Date Posted: 12/30/2016

NORTH MARIN WATER DISTRICT

NORTH MARIN WATER DISTRICT
AGENDA - REGULAR MEETING
January 3, 2017 – 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***, December 20, 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***
		ACTION CALENDAR
	5.	***Approve:*** Contract Extension for NMWD Trench Restoration Paving
	6.	***Approve:*** Content for Winter 2017 Bill Insert
		INFORMATION ITEMS
	7.	Summary from the Danish Water Technology Alliance Fact Finding Tour
	8.	NBWA Meeting – January 6, 2017
	9.	TAC Meeting – January 9, 2017
	10.	***MISCELLANEOUS*** Disbursements Update- Bill Payment Options SWRCB – Correction to Order for Additional Information Save the Date – January 30, 2017 Shaping the future of ABAG Marin LAFCo Notice of Special Meeting and Agenda Think Tank's Infrastructure Plan for U.S. Waterways Emphasizes Dam Removal <u>News Articles</u>: City sets forum on Bel Marin Keys plan Notice – NMWD Board Vacancy
8:00 p.m.	11.	***ADJOURNMENT***

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

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DRAFT
NORTH MARIN WATER DISTRICT
MINUTES OF REGULAR MEETING
OF THE BOARD OF DIRECTORS
December 20, 2016

CALL TO ORDER

President Petterle called the regular meeting of the Board of Directors of North Marin Water District to order at 7:00 p.m. at the District headquarters and the agenda was accepted as presented. Present were Directors Jack Baker, Rick Fraites, Stephen Petterle, and Dennis Rodoni. Also present were General Manager Chris DeGabriele, District Secretary Katie Young, Auditor-Controller David Bentley and Chief Engineer Drew McIntyre.

Novato Residents, Frank Rebelo, Gary Butler, and Mike Joly, Point Reyes Resident Rhonda Kutter, District employees Ryan Grisso (Water Conservation Coordinator) and Tony Arendell (Construction/Maintenance Superintendent) were in the audience.

MINUTES

On motion of Director Fraites, seconded by Director Baker the Board approved the minutes from the previous meeting as presented by the following vote:

AYES: Director Baker, Fraites, Petterle and Rodoni

NOES: None

ABSENT: Director Schoonover

GENERAL MANAGER'S REPORT

Chief Engineer Position

Mr. DeGabriele advised the Board that the new Chief Engineer Rocky Vogler will start on January 17th. He informed the Board that Mr. Vogler successfully completed his medical exam on December 8th and came into the office to meet with the Engineering staff and others. He noted that staff willl prepare a press release to inform the public when he arrives.

Mr. DeGabriele advised the Board that he has not yet concluded on a date of departure. He informed the Board that he'll make sure that the Chief Engineer transition is solid and provide ample time for the GM transition between Mr. McIntyre and himself.

Meeting Thursday

Mr. DeGabriele informed the Board that staff from SCWA, MMWD and NMWD will meet this Thursday to discuss development of a decision support tool to evaluate operational strategies that may improve water supply reliability between the three agencies.

Director Rodoni suggested that the meeting scheduled this Thursday between the managers of NMWD, MMWD and SCWA would be a good time to suggest a joint meeting of the NMWD and MMWD Board of Directors.

OPEN TIME

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

STAFF / DIRECTORS' REPORTS

President Petterle asked if staff or Directors wished to bring up an item not on the agenda and the following item was discussed:

Director Baker advised staff that the Sonoma County Civil Grand Jury has solicited input from the Board on possible members.

MONTHLY PROGRESS

Mr. DeGabriele provided the Board with the Monthly Progress Report for November. He stated that water production this fiscal year to date in Novato is up 22% from one year ago but still down 16% from 2013, the State's prior benchmark. He advised the Board that in West Marin, to date water production this fiscal year is on par with last year and down 26% compared to 2013. He stated that storage at Stafford Lake through Monday had reached 51% and on the Russian River Lake Mendocino is full and Lake Sonoma is nearly full. He noted that high bill complaints are up significantly with 127 this month, principally due to the estimated meter read issue. Mr. DeGabriele informed the Board that overall complaints are up 216% compared to November last year and up 46% year to date and bill adjustments totaled nearly $100K.

Mr. Bentley reported that District Investments total $14.5M and the investment portfolio is earning 0.81%.

Director Schoonover arrived at 7:10 p.m.

CONSENT CALENDAR

On the motion of Director Fraites, seconded by Director Baker the Board approved the following items on the consent calendar by the following vote:

AYES: Director Baker, Fraites, Petterle, Rodoni and Schoonover

NOES: None

EUCALYPTUS AVE. FIRE HYDRANT

The Board approved an agreement with Frank Rebelo to install a fire hydrant at Thomas Ct. No new connection fees are necessary. Cost of the project is $19,613. The Board approved Resolution 16-29 entitled: "Authorization of Execution of Water Service Facilities Construction Agreement with Frank Rebelo Jr. and Erin S. Reynolds."

Mr. Rebelo left the meeting.

TANK INDUSTRY CONSULTANTS – CONSULTING SERVICES AGREEMENT

The Board approved a Consulting Services Agreement with Tank Industry Consultants. The first task order will be an evaluation and structural assessment associated with the San Mateo Tank Rehabilitation Project which is planned over the next two years.

LETTER OF INTENT TO PARTIPCATE IN THE MARIN COUNTY MULTI=JURISDICTIONAL LOCAL HAZARD MITIGATION PLANNING PROCESS

The Board authorized the District to participate in Marin County's Multi-Jurisdictional Local Hazard Mitigation Planning Process. Participation in the LHMP may benefit the District to acquire Federal Emergency Management Agency grant funds in the future.

REVIEW AND REAFFIRM REGULATION 1(C)(5) – INITIAL CHARGES FOR AFFORDABLE HOUSING

The Board reviewed and reaffirmed Regulation 1(c)(5) which enables Affordable Housing projects to defer posting connection fees for up to two years or until occupancy of the project occurs, whichever is earlier. This provision was added to comply with legislation adopted in 2006 and periodically must be reviewed and updated.

REVISION TO REGULATION 4(B)(5) – MULTIPLE SERVICE

The Board revised Regulation 4(b)(5) to prohibit service through a single service connection to two separate dwelling units on a parcel in undivided ownership and constructed prior to December 31, 2016. This change is in response to Senate Bill 1069 which becomes effective on January 1, 2017 and requires the District to change the method of collecting connection fees for accessory dwelling units (ADU's). The District will no longer be allowed to collect a connection fee when the ADU is contained within the footprint of an existing single family residence or accessory structure, except where a separate meter is provided. The Board approved Resolution 16-30 entitled: "Revision of North Marin Water District Regulation 4(b)(5) Multiple Service."

ACTION CALENDAR

RECYCLED WATER EXPANSION CENTRAL SERVICE AREA (NORMAN TANK) – REJECT BID, APPROVE ADVERTISEMENT FOR NEW BIDS

Mr. McIntyre stated that the Norman Tank is intended to be rehabilitated and used for Recycled Water storage and distribution in the Central Service Area. He informed the Board that

even though 14 prime contractors attended the mandatory pre-bid meeting in October, only one bid was received and he recommended the Board reject the bid. He advised the Board that the bid was 14.5% above the engineer's estimate. He stated that research by staff and the construction manager indicates that tank contractors were very busy and that was the reason for the limited response. Mr. McIntyre also requested that the Board approve advertisement for new bids.

Director Baker asked if this would delay the process. Mr. McIntyre responded that it should not affect the overall project schedule if staff receives the new bids before the spring.

President Petterle asked if there were any changes to the plans and specs. Mr. McIntyre responded no.

On motion of Director Schoonover, seconded by Director Baker, the Board rejected Piazza Construction's Bid for $881,436 and approved advertisement for new bids by the following vote:

AYES: Director Baker, Fraites, Petterle, Rodoni and Schoonover

NOES: None

AMI NOTICE OF EXEMPTION

Mr. Bentley reviewed the Environmental Review for the AMI project and asked that the Board approved a Notice of Exemption consistent with California Environmental Quality Act Guidelines. He advised the Board that the District did notice approximately 600 customers in the vicinity of the 26 antenna sites which will be installed to service the AMI project and only two individuals showed up to the District's public meeting on the project held December 13th.

Director Fraites advised that the prospective antenna numbers on the GHD Consultant map included in the AMI Environmental Review don't match the numbers on the table listing antenna locations. Mr. Bentley advised this will be checked and corrected.

On motion of Director Fraites, seconded by Director Baker, the Board approved filing the Notice of Exemption by the following vote:

AYES: Director Baker, Fraites, Petterle, Rodoni and Schoonover

NOES: None

AMI PILOT PROJECT

Mr. Bentley requested that the Board approve agreements with Equarius Ferguson and NMWD's IT consultant (Smedshammer) to install facilities and conduct a pilot project of the AMI technology for a cost not to exceed $590K. He informed the Board that the pilot project will involve installation of 10 meters in each of 20 different difficult to read areas in Novato, plus the homes of Directors and six staff members to test the effectiveness of the technology within Novato's rolling

topography. He noted that 26 antennas will be installed on District facilities, principally water storage tanks, located throughout Novato to receive hourly consumption data from the 200 digital meters. Mr. Bentley advised the Board that the consumption data will then be forwarded to the District office over a cellular network for analysis and billing. He informed the Board that the pilot project will include installation of analytical software for District use as well as software to allow customer access to water use over the internet. Mr. Bentley further stated that after testing the system for a few months, if all of the various components are found to be successfully working together as advertised and after financing is secured, the Board will be asked to authorize installation of digital meters throughout the Novato service area. Mr. Bentley showed the Board a sample digital meter and meter box.

Director Baker asked if the meter was covered would the AMU system it be able to obtain a read. Mr. Bentley responded that the meter can be 3" under water and staff will still receive a read, but if a car is parked on top of the meter staff would be unable to obtain the read. He stated that the data will be sent to the office four times a day, every six hours.

Director Schoonover asked if there would be a change in staffing when all customers have digital meters. Mr. Bentley responded that the District does not anticipate a change in staffing at this time. He stated that two people would be needed to maintain the meters and review data to look for leaks improving customer service and the third person would be dealing more with water conservation issues.

Rhonda Kutter opined that the District may not receive the same feedback from customers in West Marin and stated that she believes they would be more concerned about the antennas. She requested that outreach occur to all customers.

Mr. DeGabriele stated that the District is not contemplating the AMI system in West Marin at this time but when the time comes staff will provide plenty of outreach. He stated that the District already has several cellular meters in West Marin at locations which are hard to read and hard to get to and haven't had any complaints. Mr. Bentley stated that out of 770 meters there are 188 driveby radio reads in West Marin.

On motion of Director Schoonover, seconded by Director Fraites, the Board authorized staff to enter into agreements with Equarius Ferguson and NMWD's IT consultant to install facilities to conduct a pilot project of the AMI technology in the Novato Service Area for a cost not-to-exceed $590,000 by the following vote:

AYES: Director Baker, Fraites, Petterle, Rodoni and Schoonover

NOES: None

ACCEPT DIRECTOR RODONI'S RESIGNATION AND APPROVE FILING BOARD VACANCY

President Petterle stated that when he was first appointed to the District Board he appreciated Director Rodoni's counsel and still does. He believes Director Rodoni has been a champion for the District and West Marin and congratulated him on his election to the Marin County Board of Supervisors.

Director Fraites recounted running for the District Board in the same election year as Director Rodoni and that he was welcomed by Director Rodoni to share a campaign mailer with him at a time when Director Fraites was little known in the community. He further stated that Director Rodoni was always cooperative and is thrilled that he will be a County Supervisor.

Director Baker applauded Director Rodoni on his work ethic and exemplary attendance at District Board meetings and other meetings while representing the District.

Director Schoonover seconded all the comments by other Directors and wished Director Rodoni all the best.

Rhonda Kutter said thank you to Director Rodoni for his service.

Mike Jolly expressed his opinion that while Director Rodoni's departure from the District would be a loss for the District it's a big win for the County and that he has admired his great service.

