



NORTH MARIN WATER DISTRICT
AGENDA - REGULAR MEETING
 February 5, 2019 – 6:00 p.m.
 District Headquarters
 999 Rush Creek Place
 Novato, California

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Est. Time	Item	Subject
6:00 p.m.	CALL TO ORDER	
	1. APPROVE MINUTES FROM REGULAR MEETING , January 15, 2019	
	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	
	5. QUARTERLY FINANCIAL STATEMENT	
	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.	
	6. Consent – Approve: Proposed FY19/20 Budget Review Schedule	
	7. Consent – Approve: Proposed FY 19/20 Rate Hearing Schedule	
	8. Consent – Approve: Amend Consulting Services Agreement - Cinquini & Passarino	
	9. Consent – Approve: General Services Agreement – Assoc. Right of Way Services, Inc.	
	ACTION CALENDAR 10. Approve: On-Call Construction and Repair Services Contracts with Team Ghilotti and Ghilotti Construction 11. Approve: Consulting Services Agreement with SRT Consultants (Stafford Lake Watershed Sanitary Survey) 12. Approve: Amend Consulting Engineering Services Agreement -Michael Baker International 13. Approve: Marin Country Club Recycled Water Service Agreement (Amendment No. 2, Subordination Agreement, Deed of Trust) Resolution	

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)

Est. Time	Item	Subject
	INFORMATION ITEMS	
	14.	Point Reyes System – Disinfection Byproduct Operational Evaluation
	15.	Revised Report – Taste and Odor Strategy for Stafford Lake Treatment Plant
	16.	Second Quarter FY 18/19 - Water Quality Report
	17.	TAC Meeting – January 7, 2019
	18.	Potter Valley Project Relicensing Update – PG&E License Application Withdrawal and Bankruptcy Filing
	19.	Project Update – PRE Tank 4A Replacement
	20.	NBWA Meeting – February 1, 2019
	21.	MISCELLANEOUS
		Disbursements – Dated January 17, 2019
		Disbursements – Dated January 24, 2019
		Disbursements – Dated January 31, 2019
		Information - FY 19 2 ND Quarter Labor Cost Report
		Increase in Directors' Compensation
		Self-Insured Workers' Comp -2nd Quarter Status Report
		Customer Letter – 22 Portola, Point Reyes Station
		<u>News Articles:</u>
		County honing Stafford Lake plan – NOVATO
		Reservoirs in 'good shape' – THE COUNTY
		City undergoing some changes in administration – NOVATO
		PG&E halts process to sell Potter Valley Project – MARIN WATER SUPPLIES
		Gavin Newsom budget calls for drinking water tax to help poor communities
	22.	CLOSED SESSION: Conference with Labor Negotiators Pursuant to California Government Code Section 54957.6 (Joe Wiley, Christopher Boucher, and Drew McIntyre) - Unrepresented Employees (Auditor-Controller, Chief Engineer, and District/Administrative Secretary)
7:45 p.m.	23.	ADJOURNMENT

1

DRAFT
NORTH MARIN WATER DISTRICT
MINUTES OF REGULAR MEETING
OF THE BOARD OF DIRECTORS
January 15, 2019

CALL TO ORDER

President Baker called the regular meeting of the Board of Directors of North Marin Water District to order at 6:00 p.m. at the District Headquarters and the agenda was accepted as presented. Present were Directors Jack Baker, Rick Fraites, Michael Joly, James Grossi, and Stephen Petterle. Also present were General Manager Drew McIntyre, District Secretary Terrie Kehoe, Auditor-Controller Julie Blue and Chief Engineer Rocky Vogler.

District employees, Robert Clark (Operations/Maintenance Superintendent), Tony Arendell (Construction/Maintenance Superintendent), Jeff Corda (Sr. Water Distribution and TP Operator/Employee Association Chair), Kent LeBrun (Maintenance Supervisor) and Stacie Goodpaster (Senior Chemist) were in the audience.

Also in the audience were Novato residents Greg Larsen and Margarita Ajello.

MINUTES

On motion of Director Joly, seconded by Director Petterle the Board approved the minutes from the January 8, 2019 special meeting as presented by the following vote:

AYES: Director Baker, Fraites, Grossi, Joly and Petterle

NOES: None

ABSTAIN: None

ABSENT: None

GENERAL MANAGER'S REPORT

Oceana Marin HOA Meeting

Mr. McIntyre informed the Board that he attended the winter Oceana Marin HOA meeting. There were about 50 homeowners in attendance. Mr. McIntyre stated he reviewed the financial status through FY18 and included an update on CIP projects and grant reimbursement for 2017 winter storm repairs. He also stated that a flyer was handed out to remind homeowners not to flush wipes down the toilet. Director Baker asked if people from the Dillon Beach Village came down to the Oceana Marin HOA meetings. Mr. McIntyre replied not to his knowledge.

Dillon Beach Village

1 Mr. McIntyre also informed the Board that he will be attending the County's Dillon Beach
2 Village Water Resource Workshop No. 2 at 6 p.m. on Tuesday, January 29th.

3 Meetings

4 Mr. McIntyre informed the Board that he will have a WAC Water Supply Coordination Council
5 meeting on January 23rd, and the next NBWRA meeting is on January 28th and the next WAC
6 meeting is on February 4th.

7 OPEN TIME

8 President Baker asked if anyone in the audience wished to bring up an item not on the
9 agenda. During Open Time, Jeff Corda (Sr. Water Dist. & TP Operator) addressed the Board as
10 Chair of the Employee Association. Mr. Corda expressed his appreciation to the Board and
11 Management for listening to the employees. Mr. Corda felt that everyone had an open mind
12 throughout the process and they have reached a fair agreement that will help retain employees and
13 make the District more competitive when hiring for new positions.

14 STAFF/DIRECTORS REPORTS

15 President Baker asked if staff or Directors wished to bring up an item not on the agenda and
16 the following were discussed.

17 Mr. Arendell announced the beginning of our annual flushing program which started on
18 January 14th. He added that the program has been posted on our website and the front office will
19 continue to get updates on which areas of Novato staff is flushing. Mr. Arendell noted that the
20 flushing program in West Marin will begin in February and will be performed by the Operations
21 Department. Director Joly wanted to know when all flushing will be completed, and Mr. Arendell
22 replied in two to three months. Director Baker asked if the rainy weather slows down the flushing
23 program. Mr. Arendell responded that it is not a problem; staff can flush rain or shine.

24 Ms. Kehoe announced that each of the Directors have been given a packet to update their
25 Form 700 which is due on April 2nd. She also noted a copy of last years completed form was
26 included for reference.

27 Mr. Clark gave a brief weather update, stating Marin County had 2-3 inches of rain from our
28 last storm per the National Weather Service. He noted we are in good shape and ready in the event
29 of heavy rain and winds. Director Grossi wanted to know if the County of Marin rain gauges are
30 online now and Mr. Clark replied that they are but the National Oceanic and Atmospheric
31 Administration river gage data is not.

32 MONTHLY PROGRESS REPORT

1 Mr. McIntyre reviewed the Monthly Progress Report for December. He reported that water
2 production in Novato was up 4% from December one year ago and down 2% fiscal year to date. In
3 West Marin, water production is up 14% from December one year ago and up 16% fiscal year to
4 date. Recycled Water production is up 85% from one year ago and up 27% fiscal year to date. He
5 stated that Stafford Lake holds 1240 AF and is at 30% of capacity. Mr. McIntyre informed the Board
6 that Oceana Marin wastewater discharge continues in December and freeboard is excellent. He
7 added that, under Safety/Liability, we currently have 92 days without a lost time injury. On the
8 Summary of Complaints and Service Orders, the Board was apprised that overall the number of
9 complaints/service orders are up 24% fiscal year to date. Mr. McIntyre reiterated the increase
10 continues to be a reflection of the new AMI meter implementation awareness. Additionally, Mr.
11 McIntyre added that the number of questionnaires mailed out total 137, with 58 returned and over
12 90% of those received were positive comments. Ms. Blue reported on the December 2018
13 Investments, where the District's portfolio holds \$17.9M earning a 1.98% rate of return. She noted
14 the LAIF rate is trending a little higher than the portfolio rate at this time.

15 **CONSENT CALENDAR**

16 On the motion of Director Petterle, and seconded by Director Fraites the Board approved a
17 time extension amendment to the Consulting Services Agreement with Chris DeGabriele by the
18 following vote:

19 AYES: Director Baker, Fraites, Grossi, Joly and Petterle

20 NOES: None

21 ABSTAIN: None

22 ABSENT: None

23 **ACTION CALENDAR**

24 **APPROVE: CONSULTING ENGINEERING SERVICES AGREEMENT – STAFFORD WATER**
25 **TREATMENT PLANT PROCESS EFFICIENCY STUDY**

26 Mr. Clark explained the efficiency study is needed to ensure that Stafford Treatment Plant
27 operates at optimum efficiency. He advised the Board that the main focus of the Study is evaluate
28 feasible options to recapture as much process water as possible so that we can run the plant in the
29 winter and not exceed the 40,000 gallon per day discharge limit. Mr. Clark expressed his
30 confidence in West Yost and felt that they are well qualified to perform the work. Director Joly
31 stated that if the point of the study is to reduce the amount of waste stream discharge to Novato
32 Sanitary District, and in doing so recapture the water, then the study should pay for itself. Director

Joly inquired as to the duration of the study and Mr. Clark replied that it should be completed this fiscal year. Director Grossi wanted to know the cost of the treated Stafford Lake water versus the water purchases from Sonoma County Water Agency. Ms. Blue stated that it fluctuates throughout the year. On the motion of Director Joly, and seconded by Director Grossi the Board approved authorizing the General Manager to enter into a Consulting Engineering Services Agreement with West Yost for the Stafford Water Treatment Plant Process Efficiency Study by the following vote:

AYES: Director Baker, Fraites, Grossi, Joly and Petterle

NOES: None

ABSTAIN: None

ABSENT: None

**APPROVE: SALARY SCHEDULES AND SUCCESSOR MEMORANDUM OF UNDERSTANDING
WITH NMWD EMPLOYEE ASSOCIATION (2018-2023)**

On the motion of Director Grossi, and seconded by Director Petterle the Board approved the Salary Schedules and Successor Memorandum of Understanding with NMWD Employee Association (2018-2013) by the following vote:

AYES: Director Baker, Fraites, Grossi, Joly and Petterle

NOES: None

ABSTAIN: None

ABSENT: None

Director Grossi left the meeting at 7:00 p.m.

INFORMATION ITEMS

AMI OPT-OUT OPTIONS

Ms. Blue introduced Greg Larsen and Margarita Ajello, two Novato residents living at 26 Aronia Lane who expressed their concerns regarding health issues associated with the AMI meters. Mr. Larsen described their symptoms since the AMI meters were installed in August. He stated that his partner, Margarita Ajello started hearing a very loud Morse code noise in her right ear making it very difficult to sleep, and around the same time he started feeling a static electricity sensation on his skin which also makes it difficult to sleep. They asked the neighbors adjacent to them if they were experiencing anything and they were not, and so then they began investigating to see what recently changed that could be causing their discomfort. Director Baker asked if the noise is external. Mr. Larsen stated that the cause is not tinnitus in the ears but from the outside. Mr.

1 Larsen described his research findings, and by use of an EMF meter he found that he could dampen
2 the effects by putting several layers of aluminum over the meters. Mr. Larsen also commented that
3 through all this investigative process the staff have all been very helpful and supportive. Director
4 Joly ask Mr. Larsen if he had a policy suggestion. He replied that he believes the Opt-Out Policy
5 should be free. Mr. McIntyre replied that they did not. A general discussion ensued regarding this
6 issue. Director Joly empathized with Mr. Larsen and Ms. Ajello and thanked them for coming to the
7 Board and was sorry to hear they were experiencing discomfort. Director Grossi inquired if staff
8 has heard if there is anyone else experiencing these problems in the industry, and Mr. Clark replied
9 no. Director Joly asked if we could just change out the meter. Ms. Blue explained that these meters
10 are being billed to the HOA and staff has not yet scheduled a meeting with them to discuss possible
11 opt-out options. Director Baker asked if they believe their symptoms are from the water meters, and
12 Mr. Larsen stated that their symptoms did not occur until around the time the AMI meters were
13 installed. Director Fraites asked if any there have been any other customers that have had similar
14 complaint and Ms. Blue replied no. Director Joly again thanked Mr. Larsen and Ms. Ajello from
15 coming out, and asked them to give staff some time to investigate this issue and would also like to
16 hear from the HOA before getting back to them.

17 **ANNUAL REPORT ON BOARD COMPENSATION**

18 Ms. Blue reported that the Annual Report on Board Compensation is a new requirement
19 aimed to provide transparency. She advised the Board that in order to comply with the requirements
20 of Assembly Bill 2040 and Assembly Bill 1234, the District prepares a yearly report of the annual
21 compensation and expense reimbursements paid to each board member. AB 2040 now requires
22 special districts to annually report this information and post it on their website. AB 1234 requires
23 special districts to disclose the reimbursements made to its elected officials. Ms. Blue noted that
24 this item will be reported under the miscellaneous category in future agendas.

25 **AMI PROGRESS REPORT**

26 Mr. Clark updated the Board on the Advanced Meter Infrastructure (AMI) project progress.
27 With the final material order delayed, the project is now expected to run through February 2019 for
28 all of the contracted service conversions. He stated we have 1700 meters left to convert to AMI and
29 that District staff will need to install 350 of these AMI meters due to leaks and stuck meter stops.
30 Director Baker asked if this meant only 1700 total meters were left in Novato. Mr. Clark responded
31 that there are 1700 left in this project; which does not include another estimated 75 that are three
32 inch meters or larger. Director Joly asked if we are within budget. Ms. Blue responded that we need
33 to do one last order and then we can do a reconciliation, but should be close to budget. Director

1 Joly also wanted to know the number of people who have chosen to opt out. Ms. Blue stated
2 around 47, which is very low since the original estimate was 200. Mr. Clark added that we continue
3 to get good data with this program and we can detect leaks immediately with the help of the AML
4 meters. He also noted that in the next four weeks an audit will be done with our Core Billing system
5 software to see how it matches up with the AML In-sight program software. Director Baker requested
6 a comprehensive closeout report at the end of the AML project.

7 **PRE TANK 4A REPLACEMENT**

8 Mr. Vogler gave an update to the Board on the PRE Tank 4A Replacement Project. He
9 reported that due to a delay caused by the County of Marin submitting paperwork to the Coastal
10 Commission, the appeal deadline has been extended to January 29. District staff contacted both
11 the Coastal Commission and the County of Marin to raise awareness of the issue and assist with
12 coordination. Mr. Vogler stated that although it is possible that a further appeal may be filed with the
13 Coastal Commission, District staff intends to move forward with the project as currently scheduled.
14 Director Joly wanted to know if the extension of the 120 extra days imperils safety of our customers.
15 Mr. Vogler stated that it will delay building of the new tank and the PRE road maintenance
16 association will need to wait longer to perform repair. Director Joly asked if we have reached out to
17 those who have expressed an interest in the project. Mr. Vogler responded yes. Director Baker
18 asked a question about who will be paying for future Drakes View paving costs. Mr. Vogler stated
19 that we will photograph the road to document its current condition and will only be responsible for
20 repairs caused by our construction project. Director Baker thanked Mr. Vogler for his perseverance
21 on this issue.

22 **NBWA UPDATE – JANUARY 11, 2019**

23 Director Fraites gave an update on the new water-use efficiency legislation that Gov. Brown
24 recently passed. Mr. McIntyre reminded the Board that NMWD, with Ryan Grisso's oversight, is
25 participating in the state's 2nd pilot program which will give us a better understanding early on of the
26 requirements. A general discussion ensued. Director Fraites also mentioned that NBWA is working
27 on a new Strategic Plan and that the organization wants to expand their influence in Northern
28 California and have recently had two additional agencies join.

29 **MISCELLANEOUS**

30 The Board received the following miscellaneous items: Disbursements – January 10, 2019,
31 National Weather Service Precipitation Probability Map – January 2019 One Month Outlook,
32 Damage to 18-inch Zone 1 Steel Water Main at San Marin Drive and Novato Blvd., Russian River

1 Watershed Map and Current Lake Mendocino and Lake Sonoma Storage Graphs, Department of
2 Water Resources Letter – Novato Creek Dam, No. 88 – New Inundation Map Requirement for
3 Spillway and Oceana Marin Association Agenda – January 12, 2019.

4 Mr. McIntyre discussed the recent State letter regarding the need to prepare a new
5 Inundation Map for Stafford Dam. Mr. McIntyre stated he is in communication with the firm,
6 Michael Baker International, to perform the requested additional work and will report back to the
7 Board at a future meeting.

8 The Board received the following news articles: How hydropower plant sale could affect
9 Marin – POTTER VALLEY.

10 **ADJOURNMENT**

11 President Baker adjourned the meeting at 7:24 p.m.

12 Submitted by

13
14
15 Theresa Kehoe

16 District Secretary
17

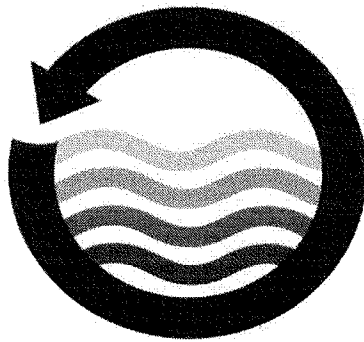
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NORTH MARIN WATER DISTRICT



FINANCIAL STATEMENT FISCAL YEAR 2018-19

December 31, 2018

**NORTH MARIN WATER DISTRICT
FINANCIAL STATEMENTS
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MEMORANDUM

To: Drew McIntyre, General Manager

January 30, 2019

From: Reviewed by: Julie Blue, Auditor-Controller

Prepared by: Nancy Holton and Nancy Williamson, Senior Accountants

Subj: Information – FY18/19 December Financial Statement

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FISCAL YEAR PERFORMANCE COMPARED TO THE ANNUAL BUDGET

CONSOLIDATED SUMMARY

Actual vs. Budget	Dec-18 Actual	FY18/19 Actual YTD	FY18/19 Budget	FYTD / Budget %
Operating Revenue	\$1,365,768	\$12,445,654	\$22,806,000	55%
Operating Expense	1,441,861	10,445,764	21,187,000	49%
Non-Operating Revenue / (Expense)	30,901	(114,115)	(460,000)	25%
Net Income / (Loss)	(\$45,192)	\$1,885,774	\$1,159,000	163%
Other Sources / (Uses)*	(623,975)	910,786	(5,326,000)	-
Cash Increase / (Decrease)	(\$669,167)	\$2,796,561	(\$4,167,000)	-

* See Page 8.

