our attention is focused on long-term water strategies," Lori Kyle, the group's president, told the Local Agency Formation Commission before it tentatively approved a final draft of a report on the county's six special water districts last week. A second public hearing is scheduled for Feb. 11, when the commission will consider codifying its determinations.

Ms. Kyle said well salinization, the impacts of climate change and the possible diversification of Marshall's ranches all point to a need for more water. Given the unknowns, "to be spun off now seems really an anomaly," she said.

Excising 7,700 acres from North Marin's boundaries—including the East Shore of Tomales Bay and portions of northern Inverness—would "clean up" the district's boundaries, since North Marin has never served those areas, said Keene Simonds, LAFCO's executive director.

(Some Inverness and Marshall residents who live within the boundary vote for North Marin's board of directors.)

North Marin's general manager, Chris DeGabriele, called Marshall's inclusion in the district boundaries an "artifact of history." In the 1960s and '70s, during plans to develop a booming populace in West Marin, the district included the East Shore in its bounds as a potential spot for a reservoir.

"That doesn't diminish their concerns," Mr. DeGabriele said. "But what the territory was annexed for a long time ago—over 50 years ago—is no longer contemplated."

The final report says that North Marin Water District should include the East Shore community in the detachment discussion. But it still contains a recommendation that the commission should consider "special legislation to expedite the boundary change and avoid the costs and uncertainties tied [to] holding protest proceedings," a point that particularly piqued the planning group.

The East Shore proposal was just one of 15 conclusions and 15 recommendations by LAFCO, which is allowed specific powers, including to approve or deny boundary changes for special districts; conduct service reviews; dissolve or consolidate special districts if a study determines such a move would best serve customers; and analyze economically disadvantaged communities' access to municipal services.

Marin's commission is comprised of two county supervisors, two city officials, two special district board members and a member of the general public.

The water service report, the first of its kind, is meant to "inform the general public" as well as create a "source document" for future LAFCO actions, Mr. Simonds said. The review is to be updated every five years, according to state legislation.

That five-year time frame has been a source of frustration for other West Marin districts.

The report concluded that water demands increased for almost all seven services areas between 2009 and

2013, with the exceptions of Marin Municipal and North Marin's West Marin area. Since the increase outpaced population growth, the report tied it to usage, not development.

The report also found that, given the county's Housing Element, Marin's population could grow by an estimated 30,000 people, which would "further stress systems already projected with deficits in single-dry year conditions." (Mr. Simonds said later that such growth may not come for another 50 or even 200 years.)

The commission recommended that all agencies at least consider enhancing water supplies.

North Marin, Bolinas Community Public Utility District and Inverness Public Utility Districts each responded to a draft report that five years was too short a period from which to draw conclusions about trends. Their own analyses, with longer windows, show decreasing demand.

In a letter sent in November, B.C.P.U.D. called LAFCO's conclusion about it "erroneous," saying water use in fact declined 5 percent annually from 2006 to 2014.

IPUD's general manager, Scott McMorrow, said this week that a "massive blip" in 2013, when water use was abnormally high, skewed the five-year window and made it seem like use was increasing. The district's 23-year analysis of water use shows flat or slightly decreasing demand.

Mr. Simonds said the differing findings simply reflect analyses of the same data using different time frames, and that the five-year window reflects the legislative mandate to update the study every five years.

The final report was altered to make the benchmarks of the study clearer, and the agencies' own data were added as appendices.

Another debated finding centered on LAFCO's conclusion that B.C.P.U.D. could not meet its average daily peak demand, which typically occurs on holiday weekends like Independence Day, when visitors flock to town. By LAFCO's analysis, average peak-day demand between 2009 and 2013 exceeded current treatment capacity; by 2023 it could exceed it even more.

The report said the town should boost its treatment capacity when it has available resources.

But B.C.P.U.D. said it has nearly four times the amount of peak-day demand of treated water in its storage tanks at all times, and therefore no reason to invest customer revenue in expanding its treatment plant.

The report also said peak averages for Inverness and Stinson Beach will match treatment capacity by 2023.

Mr. McMorrow disagrees. "First of all, we think that's its more accurate to look at a longer time frame. Secondly, one thing that peak-day doesn't account for is storage. Even if you exceed peak-day demand, that's what storage can be used for. We have 425,000 gallons in tank storage capacity," he said.

But Mr. Simonds said it is LAFCO's job to imagine different scenarios. "What if you had a peak-day demand event, plus a water line break or a fire issue? Your ability to address those types of issues comes under question," he said.