On motion of Director Schoonover, seconded by Director Baker, the Board accepted Director Rodoni's resignation effective December 20th and declared a vacancy on the Board, authorized staff to notice the County of Marin and County of Sonoma of the Board's intent to appoint a replacement to fill the vacancy, set a special meeting at 7pm on January 31st to conduct candidate interviews, approved the tentative timeline to fill the vacancy, authorized a notice being placed in the Pt. Reyes Light, Novato Advance, and Marin Independent Journal soliciting letters of interest and resumes from residents of the District who are interested in serving on the Board and approved a press release to the same three newspapers regarding the Board vacancy by the following vote:

AYES: Director Baker, Fraites, Petterle, and Schoonover

NOES: None

RESOLUTION OF APPRECIATION FOR DIRECTOR RODONI

Mr. DeGabriele requested the Board approve a Resolution of Appreciation to Dennis Rodoni, who resigned tonight after 21 years of service with the North Marin Water District Board of Directors.

Mr. DeGabriele read an email from Legal Counsel Robert Maddow stating that BPMN&J staff have very much enjoyed working with and getting to know Director Rodoni. He stated that they

wish him the very best of luck as he leaves the District's Board and embarks on his new challenges as a member of the Marin County Board of Supervisors.

Director Rodoni commented on how well the District Staff and Board works together. He recalled that he brought a lot of ideas to the table, some good and some not so good, but staff considered all prior to making recommendations. He further stated that the District is unique in its' size making it able to provide great service to its' customers.

On motion of Director Fraites, seconded by Director Schoonover, the Board approved Resolution 16-28 entitled: "North Marin Water District Resolution of Appreciation for Dennis J. Rodoni," by the following vote:

AYES: Director Baker, Fraites, Petterle, and Schoonover

NOES: None

INFORMATION ITEMS

COMMENTS TO THE STATE ON "MAKING WATER CONSERVATION A WAY OF LIFE IN CALIFORNIA"

Mr. DeGabriele reminded the Board of the presentation he provided at the last meeting regarding the States framework for "Making Water Conservation a Way of Life in California." He provided the Board with three comment letters on the framework, one from ACWA, one from the Sonoma Marin Saving Water Partnership and one from the District. He noted that the SMSWP letter was tailored toward partnership interests and the District letter was tailored soley toward the Novato and West Marin service areas interest. Mr. DeGabriele advised the Board that Ryan Grisso has been participating in webinars on how to develop landscape areas and irrigated areas and staff is hoping the State has more of a regional approach. He noted that the District is on track to save 20% by year 2020.

Director Fraites asked if customers are able to tell usage per day. Mr. DeGabriele stated with the new AMI system, customers will be able to monitor hourly usage online at home.

President Petterle asked that staff consider some way to inform customers of the States' water conservation framework ideas and to encourage customers to comment to the State.

LAFCO SPECIAL DISTRICT MEMBER CALL FOR NOMINATIONS: FOUR-YEAR TERM

Mr. DeGabriele advised the Board that Marin LAFCo is calling for nominations for a Special District Member for a four-year term.

Director Baker advised that Special District Member Craig Murray's term is expiring on Marin LAFCo and that Mr. Murray is interested in continuing. He further advised that the Public Member Alternate, Chris Burdick's, term is also expiring.

NBWRA MEETING – DECEMBER 19, 2016

Mr. McIntyre advised the Board that a report on the 12/19/2016 NBWRA meeting will be made at a future meeting. He further advised that the budget augmentation was approved and that MMWD is considering Phase 2 membership at their meeting tonight.

MISCELLANEOUS

The Board received the following miscellaneous information: Disbursements.

The Board received the following news articles: Donald Trump forces a California water deal without lifting a finger, and 50 Years Ago – December 1966.

ADJOURNMENT

Prior to adjournment, President Petterle thanked the staff for another successful year and wished all a Happy and Healthy Holiday.

President Petterle adjourned the meeting at 7:52 p.m.

Submitted by

Katie Young
District Secretary

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MEMORANDUM

To: Board of Directors December 30, 2016

From: Tony Arendell, Construction Superintendent TA

Subject: Contract Extension for NMWD Trench Restoration Paving
K:\CONST SUP\2016\Paving Memo 2017\2016-17 Paving Contract Extension BOD Memo 12-30-16.doc

RECOMMENDED ACTION: The Board authorize extension of the paving contract to W.K. McLellan Company

FINANCIAL IMPACT: Estimated at $300,000

W.K. McLellan Company (McLellan) has been the District's contractor for trench restoration work since 1997. The work was last bid in 2007 and McLellan was awarded the NMWD paving contract. Annual costs for this work over the last four years are summarized in Table 1.

The McLellan proposed pricing is 2% less than the pricing they submitted on a recent successful low bid for a similar paving contract with Marin Municipal Water District. There were two bidders for the MMWD work and McLellan was successful low bidder. Note that the last column in Table 2 shows that paving costs are increasing higher than the rate of inflation using the Consumer Price Index (CPI). The most significant increase is for projects with deep lift asphalt paving. McLellan reports that the primary reason for this increase is that new encroachment permit requirements necessitate that asphalt cool down to 160 degrees before the next lift is placed. This is very time consuming and therefore adds expense. Also, asphalt oil specifications have changed, oftentimes requiring up to eight passes with a heavy diesel tamper per lift in order to achieve 95% compaction.

Annual billings to McLellan for FY16-17 are estimated to be approximately $300,000. To prosecute the work, purchase orders will be issued monthly for trench areas to be paved at the approved unit pricing. Unit pricing is to remain in effect through December 31, 2017. The District reserves the right to extend the contract beyond FY16-17, subject to agreement by both parties.

Please see Photo 1 and Photo 2 as examples of how the patches are increasing in size. District staff wants to advise the Board that McLellan has had an excellent working relationship with NMWD and they go out of their way to insure that District paving needs are met. The quality of McLellan's work has been excellent and there have been very few complaints from City or County staff or customers on the workmanship or longevity of trench restoration paving.

RECOMMENDATION

Board authorize the General Manger to execute a trench restoration paving contract with W.K. McLellan Company based on unit prices provided.

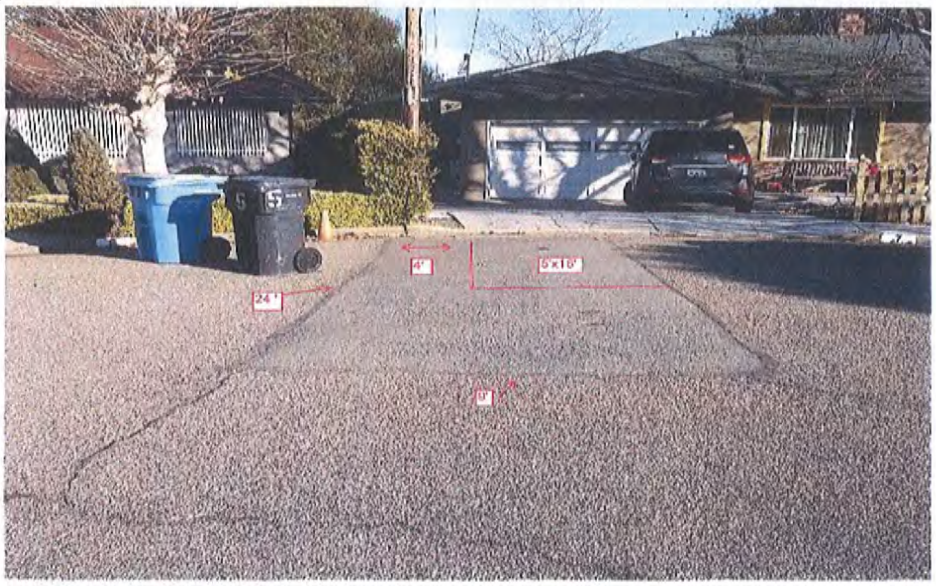


Photo 1

7 Adams Ct – District crews dug up water main to install a blow off at the end of the line. In the past, the patch would have been 136 sf at $8.59 per/sf for a cost of $1,168.24. Now the same patch is 9'x24' (216 sf) at $8.59 per/sf for a cost of $1,932.75; a difference of $764.50.

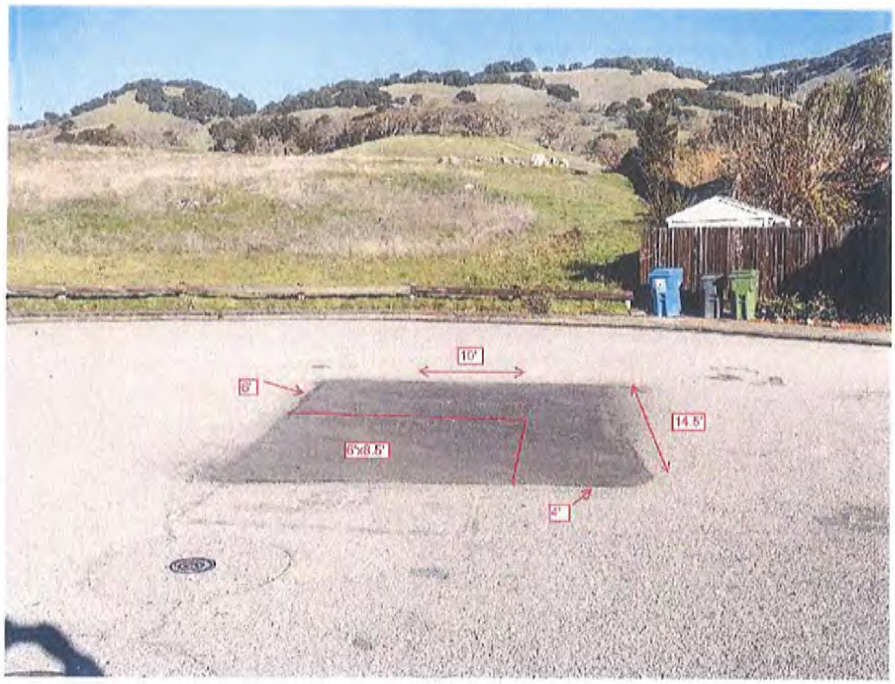


Photo 2

9 Palmo Ct - District crews dug up water main to install a blow off at the end of the line. In the past, the patch would have been 94 sf at $8.82 per/sf for a total cost of $829.08. Currently, the same patch is now 14'x9' (126 sf) at $8.59 per/sf for a total cost of $1,082.34; a difference of $253.26.

TABLE 1

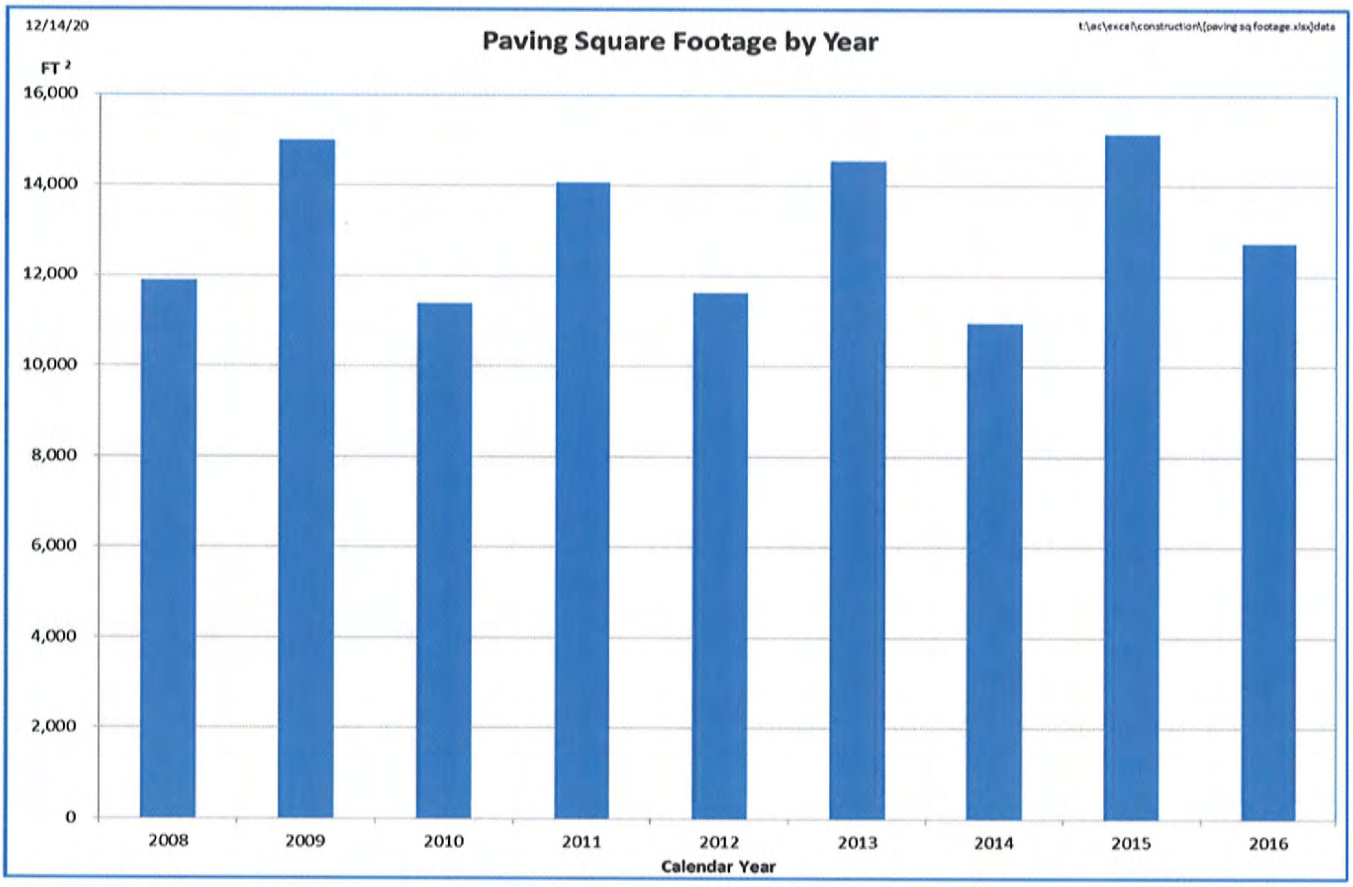
YEAR	*BILLINGS*
FY12-13	$143,299
FY13-14	$149,221
FY14-15	$234,723
FY 15-16	$295,616