For the first six months of the fiscal year, the District generated a net income of \$1,885,774 and saw a net cash increase of \$2,796,561. On a seasonally adjusted basis, Operating Revenue came in 2% under budget and Operating Expense came in 6% under budget. \$2,290,587 (29%) of the Capital Improvement Projects Budget was expended this fiscal year-to-date. At month end the ratio of total cash to budgeted annual operating expense (sans depreciation) stood at 102%.

SUMMARY INCOME STATEMENTS BY SERVICE AREA

PRESENTED IN ACCORDANCE WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPALS

NOVATO WATER

Year over Year Comparison

	Dec-18 Actual	FY18/19 Actual YTD	FY17/18 Actual YTD	FY19 vs 18 Up/(Down)
Operating Revenue	\$1,235,239	\$10,925,254	\$11,144,482	(2%)
Operating Expense	1,333,381	9,348,541	8,783,678	6%
Other Income / (Expense)	(1,022)	(47,609)	(77,738)	(39%)
Net Income / (Loss)	(\$99,164)	\$1,529,104	\$2,283,066	(33%)
Active Accounts	20,529	20,529	20,551	0%
Consumption (MG)	158	1,439	1,485	(3%)
Average Commodity Rate / 1,000 gal (net)	\$5.22	\$5.89	\$5.92	(1%)
Income / (Loss) / Active Account	(\$4.83)	\$74.49	\$111.09	(33%)
Income / (Loss) / 1,000 Gal	(\$0.63)	\$1.06	\$1.54	(31%)
Connection Fee Revenue	\$0	\$95,800	\$709,200	(86%)
FRC Transfer (to)/from Recycled Water	(\$550,741)	\$1,372,186	(\$7,122,418)	-
Caltrans Capital Contribution	\$2,012	\$13,346	\$339	3837%
MMWD AEEP Capital Contribution	\$0	\$245,000	\$245,000	0%
Developer 'In-Kind' Contributions	\$74,622	\$146,010	\$50,401	190%

Consumption for the fiscal year-to-date was 3% less than the prior year same period. Total operating revenue, which includes wheeling and other miscellaneous service charges, decreased 2% (\$219,228) from the prior year same period. Total operating expense was 6% (\$564,863) more than last year same period. The Stafford Treatment Plant produced 293 MG this fiscal year-to-date at a cost of \$3,224/MG¹ versus \$2,745/MG³ from SCWA. The budget for Stafford is 750 MG at a cost of \$3,204/MG.

Staff time (hours) charged to Novato operations was 3% more than last year. Salary and benefit cost was \$2,716,368, which was 42% of the \$6,514,000 budget for Novato operations.

The fiscal year net income (which includes non-operating items such as interest revenue and expense) of \$1,529,104 compares to a budgeted net income for the year of \$902,000 and to a net income of \$2,283,066 for the prior year. \$1,865,557 (32%) of the Novato Water Capital Improvement Project Budget was spent versus \$1,842,588 (18%) for the prior year. \$95,800 in connection fees have been collected (\$680,000 is budgeted). Connection Fee reserves totaling \$1,372,186 were transferred this fiscal year from the Recycled Water Fund to cover the debt service and working capital requirements for expansion of the RW distribution system. The Novato Connection Fee Reserve has a net deficit of \$8,217,413 arising from transfers to the RW Fund in advance of Connection Fee receipts. That deficit will be reimbursed by future Connection Fee revenue. The Novato cash balance decreased \$1,866,318 in December, and stood at \$11,224,809 at month end, compared to a budgeted projection of \$8,189,000 at fiscal year-end.

NOVATO RECYCLED	Dec-18	FY18/19	FY17/18	FY19 vs 18
Year over Year Comparison	Actual	Actual YTD	Actual YTD	Up/(Down)
Operating Revenue	\$58,504	\$847,055	\$558,656	52%
Operating Expense	47,782	661,386	407,997	62%
Other Income / (Expense)	(23,606)	(129,196)	(105,828)	22%
Net Income / (Loss)	<u>(\$12,883)</u>	<u>\$56,474</u>	<u>\$44,831</u>	26%
Active Accounts	93	93	53	75%
Consumption (MG)	9.4	141.6	99.1	43%
Average Commodity Rate / 1,000 gal (net)	\$5.77	\$5.77	\$5.48	5%
Deer Island Production (MG)	0.0	4.0	7.0	(43%)
Novato Sanitary Production (MG)	0.6	109.2	60.8	80%
Las Gallinas Production (MG)	1.4	15.7	24.4	(36%)
Potable Water Input (MG)	0.1	20.0	0.8	2397%

141.6 MG was delivered to RW customers in December, 43% more than the prior year. Operating revenue was 52% more than last year due to the June 1, 2018 4.5% rate increase and the consumption increase. Total operating expense was \$253,389 (62%) more than the prior year. The recycled water was produced at a cost of \$1,870/MG² (including potable water consumed) versus \$2,745/MG³ from SCWA. The budgeted production cost of recycled water is \$3,255/MG. The District began receiving recycled water from Las Gallinas Valley Sanitary District again at the end of August after a malfunction associated with their UV disinfection system was repaired.

The fiscal year-to-date net income of \$56,474 compares to a budgeted net loss for the year of \$10,000 and a net income of \$44,831 for the prior year same period. \$106,160 (88%) of the Capital Improvement Project Budget has been expended this fiscal year-to-date. The Novato Recycled cash balance stood at \$4,665,768 at month end, \$3.4M of which amount resides in restricted reserves for debt service, the Deer Island Facility Replacement Fund and the Recycled Water Capital Replacement and Expansion Fund.

¹ Stafford production cost = TP op expense (\$554,134) + SRF loan interest (\$121,092) + plant depreciation (\$269,533) / 293 MG produced

² Recycled Water production cost = purchased water cost (\$174,916) + treatment expense (\$5,816) + Deer Island RW Facility SRF loan interest (\$26,092) + Deer Island plant depreciation (\$57,960) / 141.6 MG produced

³ SCWA production cost per MG = O&M charge (\$2,207) + debt service charge (\$173) + Russian River conservation charge (\$337) + Russian River projects charge (\$28)

WEST MARIN WATER

Year over Year Comparison

	Dec-18 Actual	FY18/19 Actual YTD	FY17/18 Actual YTD	FY19 vs 18 Up/(Down)
Operating Revenue	\$50,965	\$546,984	\$488,230	12%
Operating Expense	48,784	338,007	375,389	(10%)
Other Income / (Expense)	26,745	29,570	18,466	60%
Net Income / (Loss)	<u>\$28,926</u>	<u>\$238,548</u>	<u>\$131,308</u>	82%
Active Accounts	782	782	781	0%
Consumption (MG)	3.2	40.2	37.7	7%
Average Commodity Rate / 1,000 gal (net)	\$10.55	\$11.19	\$10.60	6%
Income/ (Loss) / Active Account	\$36.99	\$305.05	\$168.13	81%
Income / (Loss) / 1,000 Gal	\$8.91	\$5.93	\$3.50	69%
Connection Fee Revenue	\$0	\$8,000	\$45,600	(82%)

Consumption for the fiscal year was 40.2 MG, 7% more than the prior year. Operating revenue of \$546,984 was \$58,754 (12%) more than last year.

Operating expenditures were \$37,382 (10%) less than the previous year same period. The fiscal year net income of \$238,548 compares to a budgeted annual net income of \$183,000 and to a net income of \$131,308 for the prior year same period. \$52,310 (4%) of the Capital Improvement Project Budget was expended this fiscal year-to-date, and \$8,000 in connection fees were collected (\$23,000 is budgeted). The West Marin Water cash balance increased \$26,986 in December and stood at \$1,742,892 at month end, compared to a budgeted projection of \$424,000 at June 30, 2019.

OCEANA MARIN SEWER

Year over Year Comparison

	Dec-18 Actual	FY18/19 Actual YTD	FY17/18 Actual YTD	FY19 vs 18 Up/(Down)
Operating Revenue	\$21,060	\$126,360	\$119,618	6%
Operating Expense	11,914	97,831	97,991	(0%)
Other Income / (Expense)	28,784	33,120	32,528	2%
Net Income / (Loss)	<u>\$37,929</u>	<u>\$61,649</u>	<u>\$54,156</u>	14%
Active Accounts	234	234	232	1%
Monthly Sewer Service Charge	\$90	\$90	\$86	5%
Income / (Loss) / Active Account	\$162.09	\$263.46	\$233.43	-
Connection Fee Revenue	\$0	\$0	\$0	-

Operating revenue of \$126,360 was 6% more than the previous year due to the 5% rate increase effective July 1, 2018. Operating expenditures were about the same as the previous year. The fiscal year net income of \$61,649 compares to a budgeted annual income of \$85,000 and to a net income of \$54,156 for the prior year. 47% of the Capital Improvement Project Budget has been expended this fiscal year-to-date.

No connection fees have been collected (\$30,000 is budgeted). The Oceana Marin cash balance increased \$153,012 in December and stood at \$269,520 at month end, compared to a budgeted projection of \$236,000 at June 30, 2019.

**NORTH MARIN WATER DISTRICT
STATEMENT OF NET POSITION
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	TOTAL	NOVATO WATER	NOVATO RECYCLED	WEST MARIN WATER	OCEANA MARIN SEWER
ASSETS					
Cash & Investments					
Unrestricted/Undesignated Cash	\$1,623,152	\$0	\$537,589	\$887,316	\$198,247
Restricted Cash (Note 1)					
Connection Fee Fund	92,991	0	0	92,991	0
Revenue Bond Redemption Fund	30,000	0	0	30,000	0
Bank of Marin Project Fund	466,278	30,545	0	435,733	0
AMI Project Loan Fund	12,052	12,052	0	0	0
Deer Island RWF Replacement Fund	1,431,887	0	1,431,887	0	0
Capital Replacement & Expansion Fund	1,198,480	0	1,198,480	0	0
Tax Receipts Held in Marin Co Treasury	546	0	0	536	10
STP SRF Reserve-Marine Co Treasury	1,013,000	1,013,000	0	0	0
RWS North/South SRF Reserve Fund	614,299	0	614,299	0	0
RW Central Area SRF Reserve Fund	255,373	0	255,373	0	0
Designated Cash (Note 2)					
Liability Contingency Fund	1,241,170	1,142,285	0	98,885	0
Self-Insured Workers' Compensation Fund	551,188	518,306	9,189	17,431	6,262
Retiree Medical Benefits Fund	4,123,565	4,123,565	0	0	0
Maintenance Accrual Fund	2,500,000	2,500,000	0	0	0
Operating Reserve Fund	2,773,114	1,909,162	618,952	180,000	65,000
Total Cash	17,927,095	11,248,915	4,665,768	1,742,892	269,520
Gain/(Loss) on MV of Investments	(24,106)	(24,106)	0	0	0
Market Value of Cash & Investments	17,902,988	11,224,809	4,665,768	1,742,892	269,520
Current Assets					
Net Receivables - Consumers	\$1,232,645	\$984,305	\$135,770	\$125,423	(\$12,853)
Accrued Water Sales	1,578,546	1,433,422	97,032	48,092	0
Accounts Receivable-Other	378,147	61,735	129,733	0	186,679
Prepaid Expense	413,993	411,881	0	0	2,113
Reimbursable Small Jobs	97,250	93,598	0	416	3,235
Interest Receivable	58,723	56,783	1,940	0	0
Inventories	486,711	486,711	0	0	0
Deposits Receivable	32,677	32,677	0	0	0
Total Current Assets	\$4,278,692	\$3,561,112	\$364,475	\$173,931	\$179,174

**NORTH MARIN WATER DISTRICT
STATEMENT OF NET POSITION
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	TOTAL	NOVATO WATER	NOVATO RECYCLED	WEST MARIN WATER	OCEANA MARIN SEWER
Loans Receivable					
Employee Loans (Note 3)	\$714,200	\$714,200	\$0	\$0	\$0
Due From Other Funds (Note 10)	0	0	0	0	0
Other Long Term Receivables (Note 4)	2,291,733	0	2,291,733	0	0
Loans Receivable	\$3,005,933	\$714,200	\$2,291,733	\$0	\$0
Property and Plant					
Land & Land Rights	\$1,473,091	\$1,368,872	\$0	\$103,411	\$808
Dam, Lake, & Source Facilities	5,596,066	5,103,654	0	492,412	0
Treatment Facilities	21,184,413	17,607,109	2,666,198	319,913	591,193
Storage Facilities	23,077,919	20,453,383	519,014	2,105,523	0
Transmission Facilities (16"+)	29,405,627	29,283,304	0	122,324	0
Distribution and Pumping Facilities	84,803,636	61,683,537	17,301,217	5,818,882	0
Sewer Mains, Pumps, & Laterals	1,203,030	0	0	0	1,203,030
Sub-Total	\$166,743,783	\$135,499,858	\$20,486,428	\$8,962,465	\$1,795,032
Less Accumulated Depreciation (Note 5)	(55,092,280)	(46,713,796)	(3,519,291)	(3,833,276)	(1,025,917)
Net Property and Plant	\$111,651,503	\$88,786,062	\$16,967,137	\$5,129,189	\$769,115
Buildings and Equipment (Note 6)					
Buildings	\$1,902,893	\$1,902,893	\$0	\$0	\$0
Office Equipment	698,725	698,725	0	0	0
Laboratory Equipment	252,324	252,324	0	0	0
Trucks & Automobiles	1,302,299	1,302,299	0	0	0
Construction Equipment	855,144	855,144	0	0	0
Tools, Shop Equipment	222,390	222,390	0	0	0
Sub-Total	\$5,233,775	\$5,233,775	\$0	\$0	\$0
Less Accumulated Depreciation (Note 5)	(4,137,119)	(4,137,119)	0	0	0
Net Buildings and Equipment	\$1,096,656	\$1,096,656	\$0	\$0	\$0
Construction In Progress					
Developer	\$545,228	\$545,228	\$0	\$0	\$0
District	24,075,154	7,447,768	15,729,441	496,119	401,826
Total Construction in Progress	\$24,620,383	\$7,992,996	\$15,729,441	\$496,119	\$401,826
Net Utility Plant	\$137,368,542	\$97,875,714	\$32,696,578	\$5,625,308	\$1,170,942
Deferred Outflow of Resources-GASB68	3,538,326	3,538,326	0	0	0
Deferred Outflow of Resources-GASB75	0	0	0	0	0
TOTAL ASSETS	\$166,094,482	\$116,914,162	\$40,018,555	\$7,542,130	\$1,619,636

**NORTH MARIN WATER DISTRICT
STATEMENT OF NET POSITION
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	TOTAL	NOVATO WATER	NOVATO RECYCLED	WEST MARIN WATER	OCEANA MARIN SEWER
LIABILITIES AND NET ASSETS					
Current Liabilities					
Trade Accounts Payable	\$911,028	\$805,467	\$105,561	\$0	\$0
Reimbursement Prog. Unclaimed Funds	30,475	19,375	0	11,100	0
Bond Debt Principal Payable-Current	24,000	0	0	24,000	0
Loan Debt Principal Payable-Current	1,615,470	818,738	796,732	0	0
Bank of Marin Principal Payable-Current	360,937	314,698	0	46,238	0
JP Morgan/Chase AMI Loan-Current	240,000	240,000	0	0	0
Bond/Loan Debt Interest Payable-Current	325	0	0	325	0
Accrued Interest Payable-SRF Loan	62,682	987	61,695	0	0
JP Morgan/Chase AMI Loan Interest Payable	41,247	41,247	0	0	0
Deposits/Performance Bonds	395,546	367,135	0	25,411	3,000
Unemployment Insurance Reserve (Note 8)	20,107	20,107	0	0	0
Workers' Comp Future Claims Payable	89,178	82,490	2,497	3,032	1,159
Payroll Benefits (Note 9)	722,236	660,178	23,168	28,133	10,757
Due To Other Funds (Note 10)	0	0	0	0	0
Deferred Revenue	126,360	0	0	0	126,360
Total Current Liabilities	\$4,639,592	\$3,370,422	\$989,654	\$138,240	\$141,276
Restricted Liabilities					
Construction Advances	\$280,898	\$269,168	\$10,000	\$1,030	\$700
Total Restricted Liabilities	\$280,898	\$269,168	\$10,000	\$1,030	\$700
Long Term Liabilities (Note 7)					
Bonds Outstanding - PR6 (FmHA)	\$24,000	\$0	\$0	\$24,000	\$0
Bonds Outstanding - PRE1 (FmHA)	13,000	0	0	13,000	0
JP Morgan/Chase AMI Loan Payable	4,360,000	4,360,000	0	0	0
STP Rehab SRF Loan	8,829,777	8,829,777	0	0	0
RWF SRF Loan	1,968,463	0	1,968,463	0	0
RWS North/South Expansion SRF Loan	6,895,455	0	6,895,455	0	0
RWS Central Expansion SRF Loan	6,705,816	0	6,705,816	0	0
Bank of Marin Loan	5,373,890	4,686,070	0	687,820	0
Net Pension Liability @ 6/30/18	12,774,724	12,774,724	0	0	0
Total OPEB Liability	4,123,565	4,123,565	0	0	0
Retiree Health Benefits Payable (Note 2)	0	0	0	0	0
Total Long Term Liabilities	\$51,068,689	\$34,774,136	\$15,569,733	\$724,820	\$0
Deferred Inflow of Resources-GASB 68	727,627	727,627	0	0	0
Deferred Inflow of Resources-GASB 75	158,611	158,611	0	0	0
TOTAL LIABILITIES	\$56,875,417	\$39,299,964	\$16,569,387	\$864,089	\$141,976