The report also recommends that the commission assess the "viability of any service and cost efficiencies" of consolidating North Marin and Marin Municipal, the county's two biggest water districts.

Perhaps the most surprising recommendations was that the commission start investigating wastewater potential in West Marin.

The report says LAFCO "should explore and discuss the potential to establish community wastewater systems"

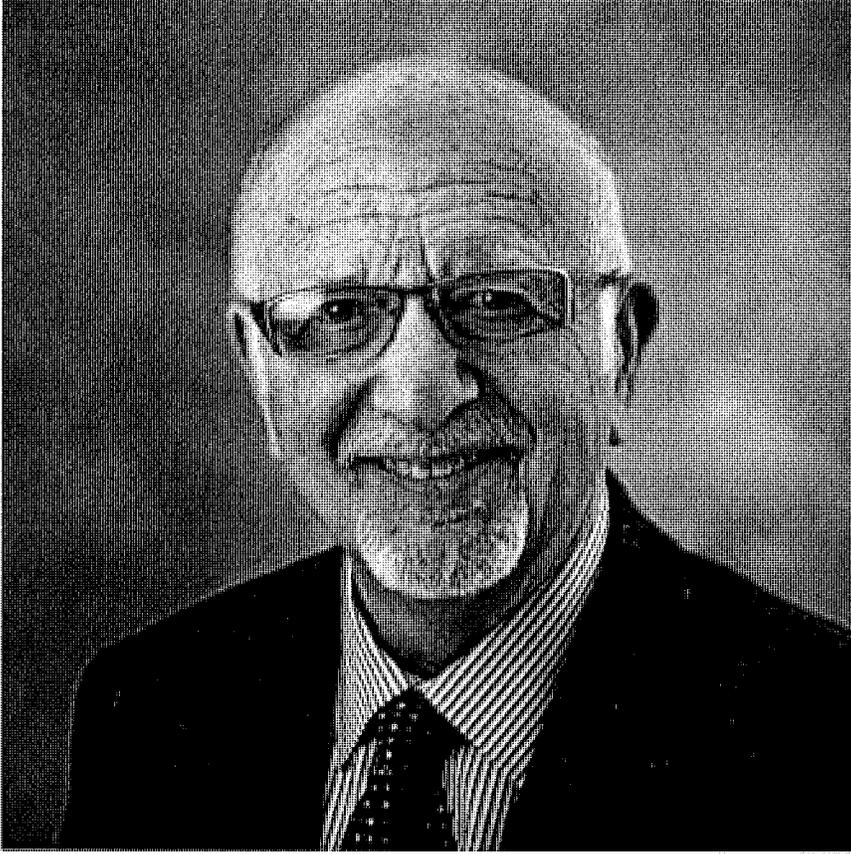
in Muir Beach, Inverness, Stinson and Point Reyes Station, “given the increasing cost and environmental considerations tied to maintaining septic systems in the area.”

Jack Baker, a commissioner and a board director for North Marin, raised concerns about that recommendation. “It still seems there are a few things I’m troubled by, such as encouraging North Marin to get into sewer service out in West Marin. That’s a very complicated, dicey subject, technically [and] politically.”

Mr. DeGabriele said the recommendation made no sense in a study of drinking water. “You might want to take that up in some other avenue, but you didn’t study wastewater at all in this study,” he said. “There’s no nexus.”

Mr. Simonds disagreed, countering this week that septic systems can malfunction and contaminate the quality of drinking water. Creating wastewater systems in West Marin would take decades, he said. “But I think it’s important that West Marin start thinking of these things now—with LAFCO and with the county—so that if a game plan is ultimately to create a community wastewater system, planning starts occurring sooner rather than later.”

Frank Egger runs for Ross Valley supervisor



Frank Egger is a candidate for Supervisor Katie Rice's Second District seat. Robert Tong — Marin Independent Journal

By Nels Johnson, *Marin Independent Journal*

POSTED: 01/21/16, 4:48 PM PST | UPDATED: 1 HR AGO 2 COMMENTS

Veteran Ross Valley politician Frank Egger of Fairfax, saying the region needs a “public advocate” on the Board of Supervisors, has jumped into the race for the county board seat held by Katie Rice.

The 77-year-old Egger, who served on the Fairfax Town Council for 40 years, said he will step down from his post on the Ross Valley Sanitary District board, where he has served since 2010, to challenge Rice on the June ballot. Also seeking the seat is Larkspur Councilman Kevin Haroff.