TABLE 2

ITEM	*BID DESCRIPTION*		*2007 PRICING*	*2007 PRICING ESCALATED 19% FOR INFLATION*	*PROPOSED NEW MCLELLAN PRICING*	*CHANGE IN PRICING ABOVE CPI $ / %*
1.	EXCAVATE, PRIME AND RESURFACE 2-INCH GRIND AND PAVE					
	a) 0-1000	square feet	NA	NA	$7.00	NA
	b) 1000-2500	square feet	NA	NA	$6.00	NA
	c) 2500-5000	square feet	NA	NA	$5.00	NA
2.	EXCAVATE, PRIME AND RESURFACE WITH 4-INCH ASPHALT CONCRETE					
	a) 0-29	square feet	$7.25	$8.63	$8.82	$0.91 / 2%
	b) 30-99	square feet	$6.75	$8.03	$8.82	$0.79 / 10%
	c) 100-499	square feet	$6.25	$7.43	$8.59	41.15 / 16%
	d) Excess of 500	square feet	$5.75	$6.84	$8.39	$1.55 / 23%
3.	EXCAVATE, PRIME AND RESURFACE WITH 6-INCH ASPHALT CONCRETE					
	a) 0-29	square feet	$8.75	$10.41	$10.53	$0.12 / 1%
	b) 30-99	square feet	$8.25	$9.82	$10.29	$0.47 / 5%
	c) 100-499	square feet	$7.75	$9.22	$10.04	$0.82 / 9%
	d) Excess of 500	square feet	$7.25	$8.63	$9.80	$1.17 / 14%
4.	EXCAVATE, PRIME AND RESURFACE WITH 8-INCH ASPHALT CONCRETE					
	a) 0-29	square feet	$10.00	$11.90	$13.72	$1.82 / 15%
	b) 30-99	square feet	$9.50	$11.31	$13.72	$2.42 / 21%
	c) 100-499	square feet	$9.00	$10.71	$13.72	$3.01 / 28%
	d) Excess of 500	square feet	$8.50	$10.12	$13.72	$3.61 / 36%
5.	EXCAVATE, PRIME AND RESURFACE WITH 12-INCH ASPHALT CONCRETE					
	a) 0-100	square feet	$11.50	$13.69	$17.64	$3.96 / 29%
	c) 100-499	square feet	$11.00	$13.09	$17.64	$4.55 / 35%
	d) Excess of 500	square feet	$10.50	$12.50	$17.64	$5.15 / 41%
6.	VALVES Includes a 3'x3' patch Installing of aluminum ring in valve riser Rising to grade		NA	NA	$75.00	NA
7.	CONCRETE RESTORATION PRICING					
	a) 4"	square feet	$14.00	$15.67	$13.25	<2.42>
	b) 6"	square feet	$16.00	$17.90	$16.00	<1.90>
	c) Dowels	each	$8.00	$8.95	$8.00	<0.95>
	d) Wash	square feet	$2.00	$2.24	$2.00	<0.24>
	e) Curb & Gutter	linear feet	$1.55	$1.73	$1.55	<0.18>
8.	MOBILIZATION TO WEST MARIN					
	4 Man Crew	LS	NA	NA	$750	NA

Note: Striping will be billed separately with no mark up.
Compaction tests will be billed separately with no mark up.

TABLE 3


12/14/20
t:\ac\excel\construction\[paving sq footage.xlsx]data
Paving Square Footage by Year
FT ²
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
Calendar Year

6

ITEM #6

MEMORANDUM

To: Board of Directors December 30, 2016

From: Chris DeGabriele, General Manager CD

Subject: Approve Content for Winter 2017 Bill Insert
\\nmwdserver1\Water Conservation\Memos to Board\Winter Bill Insert 0117.doc

RECOMMENDED ACTION: Approve Content for Winter 2017 Bill Insert

FINANCIAL IMPACT: $2,000 (included in FY 2016/2017 Budget)

Content for a Winter 2017 bill insert targeting Novato Customers is attached for your review (Attachment 1). The draft content for the bill Insert contains information updating all customers on the AMI pilot program and future AMI system. Should any Board member have individual comments please provide them to the General Manager at the Board meeting on January 3, 2017. The District's AMI consultant, Utilworks, has also reviewed the bill insert content. Once printed, the format will be sized to fit in the standard billing envelope. It is expected that the bill insert will start in mid-late January billing cycles.

RECOMMENDATION

Board authorize the General Manager to approve final content and layout for the Winter 2017 Bill insert.

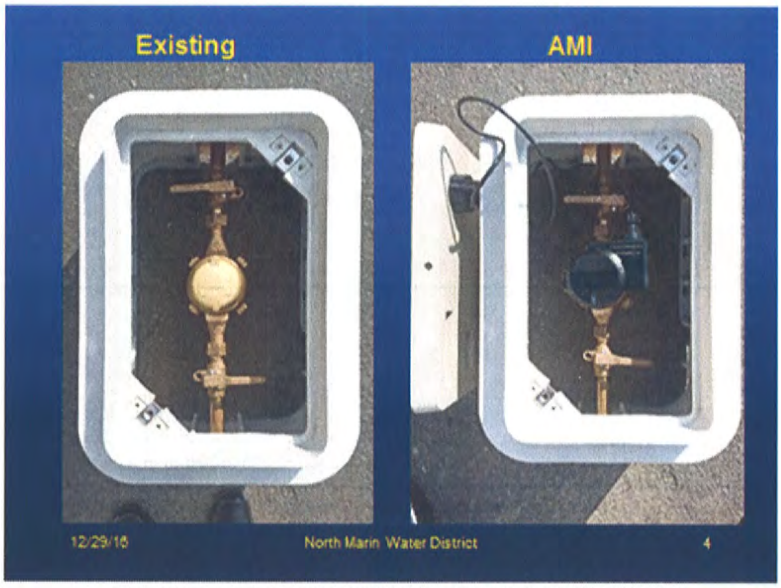
North Marin Water District's AMI Project

The North Marin Water District (NMWD) is embarking on an Advanced Meter Information (AMI) system to improve meter reading efficiency, accuracy and customer service. A pilot program is planned to commence this winter to aid in evaluating the feasibility of AMI use in Novato. The pilot project will include meter upgrades for over 200 customers throughout NMWD's Novato service territory. The pilot project is designed to test the effectiveness of the technology within Novato's rolling topography. Hourly water consumption data from these meters will be compiled and analyzed with software programs to aid in customer service. Customers will also have access to their own consumption data online which can assist in education regarding water use patterns. The AMI system will also provide early leak detection and more timely and reliable meter reading information to NMWD and its customers.

As part of the pilot project, NMWD will be installing radio antennas on facilities located throughout Novato. The antennas will receive water meter data from the digital meters and transmit it securely via cellular signal to NMWD headquarters for billing purposes. NMWD plans to install 26 antennas ranging in height from 10' to 26', with the typical height being 14', primarily on water storage tanks. A typical installation will look similar to the photograph below of the 10' high existing radio antenna atop the NMWD's San Mateo Water Storage Tank. The back page also shows the existing and proposed meter installation typically located near the street fronting customer property. A public meeting was held on December 13th to address concerns from residents in the vicinity of antenna installations.

Upon successful completion of the pilot project, a full AMI implementation for all customers throughout Novato is expected within two years. Should customers have questions or desire more information, contact NMWD Auditor-Controller, David Bentley at (415)897-4133.

Existing antenna at NMWD San Mateo Tank



Existing and proposed AMI meter installations

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MEMORANDUM

To: Board of Directors December 30, 2016

From: Robert Clark, Operations / Maintenance Superintendent RC

Subject: Summary from the WTA Fact Finding Tour
X:\MAINT SUP\2017\BOD\WTA Trip Summary.docx

RECOMMENDED ACTION: Information

FINANCIAL IMPACT: None

The recent Water Technology Alliance (WTA) sponsored fact finding trip to Denmark offered a unique opportunity to experience first-hand how Denmark is working with their water systems. The fact finding trip was an intense five day deep dive into specific solutions and innovative projects with a combination of on-site visits with key innovators reviewing projects showcasing what Denmark has and will implement in the years ahead. We were encouraged to participate in dedicated professional discussions on an educational journey that has left both those of us from the United States and the people we visited wiser and inspired to take action.

The WTA is a public-private partnership between Danish water, waste water and storm water utilities, private Danish technology companies and private enterprises. The WTA in California is focused on sharing their holistic view of a fully sustainable and 100% energy neutral water cycle. The WTA program is sponsored by the Ministry of Foreign Affairs of Denmark, the two largest Danish water companies (Aarhusvand and Hofor) along with several Danish water system equipment manufacturers. I will provide a slide show at the meeting highlighting the areas / facilities visited and topics discussed.

The tour kicked off with introductions of all participants including folks from the US:

- Cindy Tuck, ACWA, Executive Director of Government Relations;
- Tim Worley, Executive Director, AWWA Ca-NV section;
- Sylvie Lee, Manager of Planning & Environmental Resources, Inland Empire Utilities Agency;
- Carolyn Berg, Senior Water Resources Engineer, San Luis Obispo County;
- Denise England, Deputy County Admin Officer, Tulare County;
- Hank Zwart, Public Works Director, City of Prescott, Wi.;
- Mike Ambrose, Manager of Regulatory Compliance, East Bay Municipal Utility District;
- Mike Thompson, Assistant General Manager – Maintenance, SCWA

We then met with the management teams from Hofor and Aarhusvand water utility companies, which were created after the Danish government required water, waste water and storm water providers to combine into single geographical entities, a unique approach to ensuring

the water cycle is managed by a single set of goals and objectives. We were also introduced to a few of the more innovative projects and processes implemented by these large water providers as well as a couple of smaller water companies and several of the key equipment manufacturers.

Innovative projects, programs and processes we reviewed included the following: The State of Green an organization developed as a liaison for governmental regulators, water sector managers and the public to share innovative ideas. The large organizations shared how their core competencies were evaluated for the newly formed water cycle companies, development of new management strategies for the whole water cycle, customer engagement for project development and regulation of the water sector and benchmark models. Use of District Metered Areas (DMA's) include innovative leak detection strategies for reducing non-revenue water losses and pipe failure prediction in smart water systems, pressure management for increased energy efficiencies and prolonged pipe life and demand driven pump systems. The pure water cycle from well to tap with no disinfection, use of in line real time bacteria monitoring linked to plant controls for rapid control of the water supply.

Clean safe drinking water at a reasonable cost is the primary goal for Danish water providers as it is for the United States. How they achieve this result is very different and has had a dramatic result in the overall quality and reliability of operations in the water system and the efficiency and sustainability in how the water is provided. The methods used in Denmark not only provide safe drinking water but do so in the most energy efficient manner, providing the platform for the creation of the WTA.