**NORTH MARIN WATER DISTRICT
STATEMENT OF NET POSITION
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	TOTAL	NOVATO WATER	NOVATO RECYCLED	WEST MARIN WATER	OCEANA MARIN SEWER
Net Assets					
Invested in Capital Assets					
Contributions in Aid of Construction	\$84,345,503	\$75,727,271	\$5,800,128	\$2,138,348	\$679,755
Grants in Aid of Construction	13,197,035	407,945	9,961,904	2,827,187	0
Connection Fees	38,711,012	26,179,560	10,490,518	1,373,284	667,649
Total Investment	\$136,253,550	\$102,314,777	\$26,252,550	\$6,338,819	\$1,347,404
Restricted Reserves					
Connection Fee Fund	(\$8,298,376)	(\$8,217,413)	\$0	\$92,991	(\$173,954)
AMI Project Reserve Fund	12,052	12,052	0	0	0
Revenue Bond Redemption Fund	30,000	0	0	30,000	0
Bank of Marin Project Fund	466,278	30,545	0	435,733	0
Deer Island RWF Replacement Fund	1,431,887	0	1,431,887	0	0
Capital Replacement & Expansion Fund	1,198,480	0	1,198,480	0	0
RWS North/South SRF Reserve Fund	614,299	0	614,299	0	0
RW Central Area SRF Reserve Fund	255,373	0	255,373	0	0
Designated Reserves					
Liability Contingency Fund	1,241,170	1,142,285	0	98,885	0
Maintenance Accrual Fund	2,500,000	2,500,000	0	0	0
Self-Insured Workers' Compensation Fund	462,009	435,815	6,692	14,399	5,103
Retiree Medical Benefits Fund	2,759,513	2,759,513	0	0	0
Operating Reserve Fund	5,887,000	5,481,000	161,000	180,000	65,000
Earned Surplus - Prior Yrs	(34,115,484)	(27,197,195)	(6,432,441)	(657,428)	171,580
Net Income/(Loss)	1,885,774	1,529,104	56,474	238,548	61,649
Transfer (To)/From Reserves (see below)	(3,364,459)	(3,176,286)	(95,146)	(93,905)	878
Total Restricted & Designated	(\$27,034,485)	(\$24,700,579)	(\$2,803,383)	\$339,222	\$130,255
TOTAL NET POSITION	\$109,219,065	\$77,614,197	\$23,449,167	\$6,678,041	\$1,477,659
Transfer (To)/From Reserves					
Connection Fee	(16,841)	(15,280)	0	(1,562)	0
AMI Project Fund	1,512,762	1,512,762	0	0	0
Liability Reserve	(1,241,170)	(1,142,285)	0	(98,885)	0
Maintenance Reserve	1,915,681	1,915,681	0	0	0
RWF Replacement Fund	(78,953)	0	(78,953)	0	0
Retiree Medical Insurance Fund	38,863	38,863	0	0	0
(Gain)/Loss Self-Insured WC Fund	(10,559)	(9,905)	(194)	(339)	(122)
Bank of Marin Project Fund	17,758	4,877	0	12,880	0
Operating Reserve Fund	(5,502,000)	(5,481,000)	(16,000)	(6,000)	1,000
Total Transfer	(\$3,364,459)	(\$3,176,286)	(\$95,146)	(\$93,905)	\$878

NORTH MARIN WATER DISTRICT
SOURCES AND USES OF FUNDS STATEMENT - ALL SERVICE AREAS COMBINED
FOR THE PERIOD ENDING DECEMBER 31, 2018

	YTD Actual	Annual Budget	YTD/ Budget %	Prior YTD Actual
OPERATING REVENUE				
Water Sales	\$9,742,503	\$17,411,000	56%	\$9,730,984
Bimonthly Service Charge	2,395,526	4,796,000	50%	2,280,784
Sewer Service Charge	126,360	252,000	50%	119,318
Wheeling & Misc Service Charges	181,265	347,000	52%	179,900
TOTAL OPERATING REVENUE	\$12,445,654	\$22,806,000	55%	\$12,310,986
OPERATING EXPENDITURES				
Source of Supply	\$3,483,361	\$7,044,000	49%	\$2,810,040
Pumping	256,001	394,000	65%	236,115
Operations	548,249	697,000	79%	453,081
Water Treatment	962,410	2,591,000	37%	1,349,367
Sewer Service	65,525	143,000	46%	64,660
Transmission & Distribution	1,553,700	3,323,000	47%	1,531,771
Consumer Accounting	245,605	648,000	38%	319,032
Water Conservation	159,783	390,000	41%	143,985
General & Administrative	1,448,871	2,417,000	60%	1,035,564
Depreciation	1,722,260	3,540,000	49%	1,721,438
TOTAL OPERATING EXPENDITURES	\$10,445,764	\$21,187,000	49%	\$9,665,054
NET OPERATING INCOME (LOSS)	\$1,999,889	\$1,619,000	124%	\$2,645,933
NON-OPERATING REVENUE/(EXPENSE)				
Tax Proceeds	\$59,590	\$114,000	52%	\$56,791
Interest Revenue	168,620	159,000	106%	87,392
Miscellaneous Revenue	116,973	137,000	85%	87,021
Bond & Loan Interest Expense	(457,501)	(850,000)	54%	(362,101)
Miscellaneous Expense	(1,796)	(20,000)	9%	(1,675)
TOTAL NON-OP REVENUE/(EXPENSE)	(\$114,115)	(\$460,000)	25%	(\$132,572)
NET INCOME/(LOSS)	\$1,885,774	\$1,159,000	163%	\$2,513,361
OTHER SOURCES/(USES) OF FUNDS				
Add Depreciation Expense	\$1,722,260	\$3,528,000	49%	\$1,721,438
Connection Fees	103,800	733,000	14%	754,800
Loan Proceeds	2,033,836	0	-	2,033,836
Grant Proceeds	1,688	349,000	0%	1,183,099
Marin County Club Loan Principal Pmts	429,897	0	-	0
Caltrans AEEP Capital Contribution	13,346	1,000	1335%	735
StoneTree RWF Loan Principal	110,094	222,000	50%	71,515
MMWD AEEP Capital Contribution	245,000	245,000	100%	245,000
Capital Equipment Expenditures	(67,867)	(355,000)	19%	0
Capital Improvement Projects	(2,290,587)	(7,770,000)	29%	(2,522,036)
Bond & Loan Principal Payments	(956,395)	(2,279,000)	42%	(279,331)
Change in Working Capital	(434,285)	0	-	(653,271)
TOTAL OTHER SOURCES/(USES)	\$910,786	(\$5,326,000)	-	\$2,555,785
CASH INCREASE/(DECREASE)	\$2,796,561	(\$4,167,000)	-	\$5,069,145

**NORTH MARIN WATER DISTRICT
INCOME STATEMENT AND CASH FLOW BY SERVICE AREA
FOR THE PERIOD ENDING DECEMBER 31, 2018**

SUMMARY INCOME STATEMENT

	TOTAL	NOVATO WATER	NOVATO RECYCLED	WEST MARIN WATER	OCEANA MARIN SEWER
Operating Revenue	\$12,445,654	\$10,925,254	\$847,055	\$546,984	\$126,360
Operating Expense	10,445,764	9,348,541	661,386	338,007	97,831
OPERATING INCOME/(LOSS)	\$1,999,889	\$1,576,713	\$185,670	\$208,978	\$28,529
Non-Operating Revenue/(Expense)	(114,115)	(47,609)	(129,196)	29,570	33,120
NET INCOME/(LOSS)	\$1,885,774	\$1,529,104	\$56,474	\$238,548	\$61,649

CAPITAL CONTRIBUTIONS

SCWA Prop 84 Water Conserv Grant	\$1,688	\$1,688	\$0	\$0	\$0
RW Central Area Expansion Grant	0	0	0	0	0
Developer In-Kind Contributions	146,010	146,010	0	0	0
Caltrans AEEP Capital Contributions	13,346	13,346	0	0	0
MMWD Capital Contribution	245,000	245,000	0	0	0
Connection Fees	103,800	95,800	0	8,000	0
FRC Transfer	0	1,372,186	(1,372,186)	0	0
CAPITAL CONTRIBUTIONS	\$509,843	\$1,874,030	(\$1,372,186)	\$8,000	\$0
CHANGE IN NET POSITION	\$2,395,618	\$3,403,134	(\$1,315,713)	\$246,548	\$61,649
Net Position June 30, 2018	106,823,448	74,211,064	24,764,880	6,431,493	1,416,011
Net Position December 31, 2018	\$109,219,066	\$77,614,198	\$23,449,167	\$6,678,041	\$1,477,660

CASH FLOW STATEMENT

Net Income/(Loss)	\$1,885,774	\$1,529,104	\$56,474	\$238,548	\$61,649
Add back Depreciation	1,722,260	1,373,280	236,911	93,476	18,593
Cash Generated From Operations	\$3,608,034	\$2,902,384	\$293,385	\$332,024	\$80,242
Other Sources (Uses) of Funds					
Connection Fee Revenue	\$103,800	\$95,800	\$0	\$8,000	\$0
Loan Proceeds	2,033,836	0	2,033,836	0	0
Grant Proceeds	1,688	1,688	0	0	0
Capital Assets Acquisition	(2,356,705)	(1,931,675)	(106,160)	(52,310)	(266,559)
Caltrans AEEP Capital Contribution	13,346	13,346	0	0	0
MMWD AEEP Capital Contribution	245,000	245,000	0	0	0
Marin Country Club & Stone Tree Loan Principal Pmts	539,991	0	539,991	0	0
Principal Paid on Debt	(956,395)	(556,994)	(365,669)	(33,732)	0
Consumer Receivables Decr (Incr)	393,588	242,646	156,942	(21,901)	15,900
Construction Advances (Decr) Incr	(34,978)	(36,008)	0	1,030	0
Other Assets Decr (Incr)	1,409,980	1,318,740	236,319	42,995	(188,073)
Other Liabilities (Decr) Incr	(474,129)	(340,345)	(252,264)	(9,201)	127,681
Trade Accounts Payable (Decr) Incr	(1,730,496)	(1,729,652)	60,233	0	(61,076)
Connection Fee Transfer	0	1,372,186	(1,372,186)	0	0
Interdistrict Loan Due To (From)	0	(543,218)	543,218	0	0
Total Other Sources (Uses)	(\$811,473)	(\$1,848,486)	\$1,474,260	(\$65,120)	(\$372,127)
Net Cash Provided (Used)	\$2,796,561	\$1,053,898	\$1,767,644	\$266,904	(\$291,885)
MV Cash & Investments June 30, 2018	15,106,428	10,170,912	2,898,124	1,475,988	561,404
MV Cash & Investments Dec 31, 2018	\$17,902,988	\$11,224,809	\$4,665,768	\$1,742,892	\$269,520

NOVATO WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
OPERATING REVENUE				
Water Sales	\$829,422	\$8,524,273	54%	\$8,878,123
Bill Adjustments	(5,979)	(50,703)	33%	(86,075)
Bimonthly Service Charges	379,088	2,274,530	50%	2,176,584
Account Turn-on Charges	6,454	36,866	50%	39,168
New Account Charges	495	3,475	50%	4,030
Returned Check Charges	9	117	12%	351
Hydrant Meter Up/Down Charges	0	2,800	140%	2,860
Backflow Service Charges	11,502	71,504	51%	69,618
Lab Service-Outside Clients	6,267	18,440	71%	15,465
Wheeling Charges - MMWD	7,982	43,951	59%	44,357
TOTAL OPERATING REVENUE	\$1,235,239	\$10,925,254	53%	\$11,144,482
TOTAL EXPENDITURES				
SOURCE OF SUPPLY				
Supervision & Engineering	\$513	\$3,221	9%	\$5,183
Operating Expense - Source	152	5,470	46%	1,982
Maint/Monitoring of Dam	1,014	22,415	33%	15,650
Maint of Lake & Intakes	54	16,198	90%	566
Maint of Structures	0	205	-	0
Maint of Watershed	0	3,037	6%	21,841
Water Quality Surveillance	101	504	2%	4,410
Purchased Water	410,968	3,245,687	50%	2,651,558
SOURCE OF SUPPLY	\$412,802	\$3,296,737	49%	\$2,701,190
PUMPING				
Supervision & Engineering	\$0	\$0	-	\$0
Operating Expense - Pumping	0	0	0%	0
Maint of Structures & Grounds	1,625	30,959	119%	12,497
Maint of Pumping Equipment	2,431	20,900	34%	17,613
Electric Power	12,973	176,105	70%	171,712
PUMPING	\$17,028	\$227,965	66%	\$201,823
OPERATIONS				
Supervision & Engineering	\$13,907	\$94,630	56%	\$124,079
Operating Expense - Operations	20,438	158,772	63%	200,864
Maintenance Expense	4,942	22,232	40%	23,951
Telemetry Equipment/Controls Maint	9,868	39,691	46%	43,047
Leased Lines	98	8,369	49%	8,589
OPERATIONS	\$49,253	\$323,694	56%	\$400,529

NOVATO WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
WATER TREATMENT				
Supervision & Engineering	\$52,720	\$106,086	70%	\$110,838
Operating Expense - Water Treatment	1,170	112,706	29%	186,535
Purification Chemicals	0	124,406	27%	338,928
Sludge Disposal	2,318	40,098	34%	54,772
Maint of Structures & Grounds	7,915	17,098	14%	14,323
Maint of Purification Equipment	11,940	81,113	40%	79,878
Electric Power	6,202	72,626	47%	98,419
Water Quality Programs	8,357	57,494	50%	64,111
Laboratory Direct Labor	29,678	178,048	41%	192,210
Lab Service-Outside Clients	1,235	22,382	42%	21,562
Water Quality Supervision	4,671	33,222	39%	42,490
Laboratory Supplies & Expense	4,276	29,040	36%	33,065
Customer Water Quality	2,383	20,671	28%	23,883
Lab Cost Distributed	(1,283)	(12,191)	49%	(16,136)
WATER TREATMENT	\$131,582	\$882,800	37%	\$1,244,875
TRANSMISSION & DISTRIBUTION				
Supervision & Engineering	\$40,769	\$266,771	41%	\$323,751
Maps & Records	11,078	75,972	42%	81,162
Operation of T&D System	12,656	68,694	32%	70,910
Facilities Location	12,856	84,370	70%	74,872
Safety: Construction & Engineering	5,188	28,307	42%	17,184
Customer Service Expense	19,619	124,409	63%	104,488
Flushing	0	3,008	10%	7,220
Storage Facilities Expense	3,064	41,576	34%	46,050
Cathodic Protection	161	4,258	25%	7,311
Maint of Valves/Regulators	270	31,670	14%	101,891
Maint of Mains	11,221	91,143	60%	113,517
Leak Detection - Mains	474	6,776	169%	2,217
Backflow Prevention Program	10,289	97,834	41%	98,109
Maint of Copper Services	8,592	59,280	32%	72,452
Maint of PB Service Lines	38,924	331,555	71%	232,920
Single Service Installations	15,913	34,680	-	(3,024)
Maint of Meters	6,394	62,058	58%	58,034
Detector Check Assembly Maint	12,659	53,241	76%	36,897
Maint of Hydrants	3,148	8,424	11%	17,024
TRANSMISSION & DISTRIBUTION	\$213,274	\$1,474,025	47%	\$1,462,985
CONSUMER ACCOUNTING				
Meter Reading	\$6,452	\$49,371	24%	\$74,761
Collection Expense - Labor	1,002	11,104	28%	12,233
Collection Expense - Agency	410	1,299	43%	1,260
Billing & Consumer Accounting	13,109	100,364	44%	141,376
Contract Billing	1,252	7,977	44%	9,624
Stationery, Supplies & Postage	4,196	26,473	48%	30,416
Online Payment Processing Fees	4,662	31,824	103%	23,786
Lock Box Service	912	5,472	50%	5,472
Uncollectable Accounts	(102)	5,268	38%	4,916
Office Equipment Expense	100	2,630	10%	10,748
Distributed to West Marin (4.1%)	(1,012)	(7,363)	46%	(9,093)
CONSUMER ACCOUNTING	\$30,980	\$234,418	38%	\$305,498

NOVATO WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
WATER CONSERVATION				
Residential	\$14,809	\$121,904	41%	\$110,663
Commercial	915	3,875	20%	3,486
Public Outreach/Information	1,314	19,863	51%	13,352
Large Landscape	799	12,158	53%	13,396
TOTAL WATER CONSERVATION	\$17,836	\$157,800	42%	\$140,897
GENERAL AND ADMINISTRATIVE				
Directors Fees	\$2,693	\$17,367	45%	\$16,099
Legal Fees	3,591	10,521	55%	11,574
Human Resources	9,563	73,468	115%	14,036
Auditing Fees	392	19,992	100%	19,196
Consulting Services/Studies	14,574	85,872	22%	63,675
General Office Salaries	64,242	518,043	40%	695,577
Safety: General District Wide	2,020	16,516	27%	17,996
Office Supplies	2,361	10,566	22%	11,509
Employee Events	309	6,703	56%	3,401
Other Administrative Expense	567	3,071	19%	6,689
Dues & Subscriptions	9,937	51,102	70%	51,428
Vehicle Expense	676	4,056	51%	4,056
Meetings, Conferences & Training	4,985	66,304	29%	75,217
Recruitment Expense	0	925	31%	1,052
Gas & Electricity	2,508	18,686	48%	18,848
Telephone	38	227	3%	3,400
Water	282	1,194	60%	653
Buildings & Grounds Maint	7,405	29,004	55%	23,679
Office Equipment Expense	7,186	58,127	45%	53,327
Insurance Premiums & Claims	9,219	53,058	41%	45,521
Retiree Medical Benefits	16,536	95,088	55%	78,272
(Gain)/Loss on Overhead Charges	112,555	484,105	-1241%	(20,629)
G&A Applied to Other Operations (5.9%)	(10,624)	(69,432)	48%	(78,025)
G&A Applied to Construction	(31,064)	(176,741)	42%	(159,964)
GENERAL & ADMINISTRATIVE	\$229,952	\$1,377,822	62%	\$956,587
Depreciation (Note 5)	230,673	1,373,280	49%	1,369,293
TOTAL OPERATING EXPENSE	\$1,333,381	\$9,348,541	49%	\$8,783,678
OPERATING INCOME/(LOSS)	(\$98,142)	\$1,576,713	131%	\$2,360,804