Egger, saying the county has lost its reputation for environmental stewardship, called for a ban on use of herbicides and pesticides, an end to “monster” high density housing projects and a cutback on use of consultants at the Civic Center. He called for small-scale “green solutions to flood mitigation that cost less money and will not destroy our children’s parks and playfields.”

Egger, who ran against Barbara Boxer for a county board seat in 1976 but lost in the primary, also mounted unsuccessful campaigns for Assembly, county assessor and Marin Municipal Water District. But he sized up his chance of winning Rice’s board seat as “good,” saying issues including flood control have put the post up

for grabs.

The flood control program Rice is promoting, including plans to turn Lefty Gomez Field in Fairfax into a flood basin, makes no sense, according to Egger, who helped draft the initiative that ended plans to turn San Anselmo's Memorial Park into a flood basin. "It's crazy to think about putting a detention basin in a children's playground," he said. Instead, officials should focus on smaller projects such as enlarging culverts and removing tree debris from creeks, perhaps even shifting Fairfax Town Hall away from the creek, he said.

Egger lashed out at regional planning agencies that threaten local control, and said the county does not need "to become San Jose North to have affordable housing. Monster market rate housing projects with a handful of affordable units are not the answer," he said. "Small, properly scaled infill projects consistent with community values and junior second units are."

As for traffic woes, he pledged to focus on transit and proposed "an Uber model" transportation program involving "an app-driven system of small transit vans that can go into neighborhoods or up into the hills for immediate pickup to take folks to various local destinations."

He advocated conservation of water resources, saying "we need to be capturing and harvesting rainwater and installing cisterns for irrigation for use during summer months. ... My proposal to install 10,000 water barrels in the Ross Valley in conjunction with Marin's water district can hold as much as 10 million gallons if properly managed."

He called for raising the minimum wage to \$15 per hour, proposed "pesticide free zones" for all county lands, parks, open space, creeks, trails and public rights of way and school grounds and said bicyclists should not be allowed on any more "single track trails in our watershed."

At the Civic Center, he added, officials should rely on county employees to get the job done, rather than hire consultants for "tens of millions of dollars" as a new layer of government. "I will work to rein in the county's out of control consultant costs. ... Unfortunately consultants are driving county government," he said. "We have excellent employees who can do this work," he added. "I've always been a very frugal person with the people's money."

Calling himself a "solution-oriented guy," he noted governance improvements at the Ross Valley Sanitary District during his tenure. "It was a mess when I got there in 2010, but I will leave it in pretty good shape," he said.

Advertisement

He noted he voted against a sewer fee increase as too much to fund the wrong programs, and added he has opposed other tax and fee boosts as well, including a recent effort to impose a regional mosquito tax.

Taking pride in being a "voice of the people" progressive who is "on the left," Egger has been involved in a variety of environmental lawsuits and issues over the years, including campaigns to protect the Eel, block Marin Municipal's desalination project plan, ban plastic bags, stop aerial pesticide spraying and prohibit

cultivation of genetically modified organisms.

Egger, a native of San Francisco, has lived in the Ross Valley for 57 years, first in San Anselmo before moving to Fairfax in 1963. He and his wife, Ronita, have a daughter, Lori, and two grandchildren.

He graduated from St. Ignatius High School and attended the University of San Francisco before joining Kilpatrick's Bakery as a truck driver. He worked there 44 years and served as president of his union, Local 484. The Eggers now own a boutique winery in Cazadero, where his Italian immigrant grandparents had a vineyard during Prohibition.

In Your Town for Jan. 22, 2016

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THE COUNTY

Water board names Koehler president

Cynthia Koehler of Mill Valley is the new president of the Marin Municipal Water District Board of Directors for 2016. She replaces Jack Gibson. Larry Russell of Tiburon is now vice president.

Koehler originally joined the MMWD board in 2004 and was most recently re-elected unopposed in 2014. She represents MMWD Division 4, which includes Mill Valley and surrounding neighborhoods, Sausalito, Marin City, and nearby public lands. Koehler also chairs the district's Finance and Communications committees.

Koehler is the executive director and co-founder of Water Now, a nonprofit dedicated to sustainable water solutions at the community level. MMWD's five-member board of directors also includes Larry Bragman, of Fairfax, Armando Quintero, of San Rafael and Gibson, of Sleepy Hollow.