The drivers that forced the Danish utilities to change standard practices and begin to improve water quality and water resource management began in the 1980's after an energy crisis, increased ground water quality impacts on drinking water supplies and waste water runoff having had extreme effects on the environment. In 1987 the Danish government introduced strict requirements for waste water treatment and a greater emphasis on energy self-sufficiency, resulting in a standard to maintain the high level of pure water extracted from the source to the customer with minimal treatment and no disinfection.

US water utilities are driven by EPA regulations to maintain quality standards through disinfection and water treatment that require disinfection residual throughout our community water supplies. As a result the US utilities prioritize treatment and maintenance of a residual disinfection throughout the service area and maintenance of the infrastructure so as to minimize interruptions to the community. Whereas in Denmark priority is given to maintaining the water works infrastructure to the highest level not allowing any contamination of the pure water from the well to the customer and without introducing chemical compounds to prohibit contamination. As a result the US models minimalize impacts from the maintenance and failure avoidance of infrastructure

whereas the Danish model ensures all potential impacts to water quality are eliminated and infrastructure is maintained at the highest level.

In conclusion I have come away with a few areas that the District may be able to look into for increased operational efficiencies, perhaps work with the Novato Sanitary District and Marin Clean Energy on a couple of projects and collaborate with the other utilities involved with the WTA and present these ideas through the AWWA, ACWA and Bay Works conferences.

- Look at how we could improve our water cycle if combined with NSD in Novato and the smaller water systems in West Marin.
- Evaluation on the use of all of our water system data for operation optimization and asset management planning, capital improvement projects identification and planning prioritization.
- Creation of District Metered Areas (DMA's) for our Novato distribution system and the use of AMI information, leak detection data and pressure management for system optimization and extended life cycle of distribution piping.
- Partnership with Marin Clean Energy and Novato Sanitary District for energy production from biogas, implementation of digester optimization for improved recycled water quality and increased biogas power generation to help offset energy use for the water cycle.
- Partnership with Novato Sanitary District and community on an infiltration and intrusion project solution along Center road to allow STP to operate year around.
- Collaborate in Regional efforts to improve the water cycle management process.
- Engage our customers on the whole water cycle and the impacts on the system from the environment and the needs for continued reliability and adherence to regulations.

8

NOTICE OF MEETING OF
NORTH BAY WATERSHED ASSOCIATION

A meeting of the North Bay Watershed Association will be held as follows:
Date: Friday, January 6th, 2017, Time: 9:30 a.m. – 11:30 a.m.
Location: Petaluma Community Center, 320 N. McDowell Blvd., Petaluma, CA 94954-
Conference Room 2

AGENDA Item and Recommendation

1. Call to Order (Jack Gibson, Chair) **9:30**
2. Public Comment
3. Approval of the Agenda (1 min.) *Approve*
4. Approval of Minutes (5 min) *Approve*
5. Treasurer's Report *handout* (1 min.) *Accept*
6. Director's Report *information/questions*

7. **Harmful Algal Blooms in our North Bay Waters:** **9:45**

   Naomi Feger, San Francisco Regional Water Board
   Presentation and Q & A

8. **Friends of Petaluma River Education Project** **10:15**

   Stephanie Bastianon, FOPR

   Stephanie will report out on the efforts and outcomes of work done under the NBWA grant.
   Presentation and Q & A

10. **Discussion of NBWA Proposed Communication Plan for 2017** **10:50**

    Brad Sherwood, SCWA - *Discussion and Recommended Approval*

11. **Items of Interest** **11:15**

12. **Items for next agenda** **11:25**

* Groundwater Issues in the NB - Jay Jasperse SCWA
* Project – Mark SEC

Next Meeting Information: January 6th,

North Bay Watershed Association

Summary of the meeting of the North Bay Watershed Association (NBWA) Board of Directors

Date: Friday, December 2nd, 2016 9:30 a.m.
Location: Petaluma Community Center, 320 N McDowell Blvd., Petaluma, CA94945, Conference Rm. 2

Directors Present Included:

Board Member	Agency/Organization	Board Member	Agency/Organization
Michael Boorstein	Central Marin San. Agency & Ross Valley San. Dist.	Keith Caldwell	Napa Sanitation District
Pam Drew	City of Novato	Jack Baker	North Marin Water District
Mike Healy	City of Petaluma	Brant Miller	Novato Sanitary District
Judy Schriebman	Las Gallinas Valley Sanitary District	Grant Davis	Sonoma County Water Agency
Jack Gibson	Marin Municipal Water District		

Directors present represented 9 of the 18 agencies signatory to the Association MOU.

Board Actions:

1. Call to Order – Jack Gibson, Chair, called the meeting to order at 9:40 a.m.
2. Public Comment – no public comments.
3. Approval of the Agenda – (see handout) The Board unanimously approved the agenda.
4. Approval of Minutes – (see handout) The Minutes of the Board Meeting held on November 4th, 2016 were unanimously approved by the Board.
5. Treasurer's Report – (see handout) The Treasurer's Report was accepted as presented by Judy Kelly, Executive Director.
6. Director's Report – (see handout) Judy Kelly, Executive Director for the NBWA, presented the Director's Report for December 2016. Of note, Judy reported that the dates and locations for the 2017 NBWA Board Meetings have been established. Although many are scheduled at the Novato Sanitary District, some of those meetings will actually be held at the Marin Community Foundation, which only accepts reservations 30 days in advance. Judy also reminded the Board that she expects another round of EPA San Francisco Bay Funds for water quality and restoration efforts soon, and will update the Board when an RFP becomes available.
7. Pharmaceuticals and Personal Care Products: How RMP Science informs policy – Meg Sedlak of the San Francisco Estuary Institute, presented on the work the Regional Monitoring Program (RMP) for Water Quality in the SF Bay is doing to understand how pharmaceuticals and personal care products are affecting the Bay (and its inhabitants), and how this research affects public policy. The RMP seeks to understand Bay health by status and trend monitoring of a variety of different indicators which play key roles in the Bay ecosystem. Regional data is collected to measure various compound levels, which are then compared with data from other locations and leading literature on the compound. Compound levels can then be categorized on the severity of their implications. Categorization helps inform the prioritization of public policy and environmental remediation efforts. The RMP is especially concerned with Chemicals of Emerging Concern (CECs) which were not historically regulated under the Clean Water Act. *Example of Compound:* fipronil (the insecticide in pet flea medication) is found in Bay Area effluent. This compound can kill the lower levels of the food web. Solution: oral pet medication, rather than topical medication,

results in less fipronil entering the water system. *Pharmaceuticals:* As life expectancy increases, more medication is prescribed and consumed. Many pharmaceuticals are endocrine disrupters which can have a strong environmental impacts. These medications enter the water system through human excretion and the disposal of unused medications in the toilet. These findings help drive safe medicine take-back programs, such as the one being considered in Sonoma County. *Personal Care Products Example*: Microplastics – In the Bay, plastic trash can break down into microplastics, which can be ingested by small organisms causing lacerations or obstructions. Microplastic pollution is higher in the San Francisco Bay than other comparable locations (ex. Chesapeake Bay and Great Lakes). RMP is about to embark on a large study on microbeads in the SF Bay. Q: Grant Davis commented that this local high concentration of microplastics could be used to seek more federal and state funding to address local water issues. Q: Brant Miller asked is data is available to the public. A: Yes, visit cd3.sfei.org. www.sfei.org/rmp

8. North Bay Trash Amendments/Stormwater Planning Project Update – Rob Carson, Coordinator for the Marin County Stormwater Program, provided an update on the NBWA-supported project readying the region for the statewide trash amendments [April 2015]. Trash reduction plans for North Bay entities will be required by mid- 2018. Bay Area Stormwater Management Agencies (BASMAA) is leading the effort to create these plans, assisted by consultant (EOA). NBWA has contributed $30,293, but this is a large project with significant other funding sources. There are two main planning options to reduce stormwater trash. The first option is to attempt full trash capture by installing equipment in storm drains, pipes, catch basins, or outlets of the stormwater system which would prevent trash from entering waterways. This option may be highly expensive, would involve ongoing maintenance costs, and may not be possible in areas where the stormwater system is comprised of ditches or less developed stormwater infrastructure (ex. rural North Bay areas). The second option is to prevent an equivalent amount of trash from entering the stormwater system through a serious of "equivalent" actions which might involve street sweeping, increased availability of trash cans, policy, or public education. Advantages of this option include increased street cleanliness, and a potential reduction in trash produced.
   In additional to creating a Stormwater Trash Plan, this project includes an effort to increase the accuracy of trash generation maps through visual on-land trash assessment.
   The next steps of this project include receiving approval from the Water Board of the "equivalency" approach, continuing to refine baseline trash maps, and developing Trash Control Implementation Plans. Q: Brant Miller asked for a cost estimate of the future plan's implementation? A: Estimates vary by orders of magnitude. Q: Mike Healy asked once costs are established, who will costs be attributed to? A: Mostly general fund, not completely determined.
9. Game of Floods Redesign Project - Judy Kelly presented a proposal for the NBWA to provide $7K for the highly successful *Game of Floods* to be made more dynamic, simplified, and fabricated as a box game to expose more people to sea level rise planning in the North Bay. The NBWA financial contribution would allow for improved design and printing of the game, and would be supplemented by staff hours provided by Marin County. Redesigned boxed games would be provided to North Bay county staff, and Marin County in partnership with NBWA would host a 2017 workshop to roll out the new game. All JTC requests pertaining to this project will be met. If approved, there will be $20K left in the 2016-2017 NBWA Budget for Specific Benefit Projects. Judy recommended that this project receive Board approval. Q: Judy Schriebman asked is this game will be sold. A: Not currently planned and currently available for free, but consultant has sold games in the past, and this game could be produced to sell to cover printing fees.
   The Board unanimously approved this funding request.
10. NBWA Communication Plan Update – Judy Kelly updated the Board on the status of the NBWA Communication Plan, which was created by an ad hoc committee comprised of several NBWA Board

Members and Judy Kelly. The plan outlines five strategic communication goals, and then describes strategies, specific actions, associated budget requirements, and a timeline for achieving each goal. The Communication Committee asks that Board members read through the Draft Communication Plan and provide comments to Judy (Judy.NBWA@gmail.com) or Brad Sherwood (Brad.Sherwood@scwa.ca.gov) by December 23rd, 2016, so that they can be incorporated into the plan to be presented for Board discussion in January 2017.

11. Items of Interest – Keith Caldwell, of Napa Sanitation District, attended his last meeting as a NBWA Board Member. The NBWA greatly appreciates his contributions to the Board, and wishes him all the best in his future endeavors.
    Chris Choo reminded the Board that the San Francisco Restoration Authority is seeking a new advisory committee, which among other things will help inform grants for Measure AA. The application can be found at sfbayrestore.org and the application deadline is December 9th, 2016.
12. Items for Next Agenda
    - Harmful algae blooms in North Bay waters
    - Accomplishments under the Friends of the Petaluma River Grant
    - Review and support of the 2017 NBWA Communications Plan

Next Meeting Information: January 6th, 2017 Novato Sanitary District, 500 Davidson St., Novato, CA 94945

SUBMITTED BY:
Sophie Hallam-Eames
SCWA Programs Specialist | NBWA Staff
Sophie.HallamEames@scwa.ca.gov

January 2017 - Director's Report

NBWA Business

- At the December meeting, I passed out [and then subsequently sent out via email] the Ad Hoc **NBWA Communication Committee** Draft Communications Plan. Which was briefly summarized at the December meeting. I hope all have read the Draft as I will be asking for Board action on at the January 2017 meeting.
- Status of our supported NBWA projects: We will hear about the conclusions of the NBWA funded project with Friends of the Petaluma River at our meeting and the Bothin Marsh project in March. In early-mid 2017 we will also hear a summary report on outcomes of the Rural Road Assessment project and the shoreline mapping projects. Contracts are underway for the supported projects of the shoreline access maps and the revisions to the Game of Floods approved at the December meeting.
- Advance planning: In February the Board will have hear from senior SCWA staff about groundwater issues and progress in the North Bay region.

Funding and Legislative News

- Integrated Regional Water Management Plan [IRWMP] Update: Prop 1 IRWM DACI grant proposal for the Bay Area Funding Area was submitted to DWR on November 30th. DWR confirmed they received the proposal. There was a special Coordinating Committee conference call on November 7th in which the group gave final comments on the proposal. The proposal was submitted without recommendation for funding implementation projects. However, the proposal includes a placeholder to fund implementation projects in the future if it's determined that all outreach efforts have been exhausted. The proposal also included a list of potential outreach partners that is not meant to be exhaustive and doesn't guarantee funding to the organizations [including several from the North Bay] that are listed. Project leads have begun outreach to potential partners in anticipation of the grant's approval from DWR. See http://www.bairwmp.org for news and update on this funding.