NOVATO WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
NON-OPERATING REVENUE				
Interest:				
General Funds	\$0	\$0	0%	\$0
Wohler Pipeline Financing Fund	0	3,098	77%	4,028
Collector #6 Financing Fund	0	12,181	72%	14,402
Retiree Medical Insurance Fund	20,398	74,684	191%	30,673
Self-Insured Workers' Comp Fund	1,380	8,504	142%	5,478
Conservation Incentive Rate Fund	0	0	-	6,908
Aqueduct Energy Efficiency Proj Fund	79	525	-	298
Funds Held in County Treasury	0	3,716	124%	2,678
Recycled Water Advance (Note 10)	0	0	0%	0
Total Interest Revenue	\$21,858	\$102,707	103%	\$64,466
Rents & Leases	7,754	60,189	73%	71,525
Other Non-Operating Revenue	5,192	49,541	99%	19,810
Gain/(Loss) on MV of Investments	8,451	7,310	-	(9,814)
NON-OPERATING REVENUE	\$43,255	\$219,747	94%	\$145,987
NON-OPERATING EXPENSE				
Bond Interest Expense	\$0	\$0	-	\$0
Bank of Marin AEEP Loan Interest Exp	\$13,429	\$86,159	50%	\$92,225
STP SRF Loan Interest Expense	20,401	121,092	49%	130,611
Drought Loan Interest Expense	0	0	-	0
Debt Issuance Costs	0	0	-	0
JP Morgan/Chase AMI Loan Interest Expense	10,312	59,464	51%	0
Other Non-Operating Expense	135	640	3%	888
NON-OPERATING EXPENSE	\$44,277	\$267,355	48%	\$223,725
NET INCOME/(LOSS)	(\$99,164)	\$1,529,104	173%	\$2,283,066
BEGINNING FUND EQUITY				
		\$74,211,063		\$79,268,844
NET INCOME/(LOSS)	(99,164)	1,529,104		2,283,066
SCWA 84 Water Conservation Grant	0	1,688	6%	42,567
Developer 'In-Kind' Contributions	74,622	146,010	-	50,401
Caltrans AEEP Capital Contribution	2,012	13,346	1335%	339
MMWD AEEP Capital Contribution	0	245,000	100%	245,000
Connection Fees	0	95,800	14%	709,200
FRC Transfer to/from Recycled Water	(550,741)	1,372,186	-109%	(7,122,418)
ENDING FUND EQUITY		\$77,614,197		\$75,476,999

**NOVATO RECYCLED WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
OPERATING REVENUE				
Recycled Water Sales	\$54,457	\$817,193	71%	\$540,818
Bill Adjustments	0	0	-	0
Bimonthly Service Charges	4,017	28,403	69%	16,747
Water Loads	0	1,375	-	1,085
Account Turn-on Charges	30	84	-	6
TOTAL OPERATING REVENUE	\$58,504	\$847,055	71%	\$558,656
OPERATING EXPENSE				
SOURCE OF SUPPLY				
Purchased Water - NSD	\$822	\$152,958	73%	\$72,165
Purchased Water - LGVSD	1,967	21,957	35%	25,429
SOURCE OF SUPPLY	\$2,789	\$174,916	64%	\$97,594
PUMPING				
Maint of Pumping Equipment	\$0	\$225	11%	\$0
Electric Power	293	2,654	88%	2,032
PUMPING	\$293	\$2,879	58%	\$2,032
OPERATIONS				
Supervision & Engineering	\$273	\$5,175	35%	\$5,008
Operating Expense - Operations	0	6,819	34%	3,931
Potable Water Consumed	431	191,777	1743%	5,122
Maintenance Expense	220	409	8%	9,624
Telemetry Equipment/Controls Maint	0	1,510	12%	3,540
OPERATIONS	\$924	\$205,690	321%	\$27,225
WATER TREATMENT				
Purification Chemicals	\$0	\$2,308	58%	\$842
Maint of Purification Equipment	0	3,508	23%	8,989
Electric Power	0	0	0%	0
Laboratory Direct Labor	0	1,201	17%	923
Customer Water Quality	0	33	-	0
Lab Expense Distributed from Novato	(20)	684	23%	551
WATER TREATMENT	(\$20)	\$7,734	25%	\$11,304
TRANSMISSION & DISTRIBUTION				
Supervision & Engineering	\$0	\$2,163	9%	\$707
Maps & Records	0	0	0%	0
Operation of T&D System	0	0	0%	2,229
Facilities Location	0	0	-	112
Cathodic Protection	0	0	0%	0
Customer Service Expense	220	4,194	25%	0
Storage Facilities Expense	15	211	2%	590
Maint of Valves/Regulators	0	0	0%	488
Maint of Meters	0	0	0%	717
Maint of Mains	0	0	-	887
TRANSMISSION & DISTRIBUTION	\$235	\$6,568	12%	\$5,730

**NOVATO RECYCLED WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
CONSUMER ACCOUNTING				
Distributed from Novato (0.2%)	\$75	\$547	55%	\$440
CONSUMER ACCOUNTING	\$75	\$547	55%	\$440
GENERAL AND ADMINISTRATIVE				
Distributed from Novato (2.4%)	\$4,000	\$26,142	51%	\$26,613
GENERAL & ADMINISTRATIVE	\$4,000	\$26,142	51%	\$26,613
Depreciation (Note 5)	39,486	236,911	50%	237,060
TOTAL OPERATING EXPENSE	\$47,782	\$661,386	69%	\$407,997
OPERATING INCOME/(LOSS)	\$10,722	\$185,670	77%	\$150,659
NON-OPERATING REVENUE				
Interest:				
General Funds	(\$3,009)	(\$1,199)	-12%	\$0
RWF Replacement Fund	3,761	21,453	-	0
Capital Repl & Exp Fund	0	0	-	0
Self-Insured Workers' Comp Fund	25	151	-	0
StoneTree RWF Loan	4,399	27,013	93%	17,798
Total Interest Revenue	\$5,175	\$47,418	122%	\$17,798
Other Non-Operating Revenue	0	0	-	0
NON-OPERATING REVENUE	\$5,175	\$47,418	122%	\$17,798
NON-OPERATING EXPENSE				
RWF SRF Loan Interest Expense	\$4,397	\$26,092	49%	\$29,133
Expansion SRF Loan Interest Expense	24,384	147,168	63%	94,494
Other Non-Operating Expense	0	3,354	-	0
Interest-Advance from Novato (Note 10)	0	0	-	0
NON-OPERATING EXPENSE	\$28,780	\$176,614	61%	\$123,627
NET INCOME/(LOSS)	(\$12,883)	\$56,474	(627%)	\$44,831
BEGINNING FUND EQUITY		\$24,764,880		\$17,146,483
NET INCOME/(LOSS)	(12,883)	56,474		44,831
Developer 'In-Kind' Contributions	0	0		(13,237)
FRC Transfer to/from Novato	550,741	(1,372,186)	-109%	7,122,418
RW Central Area Expansion Grant	0	0	-	1,571,285
ENDING FUND EQUITY		\$23,449,167		\$25,871,780

**WEST MARIN WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
OPERATING REVENUE				
Water Sales	\$36,704	\$460,611	67%	\$411,530
Bill Adjustments	(2,463)	(10,248)	-	(14,497)
Bimonthly Service Charges	15,432	92,592	50%	87,453
Account Turn-on Charges	180	642	64%	590
New Account Charges	20	80	8%	100
Returned Check Charges	0	9	-	9
Backflow Service Charges	1,092	3,298	66%	3,045
TOTAL OPERATING REVENUE	\$50,965	\$546,984	63%	\$488,230
OPERATING EXPENSE				
SOURCE OF SUPPLY				
Supervision & Engineering	\$0	\$385	-	\$424
Operating Expense	70	2,164	36%	2,097
Maint of Structures	0	8,736	109%	8,200
Water Quality Surveillance	0	101	10%	535
Purchased Water - MMWD	0	322	-	0
SOURCE OF SUPPLY	\$70	\$11,708	78%	\$11,256
PUMPING				
Maint of Structures and Grounds	\$720	\$4,119	82%	\$397
Maint of Pumping Equip	0	245	3%	17,999
Electric Power	2,589	20,794	74%	13,865
PUMPING	\$3,309	\$25,158	60%	\$32,261
OPERATIONS				
Supervision & Engineering	\$722	\$5,012	42%	\$8,158
Operating Expense	941	6,607	44%	4,319
Maint of Telemetry Lines	0	0	-	0
Maint of Telemetry Equipment	960	5,204	26%	10,465
Leased Lines	340	2,043	41%	2,385
OPERATIONS	\$2,963	\$18,866	36%	\$25,327
WATER TREATMENT				
Supervision & Engineering	\$182	\$3,092	44%	\$2,532
Operating Expense	5,423	13,796	69%	16,011
Purification Chemicals	0	2,774	55%	11,623
Maint of Structures & Grounds	0	0	0%	242
Maint of Purification Equipment	694	4,322	17%	8,237
Electric Power	1,091	13,095	62%	13,738
Laboratory Direct Labor	2,283	17,659	41%	22,820
Laboratory Services	898	5,527	138%	1,515
Water Quality Supervision	0	495	6%	1,272
Customer Water Quality	49	1,055	21%	1,585
Lab Expense Distributed from Novato	1,041	10,061	53%	13,613
WATER TREATMENT	\$11,661	\$71,876	45%	\$93,188

**WEST MARIN WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
TRANSMISSION & DISTRIBUTION				
Supervision & Engineering	\$444	\$1,854	9%	\$3,185
Maps & Records	0	0	0%	0
Facilities Location - USA	407	2,599	20%	9,744
Customer Service Expense	594	3,957	57%	7,751
Storage Facilities Expense	1,076	5,487	21%	6,171
Cathodic Protection	0	1,436	36%	942
Maint of Valves	0	899	15%	378
Valve Operation Program	1,998	4,433	222%	0
Maint of Mains	0	5,423	108%	5,915
Water Quality Maintenance	0	304	15%	0
Maint of Backflow Devices	0	0	0%	0
Backflow Dev Inspection/Survey	0	2,547	127%	3,152
Maint of Copper Services	1,412	8,231	274%	665
Maint of PB Service Lines	26	21,908	78%	19,027
Maint of Meters	133	429	9%	2,025
Detector Check Assembly Maint	0	0	0%	1,654
Maint of Hydrants	0	1,582	53%	0
Hydrant Operation	2,185	4,856	243%	0
Single Service Installation	0	7,162	-	2,448
TRANSMISSION & DISTRIBUTION	\$8,275	\$73,107	51%	\$63,057
CONSUMER ACCOUNTING				
Meter Reading	\$1,007	\$3,746	31%	\$3,939
Collection Expense - Labor	0	26	3%	156
Uncollectable Accounts	0	(298)	-30%	0
Distributed from Novato (3.6%)	841	6,104	47%	7,641
CONSUMER ACCOUNTING	\$1,848	\$9,578	35%	\$11,736
WATER CONSERVATION				
Water Conservation Program	\$282	\$1,982	20%	\$3,088
TOTAL WATER CONSERVATION	\$282	\$1,982	20%	\$3,088
GENERAL AND ADMINISTRATIVE				
Consulting Services/Studies	\$0	\$898	7%	\$0
Distributed from Novato (3.6%)	4,798	31,358	38%	39,085
GENERAL & ADMINISTRATIVE	\$4,798	\$32,256	34%	\$39,085
Depreciation (Note 5)	15,578	93,476	47%	96,390
TOTAL OPERATING EXPENSE	\$48,784	\$338,007	46%	\$375,389
OPERATING INCOME/(LOSS)	\$2,181	\$208,978	156%	\$112,841

**WEST MARIN WATER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	<u>DECEMBER 2018</u>	<u>YEAR TO DATE ACTUAL</u>	<u>YTD/ BUDGET%</u>	<u>PRIOR YTD ACTUAL</u>
NON-OPERATING REVENUE				
Interest - General Funds	\$441	\$6,490	-	\$3,982
Interest - FRC	258	1,562	39%	(7,953)
Interest - Self-Insured WC Fund	46	287	-	115
Interest - Bank of Marin Project Fund	1,186	7,264	73%	5,614
Interest - CIR Fund	0	0	-	234
Rents & Leases	0	0	0%	5,000
Tax Proceeds - OL-2 G.O. Bond	0	1	-	1
Tax Proceeds - PR-2 Tax Allocation	27,431	28,846	52%	27,492
Other Non-Operating Revenue	0	(317)	-	0
NON-OPERATING REVENUE	<u>\$29,362</u>	<u>\$44,134</u>	60%	<u>\$34,485</u>
NON-OPERATING EXPENSE				
Bank of Marin Loan Interest Expense	\$1,971	\$12,647	49%	\$13,538
PRE-1 Revenue Bond Interest Exp	108	650	65%	950
PR-6 Revenue Bond Interest Exp	146	875	44%	1,150
Other Non-Operating Expense	392	392	-	381
NON-OPERATING EXPENSE	<u>\$2,618</u>	<u>\$14,564</u>	50%	<u>\$16,019</u>
NET INCOME/(LOSS)	<u>\$28,926</u>	<u>\$238,548</u>	134%	<u>\$131,308</u>
BEGINNING FUND EQUITY		\$6,431,493		\$6,155,744
NET INCOME/(LOSS)	28,926	238,548		131,308
CONTRIBUTED CAPITAL				
Developer 'In-Kind' Contributions	0	0	-	3,430
Connection Fees	0	8,000	35%	45,600
ENDING FUND EQUITY		<u>\$6,678,041</u>		<u>\$6,336,082</u>

**OCEANA MARIN SEWER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
OPERATING REVENUE				
Sewer Service Charges	\$21,060	\$126,360	50%	\$119,318
Inspection Fees	0	0	-	300
TOTAL OPERATING REVENUE	\$21,060	\$126,360	50%	\$119,618
OPERATING EXPENSE				
SEWAGE COLLECTION				
Supervision & Engineering	\$689	\$4,322	12%	\$6,282
Inspection	0	0	0%	384
Operating Expense	839	6,082	61%	4,627
Facilities Location	0	896	90%	1,044
Maint of Telemetry Equipment	20	1,309	44%	918
Sewer Service Installation	0	0	-	0
Maint of Lift Stations	1,658	7,534	94%	3,414
Maint of Manholes	0	0	0%	0
Maint of Sewer Mains	0	0	0%	0
Electric Power	662	6,153	51%	7,143
GASB68 Adjustment	0	0	-	0
SEWAGE COLLECTION	\$3,869	\$26,295	34%	\$23,812
SEWAGE TREATMENT				
Operating Expense	\$427	\$20,294	101%	\$21,268
Maint of Structures	0	0	0%	0
Maint of Equipment	619	4,668	58%	211
Laboratory Direct Labor	521	2,538	28%	3,307
Lab Expense Distributed from Novato	263	1,446	72%	1,972
Electric Power	770	3,074	51%	5,164
SEWAGE TREATMENT	\$2,601	\$32,019	68%	\$31,922
SEWAGE DISPOSAL				
Operating Expense	\$557	\$2,520	21%	\$2,434
Maint of Pump Stations	(422)	1,091	16%	1,442
Maint of Storage Ponds	19	3,407	28%	2,966
Maint of Irrigation Field	0	194	2%	2,084
SEWAGE DISPOSAL	\$153	\$7,211	18%	\$8,927
CONTRACT OPERATIONS				
CONTRACT OPERATIONS	\$0	\$0	-	\$0
CONSUMER ACCOUNTING				
Collection Expense - County of Marin	\$350	\$350	-	\$345
Distributed from Novato (0.6%)	96	712	36%	1,012
CONSUMER ACCOUNTING	\$445	\$1,062	53%	\$1,357

**OCEANA MARIN SEWER
DETAIL INCOME STATEMENT
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	DECEMBER 2018	YEAR TO DATE ACTUAL	YTD/ BUDGET%	PRIOR YTD ACTUAL
GENERAL AND ADMINISTRATIVE				
Distributed from Novato (1.1%)	\$1,826	\$11,932	44%	\$12,327
Liability Insurance	(80)	719	36%	952
GENERAL AND ADMINISTRATIVE	<u>\$1,746</u>	<u>\$12,651</u>	44%	<u>\$13,279</u>
Depreciation (Note 5)	3,101	18,593	50%	18,695
TOTAL OPERATING EXPENSE	<u>\$11,914</u>	<u>\$97,831</u>	42%	<u>\$97,991</u>
OPERATING INCOME/(LOSS)	<u>\$9,146</u>	<u>\$28,529</u>	143%	<u>\$21,627</u>
NON-OPERATING REVENUE				
Rents & Leases	\$0	\$250	-	\$500
Interest - General Funds	(48)	2,789	46%	3,098
Interest - Self Insured WC Fund	17	102	-	39
Tax Proceeds - OM-1/OM-3 Tax Alloc	29,233	30,742	52%	29,299
Other Non-Operating Revenue	0	0	-	(1)
NON-OPERATING REVENUE	<u>\$29,202</u>	<u>\$33,884</u>	52%	<u>\$32,934</u>
NON-OPERATING EXPENSE				
Other Non-Operating Expense	\$418	\$764	-	\$406
NON-OPERATING EXPENSE	<u>\$418</u>	<u>\$764</u>	-	<u>\$406</u>
NET INCOME/(LOSS)	<u>\$37,929</u>	<u>\$61,649</u>	73%	<u>\$54,156</u>
BEGINNING FUND EQUITY		\$1,416,011		\$1,340,901
NET INCOME/(LOSS)	37,929	61,649		54,156
CONTRIBUTED CAPITAL				
Contribution in Aid of Construction	0	0	-	244
Connection Fees	0	0	0%	0
ENDING FUND EQUITY		<u>\$1,477,659</u>		<u>\$1,395,300</u>

**NORTH MARIN WATER DISTRICT
ANALYSIS OF WORKERS' COMP AND CONNECTION FEE FUNDS
FOR THE PERIOD ENDING DECEMBER 31, 2018**

	TOTAL	NOVATO WATER	WEST MARIN WATER	OCEANA MARIN SEWER	RECYCLED WATER
WORKERS' COMPENSATION FUND					
WC Cash Balance 6/30/18	\$549,030	\$516,563	\$17,573	\$6,054	\$8,840
Less: Projected Prior FY Claims Liability	97,580	90,652	3,513	1,073	2,342
Add: Funds borrowed to subsidize operations	0		0	0	0
WC Reserve Balance 6/30/18	\$451,450	\$425,911	\$14,060	\$4,981	\$6,498
Add: WC Expense Charged to Operations FYTD	51,376	47,523	1,747	668	1,439
Interest Earned	9,044	8,504	287	102	151
Subtotal	\$511,871	\$481,938	\$16,094	\$5,751	\$8,088
Less: Claims Expense Paid	8,106	7,498	276	105	227
Excess Insurance Premium	35,755	33,073	1,216	465	1,001
Administration Fees	6,000	5,550	204	78	168
WC Reserve Balance 12/31/18	\$462,010	\$435,816	\$14,399	\$5,103	\$6,692
Add: Projected Claims Liability	89,178	82,490	3,032	1,159	2,497
WC CASH BALANCE 12/31/18	<u>\$551,188</u>	<u>\$518,306</u>	<u>\$17,431</u>	<u>\$6,262</u>	<u>\$9,189</u>