Member News

- MMWD's Smart Water Education Opportunities. Marin Municipal Water District has several great programs and outreach efforts to engage the public and school age children in the concept of water cycles, watershed planning, and water efficient gardening. An annual school guide assists teachers and interested parents in finding the right MMWD outreach option. For more information: marinwater.org/DocumentCenter/View/4324

Other News and Notes

- Major Federal Water Legislation -- what it will mean to California? The Sacramento Bee reports [12-20] dubbed the *Water Infrastructure Improvements for the Nation Act,* a major water bill passed both House and Senate and was just signed by the president following years of maneuvering and debate. Obama's signature was never really in doubt, though administration officials had previously resisted some of the specific California provisions.
- These provisions, which include more pumping of water through the Delta for farmers, will now be implemented by an incoming Trump administration that appears agribusiness-friendly.
- Aside from the controversial provisions over Delta pumping, the bill authorizes $880 million for flood-control work along the American and Sacramento rivers, $780 million for improved flood safety in West Sacramento and $415 million for environmental assistance for Lake Tahoe. Non-native predatory fish in the Stanislaus River will be test-targeted for elimination. Money will also support water recycling projects in cities such as Sacramento and San Luis Obispo, and for desalination projects like ones proposed for Southern California. `
- More controversially, the bill streamlines potential construction approval of `Western water projects that could include Temperance Flat on the San Joaquin River and Sites Reservoir in the Sacramento Valley. The bill's funding includes $335 million for the water storage projects, which is only a fraction of their total cost.
- With highly technical but important language, the bill also directs the pumping of more water to farms south of the Sacramento-San Joaquin Delta and seeks to ensure that Sacramento Valley farmers receive all of their allocated water. More information on what the legislation may mean for the North Bay to come.

- And in state news: a trio of recent laws focuses on stormwater. Assembly Bill 2594 (Gordon), confirms that whoever captures stormwater also has the right to use it, while 2014's Assembly Bill 2403 (Rendon) lets water agencies collect money for stormwater capture. And 2014's Senate Bill 985 (Pavley) established a key funding eligibility requirement for that year's Proposition 1; to receive stormwater project grants from the voter-approved water bond, jurisdictions must develop stormwater resource plans. These plans are underway in the Bay Area, with the final versions due in 2019 [Note: NBWA is supporting work on stormwater planning in the North Bay].

- Publication of the month. Want the latest science about the San Francisco Bay and Delta? Look no further than the excellent online publication **San Francisco Estuary & Watershed Science.**
  escholarship.org/uc/jmie_sfews
  Published jointly by UC Davis and the Delta Science Program, it contains up to date research summaries on important issues to science and management in the Bay Delta estuary. While many of the articles are heavily research focused, it is a great source of current information about the thicket of issues that make management of the region one of California's most difficult efforts.

- Upcoming Meetings and Conferences. Remember to check Maven's Notebook page where these are listed and described mavensnotebook.com/calendar/action~posterboard/cat_ids~336,346,376/request_format~html/. And be sure to check out the January 21st California Water Law symposium in San Francisco at USF focused on the Bay-Delta issues.

9

ITEM #9

FOR ACCESSIBLE
MEETING INFORMATION
CALL: (707) 543-3350
ADD: (707) 543-3031

TECHNICAL ADVISORY COMMITTEE
MONDAY: JANUARY 9, 2017

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

9:00 a.m. (Note Location)

1. Check In
2. Public Comment
3. Recap from December 5, 2016 TAC Meeting and Approval of Minutes
4. Water Supply Conditions and Temporary Deviation at Lake Mendocino
5. Sonoma Marin Saving Water Partnership -
    i. Water Production Relative to 2013 Benchmark
    ii. SWRCB Proposed Water Conservation Framework
    iii. Civic Smart Water Fellow
6. SCWA Draft FY 2017/18 Budget
7. Biological Opinion Status Update
8. Items for next agenda
9. Check Out

MEMORANDUM

To: WAC Members
Cc: Grant Davis, Chris DeGabriele, Dennis Rodoni, Jake Mackenzie
From: Mike Healy, WAC Chair
Date: December 29, 2016
Re: Appointment of New WAC Vice Chair

As you are aware, the final election results have confirmed that our current WAC vice chair, Laurie Gallian from Sonoma, was not reelected. Accordingly, the vice chair position is now vacant and a new vice chair needs to be appointed. This appointment will be made at the next WAC meeting on February 6.

The purpose of this memo is to solicit expressions of interest in the vice chair position from among WAC members. Any WAC member interested in the appointment should let me know by January 20, either by phone, (707)762-8768, or email, mthealy@sbcglobal.net. WAC chair emeriti Dennis Rodoni and Jake Mackenzie and I will form an ad hoc committee to make a recommendation to the WAC on who to appoint.

The WAC chair and vice chair positions are two year appointments and, in the normal course, the outgoing vice chair assumes the chair for the next two years. Thus, the expectation is that the person who is appointed vice chair for 2017 will become chair for 2018-19.

The last time this topic arose, there were some principles that were developed for consideration in the WAC chair & vice chair nomination process. Those principles, in no particular order, are as follows:

1. Length of service on WAC.
2. Commitment to seeking reelection so as to be able to serve regular vice chair / chair cycle.
3. Contractor's history of representation in WAC & TAC leadership.
4. Due to weighted voting, contractor's share of weighted vote.

WAC Chair/Vice Chair History -- First Meeting 11/11/1974

Chairperson		Vice Chairperson	
John Olaf Nelson	1974-1995		
Miles Ferris	1995-2006		
Mike Martini	2007	Jake Mackenzie	2007
Jake Mackenzie	2008-2010	Stanley Cohen	2008
		Susan Gorin	2009 & 2010

Susan Gorin	2011 & 2012	Mark Bramfitt	2011 & 2012
Jake Mackenzie	2013	Dennis Rodoni	2013
Dennis Rodoni	2014 & 2015	Mike Healy	2014 & 2015
Mike Healy	2016 – current	Laurie Gallian	2016

Contractors' Share of Weighted Vote Pursuant to Restructured Agreement §§ 3.1 & 5.3

Santa Rosa	42.4%
Petaluma	16.3%
North Marin	14.9%
Rohnert Park	11.2%
Valley of the Moon	6.4%
Sonoma	4.7%
Cotati	2.8%
Windsor	1.1%
Total	100 %

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DISBURSEMENTS - DATED DECEMBER 29, 2016

Date Prepared 12/27/16

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 PPE 12/15/16	$133,439.54
EFT*	US Bank	Federal & FICA Taxes PPE 12/15/16	$51,653.03
EFT*	State of California	State Taxes & SDI PPE 12/15/16	$9,663.22
EFT*	CalPERS	Pension Contribution PPE 12/15/16	$35,029.08
1	ADTS	2017 DOT Random Drug Testing Compliance Program (10 Class A Drivers) (Budget $860)	870.00
2	Allquip Universal	Vac Trailer Sight Glass & Gaskets	71.87
3	Alpha Analytical Labs	Lab Testing	144.00
4	Alphagraphics	Print & Process 2016 Fall Waterline ($2,522) (18,700) & Mailing Service ($1,271)	3,793.16
5	American Family Life Ins	December Employee Contribution for Accident, Disability & Cancer Insurance	3,605.60
6	AT&T	Leased Line	65.84
7	Austin, Jennifer & Denis	Refund Overpayment on Closed Account	70.00
8	Backflow Distributors	Backflow Tester Calibration	122.00
9	Badger Meter	Cellular Monthly Meter Charge (19)	16.72
10	Bay Bolt	SS Machine Bolts (3/4" x 5" & 3/4" x 4.5") (78)	155.05
11	Bay Area Air Quality Mgmt Dist	Annual Permit Renewal (To Operate Fuel Pumps)	349.80
12	Bentley, David	Exp Reimb: Attendance at ACWA Fall Conference	1,433.33
13	Calpico	Cadweld Shots (40)	97.44
14	Cleary, Jennifer	Refund Security Deposit on Hydrant Meter Less Final Bill	687.74
15	Cole-Parmer Instrument	Solution & Buffer (Lab)	85.34

*Prepaid

Seq	Payable To	For	Amount
15	Cole-Parmer Instrument	Solution & Buffer (Lab)	85.34
16	Core Utilities	Consulting Services: November IT Support ($5,000), Frosty Acres Hatch Alarm ($450), Valve Indicators ($550), SCADA Work ($1,450), Resolved System Malfunction @ STP ($125), Day Old/Tier Information Update ($150), U.S. Bank Migration ($75), Lockbox File Transfer ($75), Modified Meter Reading Report & Update Core to v.17.4 ($900) & Website Maintenance ($75)	8,850.00
17	Covello Group	Prog Pymt#4: RW Expansion Project Central Service Area (Balance Remaining on Contract $967,858)	44,707.50
18		Cafeteria Plan: Uninsured Medical Reimbursement	177.57
19	Dickson	Pressure Data Logger Calibrations (2)	328.63
20	Ferguson Waterworks	1" Caps (7)	202.49
21	Grainger	Fuel Cylinder & Light Bulbs (10)	41.69
22	Hardy Diagnostics	Medium (Lab)	63.47
23	Harrington Industrial Plastics	Ball Valves for Chlorine Dioxide Generator (15) (STP)	1,296.88
24	Kauwe, Joseph	Exp Reimb: Battery for Engineering Camera	43.49
25	Leighton Stone	Solenoid Valve for STP	137.03
26	Madruga Iron Works	Non-Slip Vault Lids (3 - 3' x 5') (Novato Theater)	5,649.39
27	Malcher, Kristine	Refund Overpayment on Open Account	313.24
28	Maltby Electric	Conduit Straps (48) & Weatherproof Cover for Outlet	20.19
29	Marin County Clerk	Notice of Exemption. Filing Fee for AMI Project	50.00
30	McNair, Christina	Refund Overpayment on Closed Account	156.03
31	Miller Pacific Engineering	Prog Pymt#5: PreTank Pt. Reyes Station (Balance Remaining on Contract $21,190)	353.00

Seq	Payable To	For	Amount
32	Mitchell, Russ & Associates	Progress Pymt#7: Recycled Water Retrofits Design (28) (Balance Remaining on Contract $60,093)	90,677.50
33	Neopost USA	Monthly Postal Meter Rental	94.30
34	Novato Disposal Service	Green Waste Disposal @ Landfill for Recycling (6 tons)	617.60
35	Office Depot	Replacement Check. Original Lost in Mail.	1,841.21
36	Open Spatial	Drafting/Mapping Services for GIS/Auto CAD Engineering File	2,700.00
37	Pace Supply	3/4" Valves (2), 2" Coupling (6) ($972), Traffic Lid (STP) ($85) & Wye Strainer	1,157.67
38	Peterson Trucks	Oil Filter ('06 Int'l)	55.26
39	Pisharody, Anil	Novato "Washer Rebate" Program	50.00
40	Point Reyes Prop Mgmt Assn	December HOA Fee (25 Giacomini Rd)	75.05
41		Childcare Reimbursement	509.50
42	Department of Industrial Relations-Self-Insurance Plans	FY17 Self-Insured Workers' Comp Annual Assessment	1,102.32
43	Sequoia Safety Supply	Ibuprofen (600), Safety Gloves (600) ($118), First Aid Kits (5) ($96) & Woven Bandages	306.46
44	Sonoma County Water Agency	November Contract Water	177,761.06
45	SRT Consultants	Prog Pymt#2: Stafford Lake Watershed Sanitary Survey (November) (Balance Remaining on Contract $31,935)	1,620.00
46	State Water Resources Control	D2 Certification Renewal (Kane) (7/17-7/20) (Budget $80)	80.00
47		Cafeteria Plan: Uninsured Medical Reimbursement	7.96
48	Tamagno Green Products	Sludge Removal @ STP (134 yds)	3,350.00
49	TelePacific Communications	November Telephone Charges	649.94
50	Thatcher of California	Ferric Chloride (10 tons) (STP)	459.07
51	Township Building Services	November Janitorial Services	1,822.84

Seq	Payable To	For	Amount
52	USA BlueBook	Cutter Head (Maint. of Plastic Services)	355.18
53	Van Bebber Bros	Traffic Plate (48" x 48")	137.60
54	Waste Management	Misc Debris (STP Homeless Camp)	150.02
55	Wheeler, Carolyn	Novato "Toilet Rebate" Program	200.00
56	White Cap Construction	Concrete Waterproofing (4-50lb bags) ($196), Concrete Additive (2 gal) ($84) & Water Brushes (2)	369.75
		TOTAL DISBURSEMENTS	**$589,893.65**

The foregoing payroll and accounts payable vouchers totaling $589,893.65 are hereby approved and authorized for payment.