CONNECTION FEE FUND				
Connection Fee Cash Balance 6/30/18	\$102,491	\$0	\$102,491	\$0
Add: funds borrowed to subsidize operations	(11,784,485)	(11,736,872)	0	(47,613)
Connection Fee Reserve Balance 6/30/18	(\$11,681,994)	(\$11,736,872)	\$102,491	(\$47,613)
Add: Connection Fees Collected FYTD	103,800	95,800	8,000	0
Repayment Prior Year Loan from RWF	0	0	0	0
Interest Earned	1,562	0	1,562	0
Close out of Wohler & Collector 6 Reserves	2,068,744	2,068,744	0	0
Subtotal	(\$9,507,889)	(\$9,572,328)	\$112,053	(\$47,613)
Less: Fees Expended FYTD	162,674	17,270	19,062	126,341
Fees transferred to RWS FYTD (Note 14)	(1,372,186)	(1,372,186)	0	0
Connection Fee Reserve Balance 12/31/18	(\$8,298,376)	(\$8,217,413)	\$92,991	(\$173,954)
Less: Funds borrowed to subsidize operations	(8,391,367)	(8,217,413)	0	(\$173,954)
CONNECTION FEE CASH BALANCE 12/31/18	<u>\$92,991</u>	<u>\$0</u>	<u>\$92,991</u>	<u>\$0</u>

**NORTH MARIN WATER DISTRICT
EQUIPMENT EXPENDITURES
PERIOD ENDING DECEMBER 31, 2018**

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	DECEMBER 2018	FYTD TOTAL	FY 18/19 BUDGET	(OVER) UNDER	Notes
1 ADMINISTRATION					
a. Website Upgrade	\$0	\$0	\$10,000	\$10,000	
b. Timekeeping Software Upgrade	0	0	10,000	10,000	
	<u>\$0</u>	<u>\$0</u>	<u>\$20,000</u>	<u>\$20,000</u>	
2 CONSTRUCTION					
a. Pipe Locator	\$0	\$5,863	\$8,000	\$2,137	1
b. Fittings & Hose for Emergency Hose Trailer	0	0	6,000	6,000	
	<u>\$0</u>	<u>\$5,863</u>	<u>\$14,000</u>	<u>\$19,863</u>	
3 OPERATIONS/MAINTENANCE					
a. Metals Analyzer	\$0	\$0	\$105,000	\$105,000	1
b. Autoclave for Lab	0	13,864	27,000	13,136	1
c. Tire Balance Machine	0	0	8,000	8,000	1
d. STP Reclaim Cleaning Pump	0	0	6,000	6,000	1
	<u>\$0</u>	<u>\$13,864</u>	<u>\$146,000</u>	<u>\$132,136</u>	
3 VEHICLE & ROLLING EQUIPMENT EXPENDITURES					
a. 5-Yard Diesel Dump Truck With Sliding Bed	\$0	\$0	\$120,000	\$120,000	1
b. 1/2 Ton 4x4 Pickup 4-Door with Shell	2,157	33,231	40,000	6,769	1
c. STP Equipment Cart	0	14,909	15,000	91	
	<u>\$2,157</u>	<u>\$48,139</u>	<u>\$175,000</u>	<u>\$126,861</u>	
TOTAL EQUIPMENT EXPENDITURES	<u>\$2,157</u>	<u>\$67,867</u>	<u>\$355,000</u>	<u>\$298,860</u>	

Notes:

(1) Replacement item.

**NORTH MARIN WATER DISTRICT
EXPENDITURES BY CATEGORY
FOR PERIOD ENDING DECEMBER 31, 2018**

OPERATING EXPENSE		Novato	Recycled	West Marin	Oceana Marin	YTD Total	Annual Budget	YTD Budget %	Prior YTD Actual	% Change
1	Salaries & Benefits	\$2,716,368	\$21,305	\$107,296	\$25,511	\$2,870,479	\$6,942,000	41%	\$3,400,936	-15 %
2	Water Purchases	3,229,687	172,127	0	0	3,401,814	6,823,000	50%	2,749,151	23 %
3	Depreciation	1,362,895	236,911	93,476	18,593	1,711,875	3,528,000	49%	1,721,438	-0 %
4	Materials, Services & Supplies	877,193	193,838	33,588	27,948	1,132,568	2,064,000	55%	799,841	41 %
5	Consulting Services/Studies	85,872	0	898	0	86,770	335,000	26%	63,675	36 %
6	Chemicals	124,406	2,308	2,774	0	129,487	464,000	28%	351,392	-63 %
7	Electric Power	248,731	2,654	33,889	9,227	294,500	477,000	62%	312,072	-5 %
8	Vehicles and Equipment (Distrib)	132,550	798	11,452	1,883	146,683	293,000	50%	130,809	12 %
9	Tools & Supplies (Distrib)	127,123	1,283	7,111	1,043	136,560	188,000	73%	113,987	19 %
10	Retiree Medical Expenses	95,088	0	0	0	95,088	172,000	55%	78,272	21 %
11	Water Conservation Rebates	13,770	0	0	0	13,770	104,000	13%	14,300	-3 %
12	Insurance & Claims	53,058	0	0	719	53,777	155,000	35%	46,472	15 %
13	Office Supplies & Postage	37,039	0	0	0	37,039	102,000	36%	65,712	-43 %
14	GASB 68 Adjustments	0	0	0	0	0	0	-	0	-
15	Overhead Charges (Gain)/Loss	367,723	0	0	0	367,723	(39,000)	-943%	(20,629)	-1882 %
16	Distributed Costs (Lab,G&A,ConsAcctg)	(252,810)	23,319	40,844	10,723	(177,924)	(421,000)	42%	(161,937)	9 %
17	Total Operating Expense	\$9,218,693	\$654,542	\$331,327	\$95,647	\$10,300,209	\$21,187,000	49%	\$9,665,493	6 %
18	Interest Expense & Other	267,355	118,880	14,564	764	401,563	870,000	46%	362,989	10 %
19	Total Expense	\$9,486,048	\$773,421	\$345,891	\$96,411	\$10,701,772	\$22,057,000	49%	\$10,028,483	6 %
<u>Warehouse, Shop & Yard</u>										
20	Salaries & Benefits	\$83,545	\$0	\$0	\$0	\$83,545	\$263,000	32%	\$95,217	-12 %
21	Materials, Services & Supplies	150,303	0	0	0	150,303	325,000	46%	\$129,483	16 %
22	Depreciation	61,514	0	0	0	61,514	0	0%	\$67,699	-9 %
23	Distributed Costs	(295,361)	0	0	0	(295,361)	(588,000)	50%	(292,400)	1 %
24	Total W/H, Shop & Yard	\$0	\$0	\$0	\$0	\$0	\$0	-	\$0	-
<u>District Capital Outlay</u>										
25	Salaries & Benefits	\$172,968	\$15,843	\$22,246	\$10,030	\$221,086	\$844,000	26%	\$373,688	-40 %
26	Equipment Expenditures	67,867	0	0	0	67,867	355,000	19%	0	-
27	Debt Principal Payments	556,994	365,669	33,732	0	956,395	2,279,000	42%	940,497	1 %
28	Materials, Services & Supplies	1,692,590	90,317	30,065	256,529	2,069,501	6,926,000	30%	4,540,896	-54 %
29	Total District Capital Outlay	\$2,490,418	\$471,828	\$86,042	\$266,559	\$3,314,848	\$10,404,000	32%	\$5,855,081	-43 %
<u>Developer Funded Projects</u>										
30	Salaries & Benefits	\$93,980	\$0	\$2,466	\$52,985	\$149,431	\$232,000	64%	\$46,701	219 %
31	Materials, Services & Supplies	104,351	0	(2,050)	13,858	116,159	138,000	84%	97,585	19 %
32	Total Developer Projects	\$198,331	\$0	\$416	\$66,843	\$265,590	\$370,000	72%	\$144,285	84 %
33	Total	\$12,174,797	\$1,245,250	\$432,350	\$429,814	\$14,282,210	\$32,831,000	44%	\$16,027,848	-10 %

**NORTH MARIN WATER DISTRICT
VEHICLE FLEET ANALYSIS
FOR PERIOD ENDING DECEMBER 31, 2018**

Fiscal Year to Date

Vehicle Cost per Mile

Year	Description	Veh#	Assigned	Mileage	Expense ¹	Recovery ²	Gain/(Loss)	Mileage	Life to Date	FYTD19	FYTD18	FY17
1	2002 Chev K1500 4x4	47	Watkins	3,895	\$3,588	\$3,354	(\$234)	143,599	\$0.38	\$0.92	\$0.35	\$0.38
2	2003 Dodge Dakota 4x4	49	Elec/Mech	2,998	\$1,268	\$1,660	\$392	107,212	\$0.42	\$0.42	\$0.54	\$0.46
3	2004 Chev C1500	53	Backflow/Pool	2,223	\$871	\$1,025	\$154	130,783	\$0.46	\$0.39	\$0.48	\$0.46
4	2004 Chev C1500 Xtra Cab	54	Pool	2,905	\$1,756	\$865	(\$891)	104,169	\$0.47	\$0.60	\$0.53	\$0.79
5	2005 Honda Civic Hybrid	56	Engineering	534	\$521	\$354	(\$167)	79,940	\$0.30	\$0.98	\$0.56	\$1.81
6	2005 Honda Civic Hybrid	57	Wtr Cons/Pool	1,166	\$590	\$1,053	\$462	78,942	\$0.24	\$0.51	\$0.28	\$0.15
7	2005 Ford Ranger	58	FSR/Pool	1,504	\$699	\$661	(\$38)	131,607	\$0.46	\$0.46	\$0.63	\$1.07
8	2006 Chev Colorado	501	Totaled	0	\$392	(\$11)	(\$404)	145,060	\$0.37	-	\$0.31	\$0.20
9	2007 Chev Colorado	504	Rodriguez	5,455	\$3,059	\$5,046	\$1,988	76,949	\$0.43	\$0.56	\$0.37	\$0.36
9	2008 Ford F250 4x4	505	Maintenance	2,746	\$1,569	\$2,960	\$1,391	97,385	\$0.77	\$0.57	\$1.81	\$1.80
10	2008 Ford F250 4x4	506	STP	2,508	\$3,365	\$1,539	(\$1,825)	74,178	\$0.79	\$1.34	\$0.41	\$0.63
11	2008 Chev Colorado 4x4	509	Engineering	3,461	\$2,810	\$2,152	(\$659)	103,865	\$0.35	\$0.81	\$0.31	\$0.29
12	2009 Toyota Prius Hybrid	510	Clark	7,764	\$1,331	\$2,897	\$1,566	127,106	\$0.19	\$0.17	\$0.12	\$0.13
13	2010 Ford F150 4x4	511	STP	1,132	\$2,674	\$2,281	(\$392)	84,228	\$0.50	\$2.36	\$0.39	\$0.69
14	2010 Ford F150	512	Kurfirst	4,035	\$2,332	\$5,288	\$2,956	106,132	\$0.49	\$0.58	\$0.54	\$0.44
15	2010 Ford F150	513	STP	3,222	\$1,020	\$1,742	\$722	79,388	\$0.47	\$0.32	\$0.56	\$0.54
16	2012 Ford F250	515	Reed	4,996	\$3,868	\$6,768	\$2,900	55,814	\$0.61	\$0.77	\$0.40	\$0.84
17	2012 Ford F250	516	Castellucci	6,012	\$3,839	\$6,318	\$2,478	62,542	\$0.54	\$0.64	\$0.60	\$0.47
18	2014 Ford F150	517	Grisso	1,038	\$480	\$1,567	\$1,087	12,283	\$0.40	\$0.46	\$0.45	\$0.21
19	2015 Ford F250 4x4	518	Kehoe, Chris	8,475	\$3,371	\$7,270	\$3,899	75,120	\$0.40	\$0.40	\$0.47	\$0.41
20	2015 Ford Escape 4X4	520	Arendell	9,153	\$2,583	\$5,499	\$2,916	55,670	\$0.24	\$0.28	\$0.23	\$0.18
21	2015 Ford F150 4X4	521	Lemos	3,817	\$1,174	\$1,799	\$625	36,678	\$0.29	\$0.31	\$0.30	\$0.17
22	2016 Nissan Frontier	522	Roberto	6,460	\$3,337	\$3,009	(\$328)	35,103	\$0.38	\$0.52	\$0.32	\$0.38
23	2017 Ford Escape 4X4	523	Lab	2,949	\$1,036	\$1,931	\$895	16,545	\$0.30	\$0.35	\$3.27	\$0.30
24	2016 Nissan Frontier	524	Bynum	5,517	\$2,290	\$6,098	\$3,808	17,504	\$0.40	\$0.42	\$0.46	-
25	2018 Ford Cargo Van	526	On-Call	3,824	\$1,161	\$1,347	\$3,808	6,040	\$1.13	\$0.30	-	-
26	2018 Dodge Ram 2500	527	Corda, Joe	4,468	\$4,238	\$5,241	\$186	4,468	\$0.95	\$0.95	-	-
27	2019 Chev Colorado 4x4	528	Stompe	0	\$1,381	(\$21)	\$1,003	-	-	-	-	-
Total 3/4 Ton & Under				102,257	\$6,602	\$79,692	\$28,300	2,048,310	\$0.43	\$0.55	\$0.45	\$0.47
1	1999 Ford F350 W/Svc Body	19	Pool	1,389	\$2,532	\$1,518	(\$1,013)	136,726	\$0.00	\$0.00	\$1.93	\$2.08
2	2002 Int'l 5 Yd Dump	44	Construction	2,465	\$3,738	\$11,563	\$7,825	103,058	\$1.76	\$1.52	\$1.97	\$6.81
3	1999 Ford F550 3-Yd Dump ³	52	Construction	2,499	\$1,861	\$8,623	\$6,762	94,639	\$0.00	\$0.00	\$1.47	\$1.68
4	2006 Int'l 4300 Crew	503	Bergstrom/Barrilleaux	2,429	\$4,939	\$12,375	\$7,437	43,897	\$1.74	\$2.03	\$1.30	\$3.75
5	2009 Peterbilt 325 Crew	508	Breit/Crew	2,423	\$2,965	\$13,530	\$10,565	34,741	\$2.05	\$1.22	\$1.51	\$4.04
6	2012 Int'l 5 Yd Dump	514	Rupp	2,622	\$3,531	\$9,127	\$5,596	37,514	\$1.45	\$1.35	\$1.78	\$1.14
7	2015 Int'l 5 Yd Dump	519	Sjoblom	4,325	\$4,553	\$10,849	\$6,296	32,384	\$1.04	\$1.05	\$1.21	\$1.10
8	2017 Ford F350 4x4	525	Ielmorini/Davenport	5,643	\$2,816	\$10,849	\$8,034	16,084	\$0.48	\$0.50	\$0.43	\$0.52
Total 1 Ton & Over				23,795	\$26,934	\$78,436	\$51,501	499,043	\$1.26	\$1.13	\$1.24	\$2.50

¹ Expense amount shown excludes depreciation (approximately \$96,000 for FY19).

² Recovery is the amount charged to projects and operations to recover the expense of owning and operating the vehicle. Commencing 7/1/17 the recovery rate for vehicles 3/4-ton and under is \$7/hr and the recovery rate for vehicles 1-ton and over is \$14/hr. An additional 50% is charged to developer projects to reflect the fair market value of the vehicle being used.

³ Purchased used in 2004 with 32,500 miles. Mileage shown is total incurred since District purchase.

**NORTH MARIN WATER DISTRICT
WATER CONSERVATION PROGRAM DETAIL
FOR PERIOD ENDING DECEMBER 31, 2018**

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Description			COST THRU JUNE 2018	DECEMBER 2018	FYTD TOTAL	FY 18/19 BUDGET	(OVER) UNDER	TOTAL COST
NOVATO								
a. Residential								
1-7700-01	1-7700-26	1 Cash for Grass	\$401,449	\$975	\$8,405	\$35,000	\$26,595	\$409,854
1-7700-02	1-7700-27	2 Landscape Efficiency Rebates	23,492	100	246	5,000	4,754	23,738
1-7700-03		3 Fixtures Purchases	45,649	0	4,981	5,000	19	50,630
1-7700-06	1-7700-28	4 Washing Machine Rebates	347,112	100	755	5,000	4,245	347,867
1-7700-07		5 Demonstration Garden Improvements	54,416	0	0	1,000	1,000	54,416
1-7700-11	1-7700-29	6 Toilet Rebate SF	981,400	1,757	7,897	18,000	10,103	989,297
1-7700-12	1-7700-30	7 Toilet Rebate MF	18,173	0	0	2,000	2,000	18,173
1-7700-13		8 Residential Audits	386,744	2,304	31,326	65,000	33,674	418,070
1-7700-15		9 High Efficiency Toilet Distribution	242,177	0	0	0	0	242,177
1-7700-16		10 Water Waste Ordinance Monitoring	90,875	188	1,269	7,000	5,732	92,143
1-7700-17	1-7700-31	11 Swimming Pool Cover Rebate	3,258	35	206	1,000	794	3,464
1-7700-19	1-7700-32	12 ET Controller Rebate	33,553	524	1,253	5,000	3,747	34,806
1-7700-08		13 Administration	1,419,540	7,961	60,477	130,000	69,523	1,480,017
1-7700-20		14 New Development Wtr Cons Program	88,418	791	4,939	15,000	10,061	93,357
1-7700-21	1-7700-33	15 Demand Offset Rebate Program	2,816	0	0	2,000	2,000	2,816
1-7700-23		16 Grant Administration	3,300	0	0	1,000	1,000	3,300
1-7700-24	1-7700-34	17 Hot Water Recirculation Rebate	2,266	75	150	2,000	1,850	2,416
1-7700-25		18 Residential Fill Station	66,421	0	0	0	0	66,421
b. Commercial								
1-7701-02	1-7701-05	1 Toilet Rebate Program	67,061	0	300	10,000	9,700	67,361
1-7701-03	1-7701-04	2 Commercial Audits	21,608	915	3,575	9,000	5,425	25,183
c. Public Outreach/Information								
1-8672-16		1 Fall Newsletter	67,368	0	10,603	8,000	(2,603)	77,971
1-8672-17		2 Spring Newsletter	85,224	0	0	9,000	9,000	85,224
1-8672-18		3 Summer Newsletter	20,290	0	0	0	0	20,290
1-7700-04		4 Public Outreach / H ₂ O Fair	122,868	1,314	7,150	7,000	(150)	130,018
1-7700-05		5 Marketing	150,716	0	1,880	15,000	13,120	152,596
1-7700-22		6 Public Outreach/Leadership Novato	11,098	0	230	0	(230)	11,327
d. Large Landscape								
1-8653-02		1 Large Landscape Audits	90,427	0	261	3,000	2,739	90,689
1-7702-01		2 Large Landscape Budgets	37,883	0	176	1,000	824	38,059
1-7702-02	1-7702-04	3 Large Landscape Irrig Efficiency Rebates	14,460	0	0	4,000	4,000	14,460
1-8653-01		4 CIMIS Station Maintenance	18,866	15	555	2,000	1,445	19,421
1-7702-03		5 Administration-Large Landscape	71,730	784	11,166	13,000	1,835	82,896
TOTAL NOVATO WATER CONSERVATION			\$4,990,655	\$17,836	\$157,800	\$380,000	\$222,200	\$5,148,455
WEST MARIN WATER								
2-5166-00		a. Water Conservation Program	\$89,054	\$282	\$1,982	\$10,000	\$8,018	\$91,037
TOTAL WATER CONSERVATION EXPENDITURES			\$89,054	\$282	\$1,982	\$10,000	\$8,018	\$91,037

**NORTH MARIN WATER DISTRICT
CAPITAL IMPROVEMENT PROJECTS
PERIOD ENDING DECEMBER 31, 2018**

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Description	COST THRU JUNE 2018	DECEMBER 2018	FYTD TOTAL	FY 18/19 BUDGET	(OVER)/UNDER BUDGET	TOTAL COST
1 PIPELINE REPLACEMENTS/ADDITIONS						
a. Main/Pipeline Replacements						
1-7161-00 1 Ridge Road 6" ACP (8" @ 1,400')	\$682,854	\$0	\$88,004	\$140,000	\$51,996	\$770,858
1-7176-00 2 Replace Shady Lane Service Saddles	4,548	0	26,823	100,000	73,177	31,370
5 Other Main Replacements (60+ years old)	0	0	0	160,000	160,000	0
1-7161-01 6 Ridge Road 6" ACP-Materials Purchase	67,832	0	0	0	0	67,832
1-7179-00 7 Bel Marin Keys/101 On Ramp Pipe Repair	0	0	48,209	0	(48,209)	48,209
1-7180-00 8 Montego Keys Pipeline Replacement	0	0	0	0	0	0
b. Main/Pipeline Additions						
1-7150-00 1 San Mateo Inlet/Outlet Pipe (2,200')	45,348	500	1,197	500,000	498,803	46,545
c. PB Service Line Replacements						
1-7169-00 1 Country Lane 2" Plastic	7,445	284	4,695	150,000	145,305	12,140
1-7123-22 4 Repl PB-Brooke/Robinhood/McIntosh/Charmaine/Timothy	66,286	0	26,642	0	(26,642)	92,928
1-7177-00 5 Rush Creek Pipe Protection	0	0	0	0	0	0
d. Relocations to Sync w/City & County CIP						
1-8737-xx 1 Other Relocations	0	0	0	70,000	70,000	0
1-8737-06 2 Montego Keys Pipeline Replacement	0	0	3,792	0	(3,792)	3,792
TOTAL PIPELINE REPLACEMENTS/ADDITIONS	\$874,313	\$785	\$199,362	\$1,120,000	\$920,638	\$1,073,675
e. Aqueduct Replacements & Enhancements						
1-7118-02 1 MSN B2-Utility Agreement Costs ⁴	\$72,949	\$2,012	\$13,346	\$0	\$0	\$86,295
1-7118-11 2 AEEP Post Construction Costs	3,221	98	4,610	0	(4,610)	7,831
1-7118-19 3 AEEP B3 Betterment & Depr Cost	439	0	0	0	0	439
	\$76,609	\$2,110	\$17,956	\$0	(\$4,610)	\$94,565
2 SYSTEM IMPROVEMENTS						
1-7007-12 a. Detector Check Assembly Repair/Repl (~14/yr)	\$131,448	\$2,917	\$2,917	\$60,000	\$57,083	\$134,365
1-7090-04 b. Anode Installations (150/yr)	0	0	0	30,000	30,000	0
1-7157-00 c. Automate Zone Valve	1,016	0	0	100,000	100,000	1,016
1-7158-00 d. Advanced Meter Information Retrofit ¹	3,849,754	16,239	1,509,185	2,500,000	990,815	5,358,939
1-7178-00 f. Asset Management Software Procurement/Implementation	0	0	484	75,000	74,516	484
1-7136-00 e. Facilities Security Enhancements	51,592	268	7,652	25,000	17,348	59,244
TOTAL SYSTEM IMPROVEMENTS	\$4,033,809	\$19,425	\$1,520,238	\$2,790,000	\$1,269,762	\$5,554,047
3 BUILDINGS, YARD, & S.T.P. IMPROVEMENTS						
a. Administration Building						
1-6501-43 1 Electronic Document Management System	\$0	\$0	\$0	\$140,000	\$140,000	\$0
1-6501-44 2 Office/Yard Building Renovation ²	52,381	0	0	250,000	250,000	52,381
b. Stafford Treatment Plant						
1-6600-89 2 Coat Concrete Clearwells (Both Units)	2,346	29,313	58,335	590,000	531,665	60,681
1-6600-92 4 Other Treatment Plant Improvements	0	6,174	6,174	50,000	43,826	6,174
1-6600-91 5 Stafford Spillway Repairs	79,604	0	175	0	(175)	79,779
TOTAL BUILDING, YARD, & STP IMPROVEMENTS	\$134,331	\$35,487	\$64,684	\$1,030,000	\$965,316	\$199,014
4 STORAGE TANKS & PUMP STATIONS						
a. Tank Construction						
1-6207-20 1 Old Ranch Rd Tank Replacement	\$14,394	\$928	\$11,820	\$60,000	\$48,180	\$26,214
b. Tank Rehabilitation						
1-7170-00 1 Hydro pneumatic Tank Repairs	15,145	0	0	30,000	30,000	15,145
1-6205-22 2 Cherry Hill #2 Recoat	0	0	0	250,000	250,000	0
1-6112-24 c. Lynwood Pump Station Motor Control Center	103,098	1,819	15,234	280,000	264,766	118,332
1-6141-00 d. Crest P.S.(Design/Const)/Reloc School Rd P.S.	55,278	16,389	36,264	200,000	163,736	91,541
TOTAL STORAGE TANKS & PUMP STATIONS	\$187,914	\$19,136	\$63,318	\$820,000	\$756,682	\$251,232

**NORTH MARIN WATER DISTRICT
CAPITAL IMPROVEMENT PROJECTS
PERIOD ENDING DECEMBER 31, 2018**

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Description	COST THRU JUNE 2018	DECEMBER 2018	FYTD TOTAL	FY 18/19 BUDGET	(OVER)/UNDER BUDGET	TOTAL COST
5 RECYCLED WATER						
5-7127-00 a. NBWRA Grant Program Administration	\$1,307,784	\$892	\$6,966	\$20,000	\$13,034	\$1,314,750
b. Other Recycled Water Expenditures	0	0	0	100,000	100,000	0
5-6058-10 c. Expansion to Central Area ³	1,094,677	300	780	0	(780)	1,095,457
5-6058-15 d. RW Central Right of Way Costs ³	83,607	0	3,077	0	(3,077)	86,683
5-6058-20 e. RW Central Private Onsite Retrofit ³	774,727	0	89,638		(89,638)	864,365
5-6058-25 f. RW Central Public Onsite Retrofit ³	29,338	0	0	0	(0)	29,339
5-6058-30 g. RW Exp-Central-East Side Const ³	4,072,735	443	3,837	0	(3,837)	4,076,572
5-6058-35 h. RW-Central East-Rowland Way ³	353,862	0	0	0	0	353,862
5-6058-40 i. RW Exp-Central-West Side Const ³	6,863,454	963	1,336	0	(1,336)	6,864,790
5-6058-50 j. RW Central-Norman Tank Rehab/Const ³	1,122,107	0	0	0	0	1,122,107
5-6058-60 k. RW Central-Highway101 Crossing	854,674	0	0	0	0	854,674
5-7162-02 l. So Novato Dual Plumbed Shell Loop	0	0	525	0	(525)	525
TOTAL RECYCLED WATER	\$16,556,966	\$2,599	\$106,160	\$120,000	\$13,840	\$16,663,126
6 WEST MARIN WATER SYSTEM						
2-6263-20 a. Replace PRE Tank #4A (25K Gal w/82K Gal)	\$199,266	\$5,528	\$29,643	\$625,000	\$595,357	\$228,909
2-6609-20 b. New Gallagher Well #2	588	1,242	2,426	90,000	87,574	3,014
2-8829-00 c. PB Replace in Sync w/County Paving	0	0	1,455	50,000	48,545	1,455
2-6601-32 d. TP Solids Handling	197,161	2,532	3,155	550,000	546,845	200,316
e. Relocation of Production Meter	0	0	0	10,000	10,000	0
2-7123-23 f. PB Replacement-State Route One	0	0	13,677	0	(13,677)	13,677
2-8912-00 g. Lagunitas Bridge Pipeline Replacement	0	626	1,955	0	(1,955)	1,955
TOTAL WEST MARIN WATER SYSTEM	\$397,015	\$9,928	\$52,310	\$1,325,000	\$1,272,690	\$449,326
7 OCEANA MARIN SEWER SYSTEM						
8-8672-28 a. Infiltration Repair	\$39,195	\$0	\$0	\$40,000	\$40,000	\$39,195
8-7171-00 b. Pond Dredging & Relining	2,239	3,103	264,895	400,000	135,105	267,134
8-7173-00 c. OM Treatment Pond Rehab-404 Grant-FEMA	44,610	0	1,664	0	(1,664)	46,274
8-8607-22 d. OM Treatment Pond-Storm Damage-FEMA	0	0	0	125,000	125,000	0
TOTAL OCEANA MARIN SEWER SYSTEM	\$86,044	\$3,103	\$266,559	\$565,000	\$298,441	\$352,603
TOTAL PROJECT EXPENDITURES	\$22,347,002	\$92,572	\$2,290,587	\$7,770,000	\$5,492,759	\$24,637,588
8 LESS FUNDED BY GRANTS, LOANS & REIMBURSEMENTS						
(Accrued)/Deferred						
a. RW Expansion - Central Service Area SRF Loan ³	(\$2,227,069)	\$0	\$2,227,069	\$0	(\$2,227,069)	\$0
b. RW Expansion - Central Service Area Grant ³	(43,026)	0	43,026	0	(43,026)	0
c. MSN Aqueduct Caltrans Reimb-Segment B2 ⁴	(1,585)	(2,012)	(13,346)	0	13,346	(14,931)
d. Office/Yard Building Renovation ²	(52,597)	0	0	0	0	(52,597)
FUNDING BY OTHERS (ACCRUED)/DEFERRED	(\$2,324,277)	(\$2,012)	\$2,256,749	\$0	(\$2,256,749)	(\$67,528)
Received						
a. RW Expansion - Central Service Area SRF Loan ³	(\$4,883,337)	\$0	(\$2,227,069)	(\$2,227,069)	\$0	(\$7,110,406)
b. RW Expansion - Central Service Area Grant ³	(5,988,079)	0	(43,026)	(\$43,026)	0	(6,031,105)
c. MSN Aqueduct Caltrans Reimb-Segment B2 ⁴	(59,974)	0	0	0	0	(59,974)
d. Office/Yard Building Renovation ²	0	0	0	(250,000)	(250,000)	0
FUNDING BY OTHERS RECEIVED	(\$10,931,390)	\$0	(\$2,270,095)	(\$2,520,095)	(\$250,000)	(\$13,201,485)
NET PROJECT EXPENDITURES	\$9,091,335	\$90,560	\$2,277,241	\$5,249,905	\$2,986,009	\$11,368,576

**NORTH MARIN WATER DISTRICT
CAPITAL IMPROVEMENT PROJECTS
PERIOD ENDING DECEMBER 31, 2018**

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Description	COST THRU JUNE 2018	DECEMBER 2018	FYTD TOTAL	FY 18/19 BUDGET	(OVER)/UNDER BUDGET	TOTAL COST
CIP SUMMARY-GROSS EXPENDITURES:						
		Current Month	FYTD Total	FY 17/18 Budget	FYTD/ Budget%	
Novato Water Capital Projects		\$76,942	\$1,865,557	\$5,760,000	32%	
Novato Recycled Water Capital Projects		2,599	106,160	120,000	88%	
West Marin Water Capital Projects		9,928	52,310	1,325,000	4%	
Oceana Marin Sewer Capital Projects		3,103	266,559	565,000	47%	
Gross Capital Improvement Project Outlays		\$92,572	\$2,290,587	\$7,770,000	29%	
CIP SUMMARY-NET EXPENDITURES:						
		Current Month	FYTD Total	FY 17/18 Budget	FYTD/ Budget%	
Novato Water Capital Projects		\$74,930	\$1,852,211	\$5,510,000	34%	
Novato Recycled Water Capital Projects		2,599	106,160	(2,150,095)	-5%	
West Marin Water Capital Projects		9,928	52,310	1,325,000	4%	
Oceana Marin Sewer Capital Projects		3,103	266,559	565,000	47%	
Net Capital Improvement Project Outlays		\$90,560	\$2,277,241	\$5,249,905	43%	

Notes to Capital Improvement Projects Schedule:

- (1) FY18 Radio Read Meter Retrofit cost funded by \$4.6M Loan. Loan origination fee is \$85,300.
- (2) Office/Yard Refurbish to be funded by Bank Loan.
- (3) \$11.7M RW Central Expansion funded by Federal Grants, SRF Loan, local contribution & Marin Country Club contribution. Debt service paid from FRC Funds.
- (4) Funding provided 100% by Caltrans.

CONSULTING SERVICES/STUDIES						
1-4055-00	a. Stafford Lake Sanitary Survey	\$12,762	\$0	\$150	\$0	\$12,912
1-4056-00	b. Novato Creek Steelhead Recovery	45,121	0	336	0	45,457
1-4057-00	c. Local Water Supply Enhancement Study	0	0	0	150,000	0
1-7039-02	d. Novato Water Master Plan Update	76,946	2,422	59,290	30,000	136,236
1-4058-00	e. Cost of Service Study Peer Review	0	11,944	11,944	30,000	11,944
1-4059-00	f. Stafford Lake Water Rights Update	0	0	0	50,000	0
1-4060-00	g. STP Efficiency Improvements	0	0	608	75,000	608
1-4063-00	h. Novato Asset Management Study	50,336	209	12,800	0	63,136
1-4073-00	k. Surplus Property	200	0	0	0	200
2-4061-00	l. Digitize West Marin Water Facility Maps	17,559	0	898	0	18,457
		\$202,924	\$14,574	\$86,026	\$335,000	\$288,950

North Marin Water District Financial Statement Notes

Note 1 - Restricted Cash

Connection Fee Fund: Cash available from collection of Connection Fees. The fee is charged to developers based upon the estimate of cost necessary to construct capacity to serve the new development. These funds are restricted by law for expansion of the water or sewer facilities within the service area where the development occurs. Funds are disbursed from the Connection Fee Reserve as expenditures are incurred to increase system capacity to serve new development. The fund balance accrues interest monthly.

Wohler Pipeline Financing Fund: In December 2002 the Sonoma County Water Agency sold \$6.8 million (par) of 30-year revenue bonds to finance the Wohler to Forestville Pipeline. NMWD's share of the debt is \$844,050 ($\$6,800,000 \times 11.2 / 90.4$). In January 2003 the District established this designated cash and corresponding reserve account and transferred \$844,050 of FRC money into the fund. The Wohler Pipeline Financing Fund is credited with interest monthly. The restricted cash Wohler Pipeline Financing Fund account and the related reserve account have been closed as of 10/31/18.

Collector #6 Financing Fund: The Sonoma County Water Agency received a \$15.8 million State Revolving Fund loan commitment at an interest rate of 2.8% repayable over 20 years for construction of Collector #6. NMWD's share of Collector #6 is \$1,950,000 ($\$15,800,000 \times 11.2 / 90.4$). In January 2003 the District established this designated cash and corresponding reserve account and transferred \$1,950,000 of FRC money into the fund. The Collector #6 Financing Fund is credited with interest monthly. The restricted cash Collector #6 Financing Fund account and the related reserve account have been closed as of 10/31/18.

AMI Project Fund: The District received a \$4.6 million loan from Chase Bank in March 2018 to fund the Automated Meter Information System Project. The 15-year, 2.69% annual percentage rate loan requires semi-annual payments and will be fully amortized on 3/1/2033. The fund is reduced by project expenditures and once all loan proceeds are disbursed, the fund will be closed. The fund balance does not accrue interest.

Revenue Bond Redemption Fund: Comprised of one year of debt service as required by West Marin revenue bond covenants. These funds are restricted for payment of bond principal, interest and administration fees. The fund balance does not accrue interest.

Bank of Marin Project Fund: The District received an \$8 million loan from the Bank of Marin in October 2011 to fund the Aqueduct Energy Efficiency Project. The 20-year, 3.54% annual percentage rate loan requires monthly payments of \$46,067 and will be fully amortized on 10/27/2031. In June 2012 the Board authorized reallocating \$1 million of this loan to West Marin Water to repay Novato Water \$223,000 owed for previous loans to fund Long Range Improvement Projects and the remainder to fund the Solids Handling Facility at the Point Reyes Water Treatment Plant. The unexpended fund balance accrues interest monthly.

Deer Island RWF Replacement Fund: The State Revolving Fund (SRF) loan agreement required the District to agree to establish and maintain a Water Recycling Capital Reserve Fund (WRCRF) for the expansion, major repair, or replacement of the Deer Island Recycled Water Treatment Plant. The WRCRF is maintained in compliance with the "Policy for Implementing the State Revolving fund for Construction of Wastewater Treatment Facilities" in effect at the time the agreement was signed by the District. The September 2003 Recycled Water Master Plan prepared by Nute Engineering recommended limiting the reserve to fund replacement of the RWF electrical and mechanical equipment (including transmission pumps) as they wear out. The cost of said equipment was \$1,483,000 which, at Nute's recommended 6% interest rate factor and 25-year life, renders an annual funding requirement \$115,000. The fund balance accrues interest monthly.

Recycled Water Capital Replacement and Expansion Fund: The 2011 Interagency Agreements for Recycled Water between NSD, LGVSD & NMWD require that any payments to the Distributor (NMWD) by the End User (Consumers) in excess of actual costs (marginal payments) shall be deposited in this fund. Operation and Maintenance Costs are defined as the actual cost of: labor (including general and administrative overhead plus tools and supplies normally applied), equipment and vehicle charges,

consumables (such as chemicals and electrical power), and spare parts and/or replaced components necessary to reliably treat and deliver recycled water to the End Users. Operation and Maintenance Costs do not include costs for major capital replacement or process changes.