Auditor-Controller — Date 12/23/16

General Manager — Date 12/27/2016

DISBURSEMENTS - DATED DECEMBER 22, 2016

Date Prepared 12/20/16

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
EFT*	US Bank	November Bank Analysis Charge (Lockbox $912, Credit Card Processing $769 & Other $603) (Less Interest of $122)	$2,162.31
52241*	Donut Works	Claim Settlement-Reimbursement for Cost of Business Interruption Due to Air in Line Allegedly Caused by District (7515 Redwood Blvd)	150.00
1	Alpha Analytical Labs	Lab Testing	2,490.00
2	American Truck Body	Replacement Dump Hoist Under Body Parts	2,434.63
3	Athens Administrators	November Bill Review Fees	17.30
4	Automation Direct	Magnetic Flow Meters for 2 Pump Stations	1,780.00
5	AWWA CA-NV SEC	Grade 1 Renewal (Bena) (5/17-5/19) (Budget $60)	55.00
6	Bailey, Kymberly	Novato "Washer Rebate" Program	50.00
7	Bank of Marin	Bank of Marin Loan Principal & Interest (Pymt 62 of 240)	46,066.67
8	Bastogne	Refund Overpayment on Closed Account	30.00
9	Bing, Michael	Novato "Washer Rebate" Program	50.00
10	Centrisys	Specialty Grease for Centrifuge (12-400 gram cartridges)	547.04
11	Clipper Direct	Commuter Benefit Program (2)	216.00
12	Comcast	December Internet Connection	151.16
13	CPI International	Metals Test Reagent (Lab)	121.88
14	DeBarrows, Marilyn	Novato "Toilet Rebate" Program	100.00

Seq	Payable To	For	Amount
15		Cafeteria Plan: Uninsured Medical Reimbursement	360.00
16	Douvos, Angelo	Novato "Toilet Rebate" Program	100.00
17	English, Dennis	Novato "Washer Rebate" Program	50.00
18	Environmental Science Assoc	Prog Pymt#5: Engineering Services RW Expansion Project (Bal Rem on Contract $734)	20,452.48
19	Fabbri, Denise	Refund Overpayment on Closed Account	121.87
20	Frontier Communications	Leased Lines	1,565.37
21	Garrett, Daniel	Exp Reimb: T3 Certification Renewal (12/17-12/20) (Budget $120)	140.00
22	Golden Gate Petroleum	Gasoline ($2.08/gal) & Diesel ($2.23/gal)	1,705.78
23	Grainger	Rubberized Coating for Meter Hook Handles (1 gal)	189.00
24	Grayson, Rose Marie	Refund Overpayment on Closed Account	94.66
25	Green, Michelle	Novato "Washer Rebate" Program	50.00
26	HERC Rentals	Mini-Excavator Rental (2 Days) (O.M. Dosing Siphon Repair)	630.75
27	Hilton, Brett	Novato "Washer Rebate" Program	50.00
28	Hute, Cord	Novato "Washer Rebate" Program	50.00
29		Cafeteria Plan: Uninsured Medical Reimbursement	38.00
30	JW Mobile	High Pressure Hose Repair ('13 Vac Trailer)	82.86
31	Kaufman, Ken	Novato "Washer Rebate" Program	50.00
32	Kovarik, Susan	Novato "Toilet Rebate" Program	200.00
33	Lincoln Life	Deferred Compensation PPE 12/15/16	13,896.74
34	Maltby Electric	Circuit Breakers for AMI Collection Sites, Electrical Conduit, Elbows & Junction Boxes for the OM Dosing Station ($58)	110.44

Seq	Payable To	For	Amount
35	Marin Landscape Materials	Crushed Rock (1 yd), Mason Mix (8 lbs) Jute Bags (100) ($82) & Concrete (42 bags) ($237)	385.21
36	Marin County Treasurer	PR-6 Semi-Annual Revenue Bond Interest	1,400.00
37	Marin County Ford	Brake Rotors & Pad Kits ($439) & Drain Oil Plug	441.03
38	Micro Motion	New Electronic Flow Meters for San Antonio P/S	3,107.05
39	Nationwide Retirement Solution	Deferred Comp PPE 12/15/16	1,580.00
40	North Marin Auto Parts	Wheel Bearing, Cover & Grease Seals ($68), Running Lights (10), Shop Rags (10 lbs) ($171), Coil Packs (10) ($449), Spark Plugs (10), Coolant System Leak Tester, Oil Filters (4) ($18), Air Filters (4) ($111), Motor Oil (36 qts) ($173), Fuel Filters (3) ($38), Car Wash Soap & Brush, Latex Shop Gloves (600) ($116), Cargo Light Bulbs (4), Fender Washers (20), Nitrile Safety Gloves (1,000) ($163), Air Fittings (5) & Tire Patches (20) ($65)	1,602.39
41	North Bay Gas	Mig Welder Gas, Cut-off Wheels, Grinding disks & Torch Striker ($116) & November Cylinder Rental ($127)	242.76
42	Novato Builders Supply	Acrylic Caulk, Lumber ($102), Concrete (1 yd) ($103), Cement & Concrete Form	316.55
43	Novato Chevrolet	Replace Catalytic Converter Assembly ('07 Chevy 4x4) ($1,463), Exhaust Manifold, Bolts & Gaskets & Diagnose Air Bag Light & Electrical Problems ('07 Chevy Silverado) ($1,071)	2,596.99
44	Pape Machinery	High Temp Reading Diagnostic & Repair ('04 Backhoe)	2,780.61
45	NMWD Petty Cash	Safety Meeting Snacks ($84), Balloons for Holiday Party ($25), Parking ($18) & Lunch Meeting ($17)	151.26
46	PG&E	Power: Bldgs/Yard ($4,144), Rectifier/Controls ($519), Pumping ($17,376), Treatment ($103) & Other ($63)	22,204.96

Seq	Payable To	For	Amount
47	Pini Hardware	Sprayers (6), Door Bottom, Weather Strips, Super Glue, Head Lamp, Dishwasher Detergent, Vinegar, Mounting Tape, Clorox (2), Hand Sanitizer, Light Ballast, Silicon Sealer, Concrete Sealer, Hardware, Nuts, Screws, GFCI Receptacle, Garden Hose, Adaptor, Teflon Tape, Primer (2), Flex Seal Liquid, Faucet Repair Kit, GFCI Outlet & Circuit	330.97
48	Ramudo, Pablo	Exp Reimb: Travel Expenses to Attend ACWA Conference.	947.60
49	Randall Bros. Automotive	Smog Tests ('99 F350 & '08 F250)	105.00
50		Childcare Reimbursement	208.33
51		Cafeteria Plan: Uninsured Medical Reimbursement	220.00
52	Sebastopol Bearing & Hydraulic	Coupling (STP)	28.35
53	Silverado Avionics	Spare Radio Unit for Fleet & Replacement Microphone for Truck 503	1,501.37
54	Sisco, Justin & Jocelyn	Refund of Deposit New Development-Water Conservation Restriction-Novato	1,000.00
55	Sjoblom, Jeff	Exp Reimb: Water Distribution System Operation Class	114.68
56	Smith, D M	Refund Overpayment on Closed Account	30.45
57	State Water Resources Control	D1 Certification Renewal (Rupp) (5/17-5/20) (Budget $120)	70.00
58	State Water Resources Control Board	RW-South Phase 1A ($65,599) & RW-South Phase 1B Loan Principal & Interest ($166,575)	232,173.86
59	Steiner, Wendy	Novato "Toilet Rebate" Program	100.00
60		Cafeteria Plan: Uninsured Medical Reimbursement	568.76
61	Streakwave Wireless	WiFi Nano Beam Radios for iPads (2)	168.48
62	US Bank	November Safekeeping Fee - Treasury Securities	166.50

Seq	Payable To	For	Amount
63	U.S. Bank	Calif Water Codes (DeGabriele) ($187), EV/Hybrid Class Registration (Watkins) ($400), Dry Ice-Cooler ($420) (Lab), ACWA Conf: Super Shuttle ($47), Food ($61), Airport Parking ($72), Hotel ($564) (DeGabriele & McIntyre), Ergonomic Mouse ($30) (Holton), Airfare for ACWA Conference ($175) (Ramudo), "Ensuring Financial Health Utility After Drought" Seminar (Bentley) ($40), Valve & 'O' Ring for Pump @ STP ($97) (STP) & Fastrak ($25)	2,118.58
64	Vierra, Jean	Refund Overpayment on Closed Account	96.98
65	VWR International	Thermometer	34.53
66		Vision Reimbursement	16.65
67	Wilson, Andrew	Refund Overpayment on Closed Account	226.54
68		Childcare Reimbursement	1,500.00
		TOTAL DISBURSEMENTS	**$374,896.38**

The foregoing payroll and accounts payable vouchers totaling $374,896.38 are hereby approved and authorized for payment.

Auditor-Controller — Date 12/20/16

General Manager — Date 12/20/2016

MEMORANDUM

To: Board of Directors

December 30, 2016

From: David L. Bentley, Auditor-Controller

Subj: Update - Bill Payment Options
t:\cons srvc\aps\aps memo 16.docx

RECOMMENDED ACTION: Information

FINANCIAL IMPACT:

- APS saves the District $5,800 annually, and saves each APS customer $3.12 annually ($14,000 cumulatively)
- Email bills save the District $4,800 annually
- Online payments cost the District $25,900 annually

In May 1997 the District introduced the Automatic Payment Service (APS) program. The goal was to attract 8% (1,700) of District customers to pay their bill by direct Automated Clearing House (ACH) debit to their checking account. Today 4,495 customers (21%[1]) participate, up 222 from one year ago. A message on the bill invites customers to sign-up for APS.

The APS bank charge in 1997 was 16.7¢ per transaction. Today the bank charge per transaction is 5.6¢[2], totaling $1,510[3] annually. The District's average cost to process a paper check via lockbox is 27.3¢[4] (a significant reduction from the 75¢ processing cost prior to lockbox). Thus, APS eliminates over $5,800[5] annually in check processing cost. APS also saves each participating customer the cost of a 5¢ check and 47¢ postage six times per year ($3.12).

In November of 2002 the District began collecting email addresses from customers who prefer to have their bill delivered over the internet. Now 1,577 customers (7%) receive their bill via email only, an increase of 280 from one year ago. The email bill eliminates the cost of paper statements, envelopes, printing and postage, which costs $3.04[6] per account annually, saving the District $4,800 per year.

Finally, in response to customer demand, in August of 2006 the District began providing the option to pay water bills online. Over 1,450 payments per month (13% of total payments) are now received over the internet. The bank and credit card companies charge a fee for accepting payment by credit/debit card. The net cost of online payment transactions averages $1.76 per payment, which totals $30,600[7] annually. Note that the District saves the 27.3¢ paper check lockbox processing cost when customers pay online, which renders a net annual online payment transaction cost of $25,900.