Tax Receipts held in Marin County Treasury: Balance of tax proceeds collected and disbursed by the County of Marin for repayment of the Olema (OL-2) general obligation bond debt. The County credits interest to these funds quarterly.

STP SRF Reserve Fund – Marin County Treasury: The 2004 Stafford Treatment Plant State Revolving Fund (SRF) loan agreement requires the District to build a Reserve Fund equal to one year of payments (\$1,044,474) in the Marin County Treasury during the first ten years of the 20-year repayment period. Every January 1 and July 1, commencing January 1, 2010, the District deposits with the County 10% of the semi-annual SRF payment. The County credits the fund with interest quarterly, and will use the Reserve to pay the last 2 semi-annual SRF loan payments.

RWS North/South SRF Reserve Fund: The State Water Resource Control Board Agreements for the seven Clean Water State Revolving Fund Loans made for expansion of the Recycled Water System distribution system require that the District establish a reserve fund equal to one year's debt service (\$614,299) prior to the construction completion date.

RWS Central SRF Reserve Fund: The State Water Resource Control Board Agreement for the Clean Water State Revolving Fund Loan made for expansion of the Recycled Water System distribution system requires that the District establish a reserve fund equal to one year's debt service (\$255,373) prior to the construction completion date.

Note 2 - Designated Cash

Self-Insured Workers' Compensation Fund: Commencing July 2011, the District began self-insuring its workers' compensation liability. The savings accrued through self-insuring the liability is reserved in this fund for possible future claims expense. The District carries a workers' compensation excess policy for claims that exceed \$1,000,000. See schedule on page 21.

Retiree Medical Benefits Fund: NMWD pays the cost of health insurance for retirees between the ages of 55 and 65 and spouse under any group plan offered by CalPERS. The retiree must be at least 55 and have a minimum of 12 years of NMWD service at the date of retirement. NMWD's contribution toward the chosen plan is capped in the same manner as all other NMWD employees in the same class. Coverage terminates for the spouse when the spouse becomes eligible for Medicare, or for both the retiree and spouse when the retiree becomes eligible for Medicare. When the retiree or spouse becomes eligible for Medicare, NMWD pays up to the couple annuitant rate, which is capped at \$3,830 per year (\$319/month). In August 2003, NMWD transferred \$2.55 million (\$2.3 million for current retirees plus \$250,000 for future retirees) from unrestricted cash into a reserve to fund this obligation. In 2010 the Board directed staff to add \$1,500 per employee annually as a payroll overhead to accrue and accelerate amortization of this liability. The accrual is maintained as a Long-Term Liability entitled Retiree Health Benefits Payable. The Total OPEB Liability has a balance of \$4.1M. In 2017 an Actuarial Analysis calculated NMWD's total actuarial liability at \$5.6 million. The Retiree Medical Benefits cash fund earns interest monthly. Accounting Standards require that the \$5.6M reserve be fully funded in 20 years.

Drought Contingency (Rate Stabilization) Fund: In August 2008, the Board directed staff to establish this reserve with \$135,000 from the Self-Insured Workers' Compensation Fund for the Novato district to draw upon during dry years. A threshold of 3.2 billion gallons of potable consumption was established as a benchmark for 'normal' years. During any fiscal year that water sales volume exceeds 3.2BG, the incremental revenue generated is deposited into the Drought Contingency Reserve. In those years when sales volume falls below the benchmark, funds are withdrawn from the reserve to maintain the budgeted revenue forecast. The goal is to build a reserve equal to 20% (currently \$2,500,000) of budgeted annual water commodity sales. In FY09 \$50,335 was added to the reserve. The fund was fully depleted in FY10. The fund balance accrues interest monthly.

Maintenance Accrual Fund: Established in FY91 to provide a source of maintenance money for replacement of treatment, storage, transmission and distribution facilities as they wear out. The annual contribution from operating reserves was initially \$200,000. Net polybutylene claim settlement proceeds

of \$671,060 were closed into the fund in FY93. In FY94 the annual contribution was reduced to \$100,000. The District's goal is to build a reserve equal to 10% of the net book value of Novato's existing plant, currently \$7.0M. Funds are borrowed from the Maintenance Accrual Fund to offset the shortfall in unrestricted Cash & Investments. The fund balance does not accrue interest.

Operating Reserve Fund: This reserve, comprised of four months of budgeted operating expenditures (less depreciation) as recommended by the District's financial advisors, serves to ensure adequate working capital for operating, capital, and unanticipated cash flow needs that arise during the year. The fund balance does not accrue interest.

Note 3 – Employee Loans

Housing Loans: The District's Employer Assisted Housing Program allows up to \$300,000 to be loaned to an employee for a period of up to 15 years for the purchase of a home within the District service territory that will enable the employee to respond rapidly to emergencies affecting the operation of the District. Repayment is due upon sale, termination of employment, or other event as described in the Program. Interest on the loan is contingent upon and directly proportional to the appreciation in value occurring on the purchased property. There are four employee-housing loans currently outstanding totaling \$714,200: a \$39,200 loan dated September 2004, a \$150,000 loan dated November 2007, a \$250,000 loan dated March 2015, and a \$275,000 loan dated June 2018.

Note 4 – Other Long Term Receivables

The District entered into a temporary water service agreement with Black Point Golf Links in 1999 to provide potable water for StoneTree Golf Course until recycled water was available. In 2006 the District received a \$4.3 million 20-year 2.4% SRF loan to finance the Deer Island Recycled Water project, and Black Point Partners agreed to pay the District \$3,612,640 in bimonthly payments of \$41,762 at 2.4% coinciding with StoneTree's water service payments. The final payment from StoneTree is due in February 2024.

In 2015 the District entered into an agreement with Marin Country Club for their share of the pipeline extension to provide recycled water for the Marin Country Club Golf Course. In 2016 the District received a \$6.6 million 30-year 1.0% SRF loan to finance the Recycled Water Central project, and Marin Country Club agreed to pay the District \$1,265,295 in bimonthly payments of \$8,142 at 1.0% over 30 years for their share of the pipeline extension. Marin Country Club also agreed to pay \$430,463 of the District's local share of the project in bimonthly payments of \$8,242 over 10 years at 2.8%, which is the Novato Potable Fund's weighted average cost of debt. The payments will coincide with Marin Country Club's water service payments. Marin Country Club paid the 10 year loan in full in December 2018. The final payment from Marin Country Club for the 30 year loan is due in November 2047.

Note 5 – Depreciation

Assets are assigned a useful life based on consultations with the District Chief Engineer and a survey of other water agencies. Depreciation is computed on a straight-line basis over the estimated useful life of the various classes of property as follows:

<u>Facility</u>	<u>Life (Years)</u>
Aqueduct.....	150
Dam.....	100
Buildings & Structures.....	40
Mains.....	50
Pumping Equipment.....	25
Water Treatment Equipment.....	20
Storage & Transmission (16"+) Facilities.....	50
Distribution Facilities (includes Pump Stations).....	50
Office, Laboratory, Construction & Shop Tools & Equipment.....	10
Vehicles 1 ton or greater.....	10
All other vehicles.....	5
Sewer Mains.....	40
Sewer Pumps.....	10

Note 6 - Capitalization Policy

The Government Finance Officers Association *Guide for State and Local Governments* recommends that a capitalization policy incorporate a minimum threshold of \$5,000 and an estimated useful life of at least two years. It also cautions that federal grant and loan requirements prevent the use of capitalization thresholds in excess of \$5,000. Thus NMWD's capitalization threshold is \$5,000.

Note 7 – Bond & Loan

Servicing Schedule for Fiscal Year 2018-2019

Service Area	Description	Issue Date	Rate	Original Amount	Payment Due	Final Pmt	FY19		6/30/19 Outstanding Balance
							Interest Expense	Principal Paid	
1 Novato	SRF Loan - STP	2004	2.39%	\$16,528,850	7/1 & 1/1	7/1/29	\$235,405	\$809,069	\$9,241,578
2 Novato	Bank Loan Marin	2011	3.54%	\$7,000,000	27 th /mo	10/27/31	\$171,462	\$310,580	\$4,845,316
3 Novato	Chase Loan	2018	2.69%	\$4,600,000	3/1 & 9/1	3/1/33	\$116,522	\$240,000	\$4,360,000
Novato Total							\$523,389	\$1,359,649	\$18,446,894
4 RW TP	SRF Loan	2006	2.4%	\$4,302,560	6/19	6/19/27	\$52,543	\$220,824	\$1,968,463
5 RW North	SRF Loans (4)	2013	2.6%	\$4,375,605	Varies	Varies	\$87,149	\$194,743	\$3,157,142
6 RW South	SRF Loans (3)	2013	2.2%	\$5,359,858	Varies	Varies	\$94,132	\$238,275	\$4,040,446
7 RW Central	SRF Loan	2016	1.0%	\$7,130,503	12/18	12/31/47	\$53,287	\$206,427	\$6,924,076
Recycled Water Total							\$287,111	\$860,269	\$16,090,127
8 PRE	PRE-1 Revenue	1980	5.0%	\$240,000	10/1 & 4/1	4/1/20	\$1,300	\$13,000	\$13,000
9 Point Reyes	PR-6 Revenue	1981	5.0%	\$217,800	7/1 & 1/1	7/1/21	\$1,750	\$11,000	\$34,000
10 WM Water	Bank Loan Marin	2012	3.54%	\$1,000,000	27 th /mo	10/27/31	\$25,169	\$45,590	\$710,934
West Marin Water Total							\$28,219	\$69,590	\$757,934
FY19 Total							\$838,719	\$2,289,508	\$35,294,955

1. In April 2004 the California State Department of Water Resources approved a 2.39% 20-year loan for reconstruction of the Stafford Water Treatment Plant. The project was completed in FY09 with repair of the Outlet Tower Sluice Gate. Interest paid during construction totaled \$1,636,378. The loan covenants require an annual reserve fund contribution of \$104,447 (10% of the annual debt service obligation) be deposited into the Marin County Treasury during each of the first ten years of the repayment period. Debt service is funded 25% by Facility Reserve Charges. The first payment was made in December 2009.
2. In October 2011 Bank of Marin made a 20-year 3.54% (APR) loan of \$8 million to fund the District's share of the Aqueduct Energy Efficiency Project. See Note 15 below, and note to loan 9 above.
3. In March 2018 Chase Bank made a 15-year 2.69% (APR) loan of \$4.6 million to fund the District's Automated Meter Information System Project.

4. In August 2006 the California State Department of Water Resources approved a 2.4% 20-year loan of \$4,264,545 for construction of the Deer Island Recycled Water Facility. With the addition of \$38,015 in Construction Period Interest, the loan principal totaled \$4,302,560. The project was completed in June 2007, and the first payment was made June 19, 2008.
5. In July 2011 the California State Department of Water Resources approved a series of four 2.6% 20-year loans which totaled \$4,375,605 for the Recycled Water North Service Area Expansion Project. The projects were completed on October 31, 2012, and the first payment was made in November of 2012.
6. In March 2012 the California State Department of Water Resources approved a series of three 2.2% 20-year loans totaling \$5,361,952 for the Recycled Water South Service Area Expansion Project. The projects were completed on September 4, 2013, and the first payment was made in December of 2013.
7. In May 2016 the California State Department of Water Resources approved a 1.0% 30-year loan of \$6,592,295 for the Recycled Water Central Service Area Expansion. The project will be completed in December 2017, and the first payment will be made December 31, 2018.
8. The Paradise Ranch Estates private water system was created by David Adams and Sons in 1952 to provide water to 85 homes in the PRE subdivision located north of Inverness Park. Problems with water quality and quantity developed and in 1969 the Marin County Health Department issued a boil-water order to all customers of the company. In 1972 the County declared a moratorium on issuance of building permits. A suit by property owners resulted in an agreement reached in Marin Superior Court in late 1978 directing Adams to finance a District feasibility study for the takeover of the system. This culminated in formation of Improvement District PRE-1 and an election authorizing issue of \$240,000 of 5% 40-year revenue bonds, which, in conjunction with a \$720,000 Farmers Home Administration grant, financed system rehabilitation. Service was provided from the Point Reyes System by installation of an additional well, expansion of the treatment plant, and a 6-inch pipeline connection at the Inverness Park pump station extending 1.6 miles along Sir Francis Drake Boulevard to the newly reconstructed Paradise Ranch Estates distribution system. On 4/22/80 the USDA purchased the revenue bond issue in its entirety.
9. In 1981 work commenced on rehabilitating the Point Reyes Inverness Park water system. 18,865 feet of pipeline was either replaced or installed, a 300,000-gallon tank was added in Point Reyes Station and a 100,000-gallon tank was added in Inverness Park. Total cost of these improvements was \$820,015. A 72% grant combined with a \$217,800 5% 40-year revenue bond acquired 8/28/81 by the Farmers Home Administration financed the project.
10. In June 2012 the Board authorized reallocating \$1 million of the Bank of Marin loan to West Marin Water to repay Novato Water \$223,000 owed for loans to fund Long Range Improvement Projects and the remainder to fund the Solids Handling Facility at the Point Reyes Water Treatment Plant. See note to loan 2 above.

Note 8 – Unemployment Insurance Reserve

NMWD uses the "Reimbursable Method" of paying for Unemployment Costs. Under this method, the District reimburses the State Employment Development Department for all unemployment benefits paid on our behalf. The reserve is maintained at an amount equal to the higher of the average claim amount paid over the last 5 years or 52 times the maximum weekly benefit amount (currently $\$450 \times 52 = \$23,400$).

Note 9 – Payroll Benefits

Payroll Benefits Payable includes Employer and Employee paid payroll taxes; vacation, sick, floating holiday and comp time leave, Section 125 payments; cancer, long term care and disability insurance premiums; union dues; and employee benefit fund.

Note 10 - Interest Policy on Inter-District Loans

In the event an improvement district expends all of its Undesignated Funds, it shall borrow funds from that improvement district's Board Designated Fund reserves to meet ongoing requirements. In the event an

improvement district expends all of its Board Designated Fund reserves, it may receive a loan from the Novato Improvement District in an amount sufficient to meet its ongoing requirements. Restricted Funds shall not be used to finance ongoing normal operating expenses.

No interest shall be paid by an improvement district on funds borrowed from that improvement district's Board Designated Fund reserves. Interest on loans from the Novato Improvement District shall be paid by the recipient district to the Novato district based upon the outstanding loan balance at the close of the previous accounting period. Interest shall be calculated at the higher of: 1. The weighted average interest rate of Novato improvement district debt (2.78% at 6/30/17); or 2. The average interest rate earned on the District treasury since the close of the previous accounting period; plus \$50 per month.

Note 11 – Budget Augmentations

Note 12 – Prior Period Adjustment

Note 13 – Explanation of Financial Statement Components

The District's financial statement is comprised of four components: 1) Statement of Net Position, 2) Sources and Uses of Funds Statement – All Service Areas Combined, 3) Income Statement and Cash Flow by Service Area, and 4) Notes to the Financial Statements. This report also contains other supplementary information in addition to the basic financial statements themselves.

The Statement of Net Position (page 4) reports the District's assets and liabilities and provides information about the nature and amount of investments in resources (assets) and the obligations to the District's creditors (liabilities). The difference between assets and liabilities is reported as *net position*. Over time, increases or decreases in the fund balance may serve as a useful indicator of whether the financial position of the District is improving or deteriorating.

The Sources and Uses of Funds Statement – All Service Areas Combined (page 8) compares fiscal year-to-date performance against the Board approved annual budget – presented in the adopted budget format. This Sources and Uses of Funds Statement varies from the income statement in that it includes capital expenditures, debt principal repayment, connection fee revenue, and cash infusions from debt issuance.

The Income Statement and Cash Flow by Service Area (page 9) presents the net income (loss) for the fiscal year-to-date (FYTD) period for each of the District's four service areas. The income and expenses on this report are presented in conformity with Generally Accepted Accounting Principles (GAAP) and comply with Governmental Accounting Standards Board pronouncements. Accordingly, all income and expenses are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of related cash flows. This statement measures the success of each service area's operations and can be used to determine whether the service area has successfully recovered all costs through user fees and other charges.

Also included at the bottom of page 9 is a statement of Cash Flow by Service Area. The primary purpose of this statement is to reconcile in an informative manner the difference between the net income/(loss) for the period of each service area with the resultant change in cash balance that occurred over the same period.

Notes to the Financial Statements (page 31) provide a summary of significant accounting policies and assumptions and other information of value to the financial statement reader.

Other Supplementary Information includes Detail Income Statements presented in accordance with GAAP for each of the four service areas (pages 10, 14, 16, 19). These statements present income and expenditures in close detail for further analysis. Other supplementary schedules of note include the Vehicle Fleet Analysis (page 25), Equipment Expenditures (page 22) and Capital Improvement Project Expenditures (page 27), which show outlays to date, compared with budget authority.

Note 14 –Connection Fee Transfers from Novato Water To Recycled Water

The following Connection Fee (FRC) reserve amounts have been transferred to the Recycled Water fund:

	Expansion Local Share			NBWRA	SRFRWF Expansion		CIP	Total	Transfer	
	North	South	Central		Loan	SRF Loan			Executed	
FY07				\$29,725				\$29,725		
FY08				\$50,478	\$22,795			\$73,273		
FY09				\$150,455	\$22,795			\$173,250		
FY10	\$133,659			\$75,198	\$22,795			\$231,652	\$133,659	\$133,659
FY11				\$133,319	\$22,795			\$156,114		\$1,175,098
FY12	\$233,478	\$265,500		\$115,883	\$22,795			\$637,656		(\$7,088)
FY13				\$315,023	\$22,795	\$464,572		\$802,390	\$1,970,400	\$802,390
FY14	\$236,291	\$723,525	\$4,024	\$63,035	\$22,795	\$500,529		\$1,550,200	\$1,550,200	\$1,550,200
FY15		\$17,563	(\$4,024)	\$38,283	\$22,795	\$614,299		\$688,916	\$688,916	\$688,916
FY16	\$0	\$0	\$66,729	\$102,842	\$22,795	\$614,299		\$806,664	\$806,664	\$806,664
FY17			\$362,524	\$194,636	\$22,795	\$614,299	\$36,687	\$1,230,940	\$1,230,940	\$1,230,940
FY18			\$5,071,512	\$38,908	\$22,795	\$614,299		\$5,747,513	\$5,747,513	\$5,747,513
FY19			(\$2,174,377)	\$6,074		\$245,776		(\$1,922,527)	(\$1,922,527)	(\$1,922,527)
	\$603,428	\$1,006,589	\$3,326,388	\$1,313,859	\$250,744	\$3,668,072	\$36,687	\$10,205,767	\$10,205,767	\$10,205,767

Note 15 –Debt Service Coverage Ratio

Debt Service Coverage Ratio is the ratio of net income/(loss) plus interest expense, depreciation, and connection fee revenue for the fiscal year to the sum of the fiscal year's principal and interest payments on the District's total debt.