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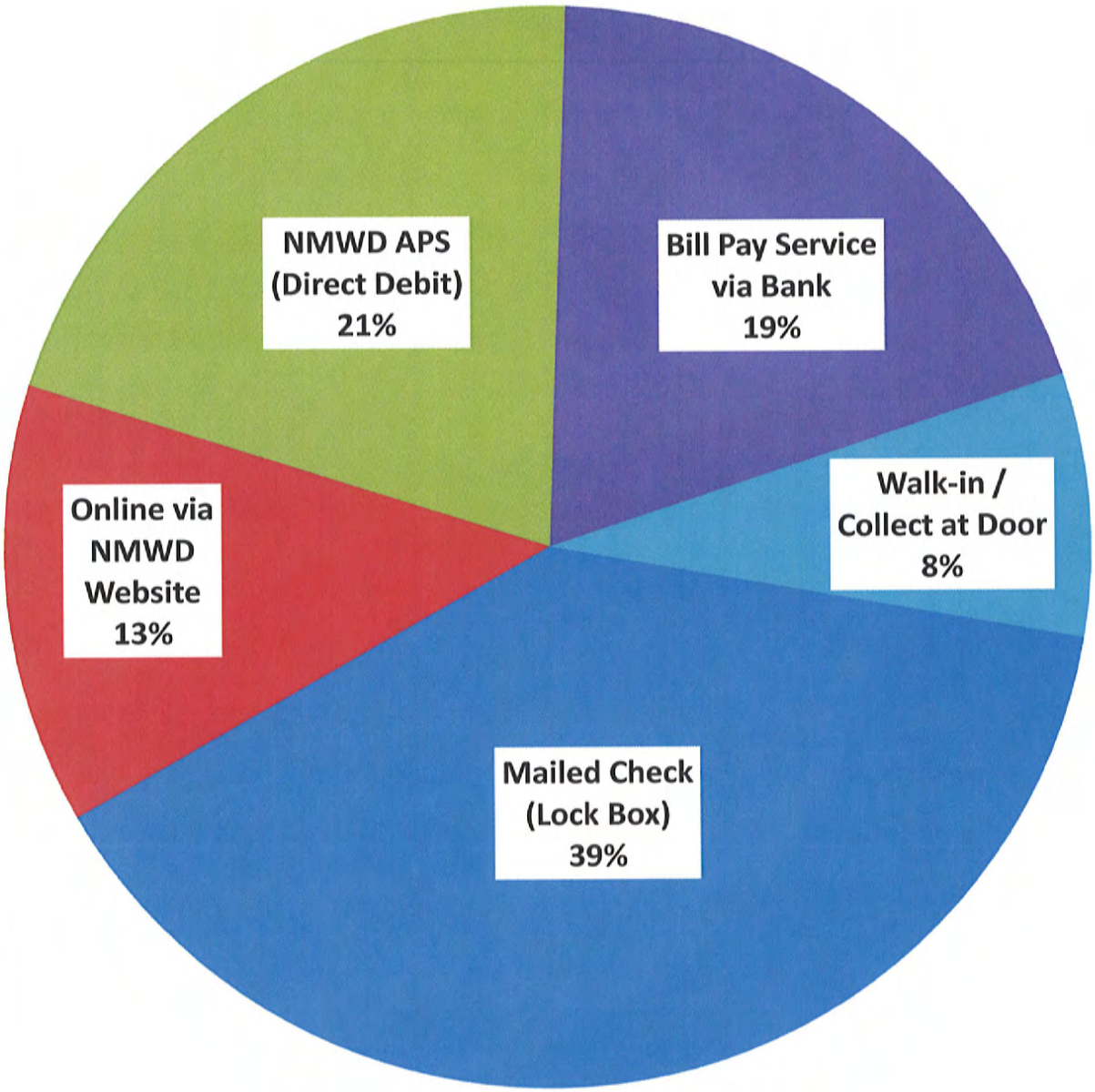
[1] 11/30/16 active accounts = 21,595 (Novato: 20,531; RW: 44; WM Water: 781; OM Sewer: 230).
[2] $20/month flat charge divided by 6 batches (4 APS + 2 payroll) X 4 APS/mo X 12 months = $160 / 26,970 (4,495 APS customers X 6 transactions/year) = 0.6¢ + 5.0¢/transaction = 5.6¢/transaction.
[3] 5.6¢ X 4,495 APS Customers X 6 transactions/year = $1,510.
[4] $912/month flat charge divided by 3,745 payments/month plus 2.977¢/payment = 27.3¢/transaction.
[5] (27.3¢ - 5.6¢) x 6 x 4,495) = $5,852.
[6] 13.0¢/bill + 37.6¢ average postage rate = 50.6¢ x 6 = $3.04/year x 1,577 = $4,794.
[7] 17,400 payments annually X $1.76 per transaction = $30,624.

Water Bill Payment by Type



CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

RECEIVED
DEC 27 2016
North Marin Water District

December 22, 2016

Sent via Electronic and U.S. Mail

Mr. Chris DeGabriele
General Manager
North Marin Water District
PO Box 146
Novato, CA 94948-0146
cdegabriele@nmwd.com

SUBJECT: CORRECTION TO ORDER FOR ADDITIONAL INFORMATION

On September 2, 2016, the State Water Resources Control Board's (State Water Board) Office of Enforcement issued a Notice of Violation for Failure to Meet Water Conservation Standard and Order for Additional Information (NOV and Informational Order) to the North Marin Water District (District) pursuant to its authority outlined in the California Code of Regulations, title 23, section 866(b).

Following the issuance of the NOV and Informational Order, the District informed our office that the data included disputed adjustments of water deliveries from its wholesaler (Sonoma County Water Agency). This data has since been corrected by the District and the District is now in compliance with its self-certified conservation standard of 0 percent compared to water produced in 2013, which went into effect on June 1, 2016. For this reason, your response to the Informational Order is no longer required and no further enforcement action will be pursued at this time.

If you have questions, please contact Ms. Angeles Caliso at (916) 323-6845, or by email at angeles.caliso@waterboards.ca.gov.

Sincerely,

Dr. Matthew Buffleben, Chief
Special Investigations Unit
Office of Enforcement

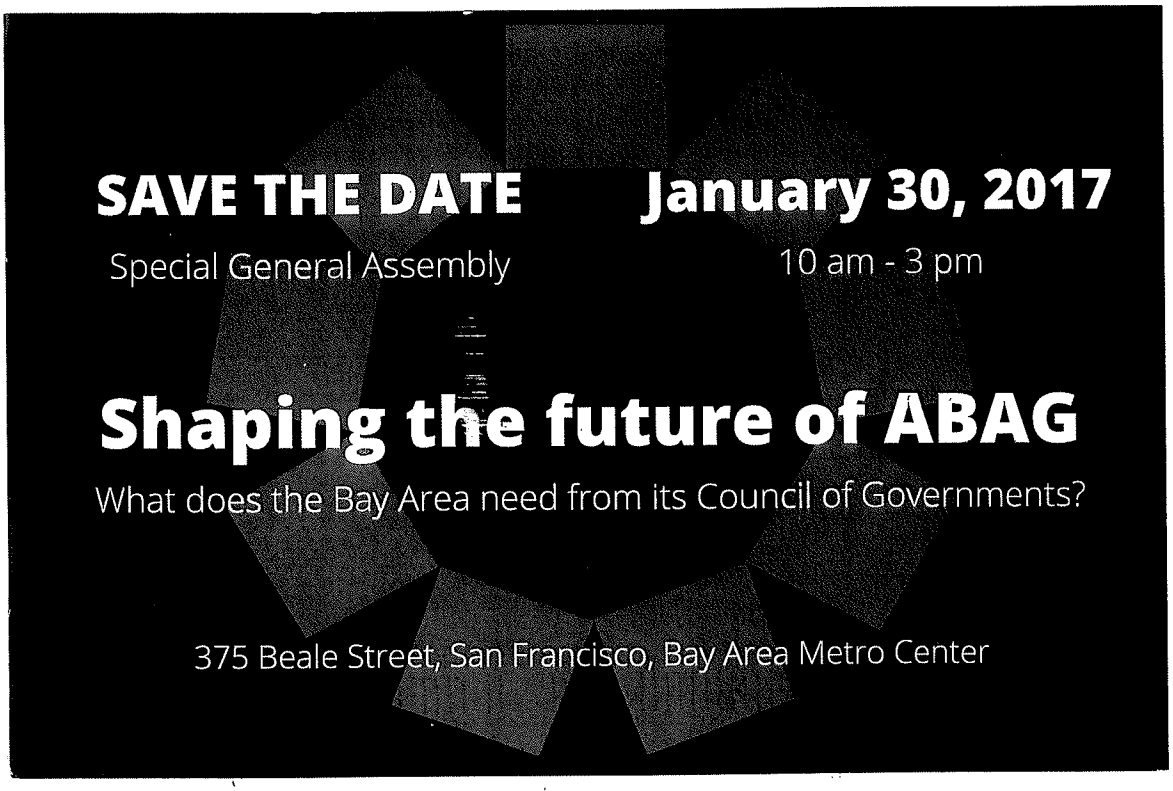
cc: See next page.

cc: *(via email only)*

Ms. Angeles Caliso, PE
Special Investigations Unit
Office of Enforcement
angeles.caliso@waterboards.ca.gov

Ms. Jasmine Oaxaca, PE
Special Investigations Unit
Office of Enforcement
jasmine.oaxaca@waterboards.ca.gov

Mr. Max Gomberg
Climate and Conservation Manager
Office of Research, Planning, and Performance
max.gomberg@waterboards.ca.gov



Shaping the Future of ABAG

What does the Bay Area need from its Council of Governments?

Special General Assembly

This conference will provide a dialogue on:

- The Future Role of the Council of Governments
- Defining the Needs of the Bay Area's Towns, Cities, and Counties
- Local Coordination to Address Regional Challenges

The agenda and registration will be available at:
http://abag.ca.gov/events/ga/2017/special.html

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CHRIS DEGABRIELE
PO BOX 146
NOVATO CA 94948-0146

January 30, 2017
10 am - 3 pm
375 Beale Street, San Francisco
Bay Area Metro Center, Yerba Buena Room

BOD MISC

Marin Local Agency Formation Commission

Regional Service Planning | Subdivision of the State of California

NOTICE OF SPECIAL MEETING AND AGENDA

Marin Local Agency Formation Commission
Friday, January 27, 2017
Central Marin Police Authority Community Room
250 Doherty Drive, Larkspur California 94939

8:30 A.M. – DOORS OPEN

Light breakfast offerings will be available for all attendees during this informal networking opportunity with Commissioners and staff members.

9:00 A.M. – CALL TO ORDER BY CHAIR; ROLL CALL

OPEN TIME

This portion of the meeting is reserved for persons desiring to address the Commission on any germane matter not listed on this agenda. Speakers are limited to three minutes unless otherwise provided by the Chair.

ANNUAL WORKSHOP ITEMS

The Commission will hold its annual workshop with facilitation services provided by William Chiat from the Alta Mesa Group. Scheduled topics are listed below with approximate starting and ending times.

1) **Workshop Introduction by William Chiat (9:00 A.M. to 9:15 A.M.)**
Introductions and review of agenda items.

2) **LAFCO Primer (9:15 A.M. to 10:00 A.M)**
This session serves as a big-picture overview of LAFCOs' existing and emerging duties/responsibilities in providing regional growth management services. This session is ideal for anyone interested in better understanding the role and relevance of LAFCO's work in Marin County and throughout California.

3) **Executive Officer's Report (10:00 A.M. to 10:20 A.M.)**
The Executive Officer will discuss key activities undertaken by Marin LAFCO in 2016 and identify opportunities and challenges going into 2017 with the latter highlighted by implementation of Senate Bills 239 (Outside Fire Service Contracts) and 1266 (Joint Power Authorities). This session is aimed at informing the Commission's subsequent discussion on strategic planning goals and objectives and will include discussing the status of the adopted study schedule and alternatives therein in advancing progress.

Comfort Break (10:20 A.M to 10:30 A.M.)

4) **Strategic Planning Discussion (10:30 A.M. to 11:30 A.M.)**
This session will review progress made in addressing the Commission's adopted goals and objectives in 2016 through the membership. The Commission will also discuss whether any changes to the adopted goals and objectives are warranted in 2017 as well as identify any specific tasks therein in step with informing the pending preparation of a budget and work plan at a future regular meeting.

ANNUAL WORKSHOP CONTINUED...

5) **Committee Assignments (11:30 A.M. to 11:45 A.M.)**
The Commission will consider making appointments/reappointments to the agency's (a) Budget, (b) Policy, (c) Legislative, and (d) Public/Technical Information Committees. Commission may also consider identifying specific Committee projects.

6) **Workshop Takeaways (11:45 A.M. to 12:00 P.M.)**
The facilitator will engage Commissioners in summarizing key takeaways generated during the workshop and discuss potential next steps for action at future meetings.

Comfort Break (12:00 P.M. to 12:15 P.M.)

CLOSED SESSION (12:15 P.M to 1:00 P.M.)

Public Employee Performance Evaluation | Government Code Section 54957
Executive Officer

ADJOURNMENT (1:00 P.M.)

Attest: _____
Keene Simonds
Executive Officer

Pursuant to GC Section 84308, if you wish to participate in the above proceedings, you or your agent are prohibited from making a campaign contribution of $250 or more to any Commissioner. This prohibition begins on the date you begin to actively support or oppose an application before LAFCO and continues until 3 months after a final decision is rendered by LAFCO. If you or your agent have made a contribution of $250 or more to any Commissioner during the 12 months preceding the decision, in the proceeding that Commissioner must disqualify himself or herself from the decision. However, disqualification is not required if the Commissioner returns that campaign contribution within 30 days of learning both about the contribution and the fact that you are a participant in the proceedings.

Any person with a disability under the Americans with Disabilities Act (ADA) may receive a copy of the agenda or a copy of all the documents constituting the agenda packet for a meeting upon request. Any person with a disability covered under the ADA may also request a disability-related modification or accommodation, including auxiliary aids or services, in order to participate in a public meeting. Please contact the LAFCO office at 415-446-4409 at least three (3) working days prior to the meeting for any requested arraignments or accommodations.

BOD MWSC 1/3/17

Think Tank's Infrastructure Plan for U.S. Waterways Emphasizes Dam Removal

IN RECENT YEARS, dam removal has become more common in response to concerns about the safety of aging dams and the sometimes deleterious environmental effects of dams on waterways. A recent report from the Center for American Progress (CAP), a liberal think tank based in Washington, D.C., calls on the federal government to give greater consideration to dam removal as part of efforts to ensure dam safety and improve the health of rivers and watersheds.

Released by CAP in mid-October, the report is entitled *Aging Dams and Clogged Rivers: An Infrastructure Plan for America's Waterways.* Citing data from the U.S. Army Corps of Engineers' National Inventory of Dams, the report notes that 65 percent of the approximately 87,000 dams listed in the inventory will be more than 50 years old by 2020. What is more, 27 percent of the dams will be more than 80 years old. At the same time, ongoing development downstream of dams results in "hazard creep," according to the report. "With an area the size of Los Angeles being lost every year to development in the West, rural and urban population sprawl has created new development downstream of many existing dams, putting more people at risk should a dam fail," the report states.

"It shouldn't take a catastrophic failure for the dams in this country to get much-needed attention," said Jenny Rowland, a research and advocacy associate for CAP's Public Lands project and the author of the report, in an October 18 news release. "Unfortunately, as is the case with much of our aging infrastructure, we jump from crisis to crisis and fail to plan ahead," Rowland said. "This report outlines a system for beginning to address the thousands of obsolete and unnecessary dams that currently block rivers, pose safety threats, and should be considered for removal."

Along with considering the hazards associated with aging dams, questions of whether to repair or remove a given dam should assess the benefits afforded by free-flowing rivers, according to the report. "While dams are traditionally valued for providing services such as recreation, irrigation, and flood protection, healthy rivers can provide many similar functions," the report states. "Properly protected and restored rivers, wetlands, and surrounding forests provide ecosystem services in the form of clean water, wildlife habitats, and recreation opportunities. In some cases, a properly restored floodplain may provide better protection against flooding than a deficient or hazardous dam."

ALONG WITH considering the hazards associated with aging dams, questions of whether to repair or remove a given dam should assess the benefits afforded by free-flowing rivers, according to the report

For these reasons, CAP advocates a federal dam policy that does more to "incentivize the decommissioning and removal of obsolete and unnecessary dams," according to the report. Even though the cost to maintain and repair aging dams often exceeds the cost of removal, dam removal typically has a higher up-front cost, making it harder to implement. To counteract this barrier, federal agencies should be required to consider dam removal when overseeing dam permitting and review processes, according to the report. "By including dam decommissioning as part of their guidelines and criteria, decision-makers in charge of federal programs related to the permitting, review, and funding of dams would be better positioned to fully consider dam removal when taking action," the report states.

In particular, the White House Council on Environmental Quality "should include dam removal as a reasonable alternative that must be considered for any National Environmental Policy Act (NEPA) assessments and review involving dams, particularly for those greater than 50 years in age," according to the report. "Further, any alternatives that include continued operation of a dam should take into consideration the life expectancy of the dam, including its cumulative effects on sediment, marine fisheries, endangered species, and water quality, as well as mitigation costs and the performance of the dam under a changing climate," the report states. Potential effects on tribal communities also should be assessed, according to the report.

Another of CAP's recommendations concerns federal grant programs that pertain to dams. "Numerous existing federal funding programs should be modified to better include dam removal," the report states. "Funding grants from the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration typically target specific species but do not consider broader ecosystem benefits. Instead of species-specific grants, federal funding should take a more holistic and ecosystem-level approach that looks at the improved ecosystem services resulting from the removal of a dam. Expanding the scope of funding would inevitably lead to some grantees considering dam removal as an option."

To attract private capital to the cause of dam removal, the CAP report calls on the Corps of Engineers and the U.S. Environmental Protection Agency to "alleviate permitting complications" that often preclude the practice as part of mitigation efforts allowed under section 404 of the Clean Water Act. "To make the Section 404 program—and other possible mitigation programs—more applicable to dam removal, policymakers need to develop a system that assesses the value of the ecosystem services and other benefits that come from free-flowing rivers," according to the report.

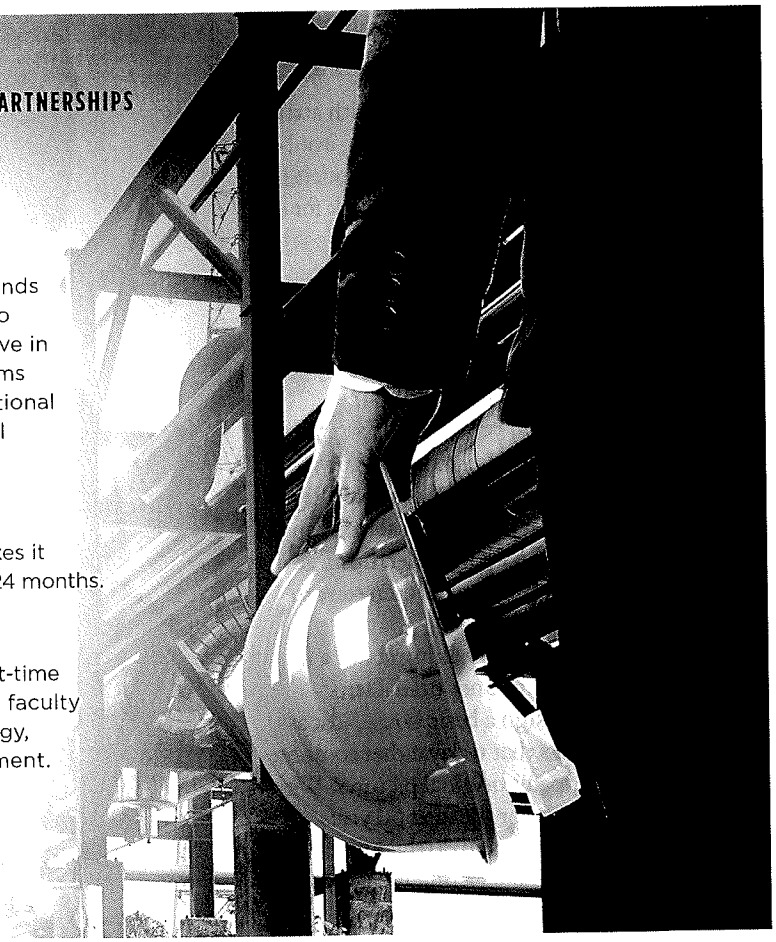
Although only a small fraction of U.S. dams are federally owned, the CAP report calls on the federal government to conduct a "comprehensive review" of its dams "to address safety concerns and determine if they are providing a net benefit to taxpayers." Such a review would single out dams that are unneeded or obsolete, as well as dams that have structural problems requiring repairs or upgrades. As an example of how such a review could be conducted, the CAP report points to the existing National Bridge Inventory, which the Federal Highway Administration uses to assess bridges. In this inventory, bridges are assigned a "sufficiency rating," which is used to determine if a structure merits federal funding for repair or replacement. "Federal dams could use a similar sufficiency rating to determine if dams are in need of repair or if they should be recommended for removal," according to the report. Dams found to be beneficial and needed should be improved so as to address any safety problems and reduce their untoward effects on the environment, the report maintains.

To encourage upgrades to nonfederal dams, the report says, Congress should establish a federal body, to be called the Safe Dams Fund, administered by the Federal Emergency Management Agency. Such a fund would provide "matched grants to state dam safety offices to keep dams safe and properly maintained," the report states. "This includes fixes to any structural deficiencies or deterioration and appropriate upgrades needed due to changed technical standards or change in hazard potential." However, to be eligible for assistance from the fund, a project should have to consider dam removal as one of the possible options, the report states. Such an approach would "help ensure that funds are not wasted on high-hazard or deficient dams that no longer provide benefits substantial enough to justify their continued maintenance," the report states. "It would also remove the most expensive, dangerous, and environmentally harmful structures."

The proposed Safe Dams Fund is similar to a dam rehabilitation program included in legislation recently passed by the Senate (see "Congress Could Reach Agreement on Water Resources Bill after Elections," *Civil Engineering,* November 2016, pages 14–15). In mid-September the Senate approved its version of the Water Resources Development Act. The legislation (S. 2848) would authorize $445 million in grant funding over 10 years to rehabilitate so-called high-hazard dams, that is, dams whose failure would pose a serious hazard to people or property. This provision is one of the main reasons that ASCE supports S. 2848. However, the version of the bill passed by the House in late September includes no such dam rehabilitation program. Infrastructure advocates have expressed hope that the two chambers will be able to negotiate a compromise bill before the end of the year. —JAY LANDERS

Landers

Jay Landers is a contributing editor to Civil Engineering.



In Your Town for Dec. 27, 2016

POSTED: 12/26/16, 7:50 PM PST | UPDATED: 6 HRS AGO0 COMMENTS

NOVATO

City sets forum on Bel Marin Keys plan

The city of Novato will hold a workshop on Jan. 5 on potential revisions to the Bel Marin Keys Industrial Parks master plan.

The plan is intended to accommodate biotech businesses. The zoning revisions would allow increased building heights, from about 42 feet to about 68 feet, and an increase in floor area-to-parcel ratios.

The proposed revisions, including potential traffic and visual implications, would also be analyzed in an environmental impact report being prepared for the city's draft general plan.

The meeting is scheduled for 6:30 p.m. at the Hamilton Community Center at 503 S. Palm Drive.

SAN RAFAEL

BOD MISC/File

MARINSCOPE
COMMUNITY NEWSPAPERS
NOVATO ADVANCE • SAN RAFAEL NEWSPOINTER • ROSS VALLEY REPORTER
TWIN CITIES TIMES • MILL VALLEY HERALD • SAUSALITO MARINSCOPE
www.marinscope

Affidavit of Publication

To: Katie Young
North Marin Water District
P.O. BOX 146
Novato, CA 94947

Re: Legal notice #11702

State of California)
) SS:
Countv of Marin)

I, Laurie Monroe, being duly sworn, depose and say that I am the Legal Publication Manager of Novato Advance, a weekly newspaper of general circulation published in City of Novato, County of Marin, State of California; that a notice, of which the annexed is a printed copy, has been duly and regularly published in Novato Advance once each week for 1 consecutive weeks; and that the dates of publication were as follows:

12/28/16

Laurie Monroe

Laurie Monroe

Sworn to before me this

28th day of December, 2016

NOTICE - NMWD BOARD VACANCY

Effective December 20, 2016, a vacancy exists on the Board of Directors of North Marin Water District due to the resignation of Director Dennis Rodoni. The Board will appoint a successor who will serve until the next general election of the District scheduled for November 2017. Any registered voter residing within the District and interested in the post is invited to contact the District Secretary at(415) 897-4133. The area of the District generally includes the greater Novato area and the Point Reyes Station, Olema, BearValley, Inverness Park, Paradise Ranch Estates and Oceana Marin areas of West Marin. Applicants are requested to submit a letter of interest by January 20, 2017 and describe their experience, educational background and previous public service and outline why they are interested in serving on the Board of Directors. The Board of Directors will review the letters of interest and interview applicants at an open public meeting to be scheduled. The meeting will be held at the District headquarters located at 999 Rush Creek Place, Novato, California. The Board will make an appointment to fill the vacancy at an open public meeting to be held no later than February 18, 2017.
Katie Young District Secretary
North Marin Water District
Dated: December 21, 2016,
NOVATO ADVANCE