	FY15	FY16	FY17	FY18	Budget FY19
Net Income/(Loss)	\$1,050,523	\$91,719	\$597,600	\$1,860,520	\$1,159,000
Depreciation	\$3,183,725	\$3,286,353	\$3,416,507	\$3,434,069	\$3,528,000
Interest Expense	\$847,951	\$807,035	\$757,935	\$833,197	\$850,000
Connection Fees	\$801,600	\$278,690	\$1,034,585	\$1,455,400	\$733,000
Total Available For Debt Service	\$5,883,799	\$4,463,797	\$5,806,627	\$7,583,186	\$6,270,000
Annual Debt Service	\$2,534,473	\$2,528,938	\$2,527,021	\$2,201,451	\$3,129,000
Debt Service Coverage Ratio	2.32	1.77	2.30	3.45	2.01

6

MEMORANDUM

To: Board of Directors

February 1, 2019

From: Julie Blue, Auditor-Controller *JB*

Subj: Proposed FY19/20 Budget Review Schedule

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RECOMMENDED ACTION: Approve**FINANCIAL IMPACT:** None***PROPOSED BUDGET REVIEW SCHEDULE FY 2019-20***

Date	Location	Item	Service Area	Review/Approve
April 16	Novato	Capital Project & Equipment Budget Schedules	Novato/RW/WM/OM	Review
May 7	Novato	Operations & Maintenance and Capital Budget - District	Novato/RW/WM/OM	Review
May 21	Novato	Operations & Maintenance and Capital Budget - District	Novato/RW/WM/OM	Review
June 4	Novato	Operations & Maintenance and Capital Budget - District	Novato/RW/WM/OM	Review (if needed)
June 18	Novato	Operations & Maintenance and Capital Budget - Novato and Recycled Water	Novato/Recycled Water	Approve
June 25	Novato	Operations & Maintenance and Capital Budget - West Marin Water	West Marin Water	Approve
June 25	Pt Reyes	Operations & Maintenance and Capital Budget - Oceana Marin Sewer	Oceana Marin Sewer	Approve

Approved by GM *[Signature]*Date *2/1/19*

7

MEMORANDUM

To: Board of Directors

February 1, 2019


From: Julie Blue, Auditor-Controller 

Subj: Proposed FY19/20 Rate Hearing Schedule

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RECOMMENDED ACTION: Approve**FINANCIAL IMPACT:** None***PROPOSED RATE HEARING SCHEDULE FY 2019-20***

Action	Novato Potable & Recycled Water	West Marin Water & Oceana Marin Sewer
Consider Proposed Rates	March 5, 2019	April 16, 2019
Approve Letter to Customers	March 19, 2019	May 7, 2019
Customer Letter Postmark Deadline ¹	March 29, 2019	May 10, 2019
Rate Hearing	May 21, 2019	June 25, 2019
Rate Effective	June 1, 2019	July 1, 2019

Approved by GM Date 2/1/19¹ To meet minimum 45-day hearing notice requirement letters must be postmarked on or before the date shown.

8

MEMORANDUM

To: Board of Directors February 1, 2019

From: Rocky Vogler, Chief Engineer 

Re: Amend Consulting Services Agreement – Cinquini & Passarino, Inc.
R:\NON JOB No ISSUES\Consultants\Cinquini & Passarino\Agmts_BOD Memos\2019\Agmts_BOD Memos\C&P Amend Contract BOD memo 2-5-19.doc

RECOMMENDED ACTION: Authorize General Manager to Amend the Consulting Services Agreement with Cinquini & Passarino, Inc.

FINANCIAL IMPACT: \$30,000

From time to time, it is necessary for the District to request surveying services from a California Licensed Land Surveyor. On April 4, 2017, the Board approved an Agreement with Cinquini & Passarino, Inc. (C&P) and established an initial budget of \$30,000. C&P is a professional land survey firm located in Santa Rosa, CA. The purpose of this memo is to request an amendment to the Consulting Services Agreement with C&P.

Since 2017, primary work performed by C&P under the current Agreement includes the following projects and tasks with associated costs:

• So. Novato Blvd. & Rowland to Sunset Pkwy	\$ 6,200
• Bear Valley Topo Survey – Upsize 4" Pipeline	\$10,000
• PRE Tank 4A Land Surveying	<u>\$ 9,990</u>
Remaining Balance out of (\$30,000)	\$ 3,810

This amendment will increase funds for C&P to provide as-needed land surveying services, and to extend the term of the agreement to December 31, 2021. The first project to be authorized under the amended agreement will be for the San Mateo Inlet/Outlet project for a proposed fee of \$4,900.

RECOMMENDATION

That the Board authorize the General Manager to amend the Consulting Services Agreement between NMWD and Cinquini and Passarino, Inc., and increase the budget by \$30,000.

Approved by GM 

Date 2/1/19

9

MEMORANDUM

To: Board of Directors

February 2, 2019

From: Drew McIntyre, General Manager

Re: Approve General Services Agreement – Assoc. Right of Way Services, Inc.

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RECOMMENDED ACTION: Authorize General Manager to execute a General Consulting Services Agreement with Associated Right of Way Services Inc.

FINANCIAL IMPACT: \$25,000

The purpose of this memo is to request a General Consulting Services (GCS) Agreement with Associated Right of Way Services Inc (ARWS). ARWS is a consulting firm with specialized expertise in right of way and real estate services (Attachment 1). From time to time, the District is in need of specialized right-of-way expertise not readily available within the District's in-house staff for:

1. Unauthorized Encroachment on District Property
2. Negotiation of Permanent Easements
3. Eminent Domain Support Services and
4. Surplus Property Appraisals/Appraisal Reviews

Attached is an agreement for ARWS to provide miscellaneous right of way services on an as needed basis with a not-to-exceed limit of \$25,000 (Attachment 2). ARWS is a Bay Area based consulting firm located in Pleasant Hill, Ca. Over the past 30 years, ARWS has completed hundreds of projects in the North Bay for agencies including the City of Novato, Marin County, Sonoma County Water Agency and Novato Sanitary District.

To best meet project demands, a new GCS Agreement is desired and will be executed with individual task orders on a job-by-job basis. The first task order to be funded through this Agreement will be for assistance related to easement acquisition for the FY19-FY20 budgeted Gallagher Well No. 2 project.

RECOMMENDATION

Approved by GM

Date


 2/1/19

That the Board authorize the General Manager to execute a General Consulting Services Agreement between NMWD and Associated Right of Way Services, Inc with a not-to-exceed limit of \$25,000.



January 23, 2019

Drew McIntyre
General Manager
North Marin Water District
999 Rush Creek Place
Novato, CA 94945

Re: Miscellaneous General Right of Way Contract
Right of Way Services

Dear Mr. McIntyre:

Associated Right of Way Services, Inc., (AR/WS) respectfully submits our firm brochure, project experience, references, and resumes in to provide right of way services to the North Marin Water District (Client). AR/WS will provide right of way services on an on-call basis. Right of way services include, project management, cost estimating, appraisal, appraisal review, acquisition, and relocation advisory experience.

AR/WS is well suited to perform services requested by the Client including, unauthorized encroachment on district property, negotiation of permanent easements, eminent domain support services, and surplus property appraisals/appraisal reviews. To expand on our areas of expertise related to the above requested services, we have included a scope of work as an attachment.

Since 1989, AR/WS has successfully completed hundreds of projects within the North Bay for local, state, and federal agencies, special districts, transportation authorities, and engineering firms. AR/WS North Bay county clients include Napa, Marin, and Sonoma; and our North Bay city clients include American Canyon, Dixon, Fairfield, Napa, Novato, Petaluma, Rohnert Park, San Rafael, Santa Rosa, Sausalito, St. Helena, Vacaville, and Vallejo. AR/WS has also provided right of way services to special districts, transportation authorities, and others in the North Bay including, Fairfield-Suisun Sewer District, Marin County Flood Control Water Control District, Napa County Flood Control and Water Control District, Napa County Transportation & Planning Agency, Napa Sanitation District, Novato Sanitary District, Sausalito-Marin City Sanitary District, Sonoma Marin Area Rail Transit, and Vallejo Sanitation and Flood Control District.

We have reviewed the Standard Consulting Services Agreement and included our requested revisions to the agreement. Feel free to contact me if you wish to discuss or if you have any questions and thank you for including AR/WS on your team for right of way services.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Larry Castellanos'.

Larry Castellanos
Vice President
(925) 691-8500
LCastellanos@arws.com

SCOPE OF WORK

AR/WS staff propose to provide services to the North Marin Water District (Client) in the following areas:

1. Unauthorized Encroachment on District Property
2. Negotiation of Permanent Easements
3. Eminent Domain Support Services
4. Surplus Property Appraisals/Appraisal Reviews

Our experience and scope of work of the above areas is outlined below.

1. Unauthorized encroachment on district property

AR/WS has extensive experience providing encroachment removal and support assistance. An example of our experience with encroachment removal and support services is our work for the San Francisco Public Utilities Commission. Since 2012 AR/WS has teamed with the SFPUC Right of Way Management to build a successful encroachment removal program and has provided encroachment removal and support services on 100+ properties.

ENCROACHMENT REMOVAL AND SUPPORT SERVICES SCOPE OF WORK

- AR/WS will provide field inspections and documentation of unauthorized encroachments based on target areas determined by the Client.
- Provide notifications to owners on Client letterhead of encroachment violations with demand for date specific removal.
- Serve as Client contact for owners to respond to explain encroachment removal policy and administer encroachment removal plan.
- Provide follow up phone calls with owners to ensure compliance with the Client's encroachment removal policy.

2. Negotiation of permanent easements

AR/WS acquisition consultants are experts in negotiating permanent, and partial easements. All AR/WS acquisition agents are currently licensed brokers or salespersons by the State of California Bureau of Real Estate. AR/WS acquisition agents also hold notary public commissions. The majority of AR/WS acquisition agents have successfully completed a course in the Uniform Relocation and Real Property Acquisition Policies Act. Our acquisition agents have training related to acquisition of property for public projects. Many of our acquisition agents have earned a professional designation or certification from the IRWA. Our scope of negotiations and acquisition of permanent easements is as follow:

NEGOTIATIONS / ACQUISITIONS SCOPE OF WORK

- AR/WS to prepare acquisition documents. Said documents include, but are not limited to, offer letter, appraisal summary statement and summary of the basis for just compensation, summary statement pertaining to the acquisition of real property or an interest therein, purchase agreement, deed, public acquisition brochure and goodwill information sheet.
- AR/WS will negotiate to acquire easements that are identified by Client.
- All acquisition documents to receive Client's written approval as to form prior to use in the field. If agreement with all owners and other required interests cannot be reached, AR/WS will advise Client that negotiations have reached an impasse. The Client will consider scheduling of an action in eminent domain including the required public necessity hearing. AR/WS will provide condemnation support as needed and requested, budget allowing. AR/WS will initiate and maintain individual acquisition files.
- If settlement with owners and other required interests is reached pursuant to the Client approved appraisal or Client approved administrative settlement, AR/WS will prepare a Memorandum of Settlement for transmittal to Client. If an administrative settlement appears to be prudent, AR/WS will prepare a

settlement discussion memorandum reviewing the issues. This memorandum will require Client written approval before implementation of any settlement agreement.

- ⌘ AR/WS will establish with Client a process of coordinating escrow closings and reviewing escrow instructions. Where there are escrow closings, preparation of escrow instructions will be completed by title company. Approval of conditions of title and escrow instructions, including but not limited to, “subject to” title exceptions, will be done by Client.
- ⌘ All discussions for the acquisition of property or an interest therein will be directed to result in the payment of just compensation.
- ⌘ AR/WS will make every reasonable effort to acquire property on behalf of the Client expeditiously through agreement with its owner and to avoid litigation. This may necessitate greater levels of effort in the negotiations phase and, where appropriate, should continue after eminent domain has been initiated. Client will provide ongoing feedback to AR/WS as to authorization for settlements.

3. Eminent domain support services

Our appraisers, acquisition agents, and relocation advisors have worked with legal counsel on various projects where the condemnation process was initiated. Our detailed and organized files, diary logs and support material have been used by many attorneys in preparation for eminent domain actions.

EMINENT DOMAIN COORDINATION SCOPE OF WORK

- ⌘ AR/WS consultants will work with the Client’s staff and legal counsel to initiate and complete condemnation proceedings.
- ⌘ We will assist in preparation of documentation establishing the basis to use the power of eminent domain, including evidence about: the necessity of the project; the project location being most compatible with the greatest public good and least private injury; and the necessity of the subject property for the project.

4. Surplus property appraisals/appraisal reviews

The majority of AR/WS appraisal reports are prepared for the acquisition of property for public projects. However, a significant portion of our appraisals are prepared for property disposition. AR/WS appraisers are certified with the State of California Bureau of Real Estate Appraisers. All AR/WS appraisers have successfully completed a course in the appraisal of partial acquisitions for public agencies, an easement valuation course, a course on the Uniform Relocation and Real Property Acquisition Policies Act, and each appraiser has training related to California eminent domain law. The majority of our appraisers have earned a professional designation or certification from the IRWA and/or the Appraisal Institute. One AR/WS appraiser has earned the prestigious MAI designation. AR/WS appraisers have backgrounds in appraising various types of properties including residential, commercial, industrial, agricultural and special uses, and are experienced in appraising property for public acquisitions through the eminent domain process.

APPRAISAL SCOPE OF WORK

- ⌘ Appraisals to be provided addressed and delivered to Client staff as directed.
- ⌘ Appraisals to be prepared in accordance with California Eminent Domain Law; California Government Code Section 7260 et seq.; and the Uniform Standards of Professional Appraisal Practice requirements, except as jurisdictionally exempt, the Caltrans Right of Way Manual, and 49 CFR, Part 24.
- ⌘ The owner or a designated representative will be invited by the appraiser to accompany him/her during the inspection of the property.
- ⌘ Appraisals to be prepared in an Appraisal Report format in accordance with Uniform Standards of Professional Appraisal Practice, Standard Rule 2-2.

SCOPE OF WORK



- Appraisal is for the “Fair Market Value” of the property as per California Code of Civil Procedure, Section 1263.320.
- The market value of the property taken will not include any increase or decrease in the value of the property that is attributable to any of the following:
 - The project for which the property is taken;
 - The eminent domain proceeding in which the property is taken;
 - Any preliminary actions of the acquiring authority relating to the taking of the property.
- Appraiser will not give consideration to, nor include in their appraisal, any allowance for relocation benefits of personal property.
- If updated values are requested, appraisal services will be billed on an hourly basis in accordance with the AR/WS Fee Schedule. (Optional Service)
- If revisions are made to the property requirements during the appraisal process or upon completion of the report, appraisal time to address these revisions will be billed on an hourly basis in accordance with the AR/WS Fee Schedule. (Optional Service)
- Expert witness related services, including preparation for and appearances at depositions, court, arbitrations/mediations, hearings, and testimony will be billed on an hourly basis in accordance with the AR/WS Fee Schedule. (Optional Service)
- If properties are split or added, additional appraisal reports may be required. (Optional Service)

APPRAISAL REVIEW SCOPE OF WORK

Appraisal reviews are required on federally funded projects. AR/WS staff appraisers have experience preparing appraisal reviews.

- Upon receiving appraisal reports, an office review of the reports using the various standards prescribed by the Federal and State Uniform Acts, Federal Highway Administration, Caltrans appraisal procedures, Uniform Standards of Professional Appraisal Practice (USPAP) and the California Eminent Domain codes will be completed.
- A checklist identifying the various requirements of the appraisal reports will be used to ensure that the reports contain all of the prescribed requirements.
- Review appraiser will prepare a summary of the appraisal process and provide comments regarding any omissions or problems with the reports, such as lack of reasonable support for the appraisal conclusions.
- Review appraiser will make initial call to the appraiser to inform the appraiser that the reports are being reviewed. Comments will be provided to the appraiser for discussion.
- Schedule a field review and if needed schedule a meeting with the appraiser.
- Communicate with the Client to clarify potential issues, resolve problems and notify Client of progress.
- If required by Client, review comments will be provided to Client at the same time they are sent to the appraiser.
- Upon satisfactory completion of the appraisal reports, a review certificate report will be prepared.

CONTRACT REVISIONS

AR/WS respectfully requests the following contract revisions to the Standard Consulting Services Agreement.

- a. With respect to design professional services provided under this agreement, Consultant shall assume the defense of and defend NMWD, its directors, officers, agents, and employees in any action at law or in equity to the extent that liability is claimed or alleged to arise out of, pertain to, or relate to, either directly or indirectly, the intentional or willful misconduct, recklessness, or negligent act, error, or omission of Consultant (or any person or organization for whom Consultant is legally liable) in the performance of the activities necessary to perform the services for District and complete the task provided for herein. In addition, Consultant shall indemnify, hold harmless, and release NMWD, its directors, officers, agents, and employees from and against any and all actions, claims, damages, disabilities or expenses, including attorney's fees and witness costs, that may be asserted by any person or entity including the Consultant, to the extent arising out of, pertaining to, or relating to, the negligent acts, errors or omissions, recklessness, or intentional or willful misconduct of the Consultant (or any consultant or subcontractor of Consultant) in connection with the activities necessary to perform the services and complete the task provided for herein, but excluding liabilities due to the sole negligence or willful misconduct of NMWD.
- b. With respect to all services other than design professional services provided under this agreement, Consultant shall indemnify, hold harmless, release and defend NMWD, its agents and employees from and against any and all actions, claims, damages, disabilities or expenses, including attorney's fees and witness costs ~~that may be asserted by any person or entity, including the Consultant, arising out of or~~
the negligent performance or willful misconduct of Consultant → in connection with the activities necessary to perform those services and complete the tasks provided for herein, but excluding liabilities due to the ~~sole~~ negligence or willful misconduct of NMWD.

This indemnification is not limited in any way by any limitation on the amount or type of damages or compensation payable by or for the NMWD or its agents under workers' compensation acts, disability benefit acts or other employee benefit acts.

4. PROSECUTION OF WORK: The execution of this agreement shall constitute the Consultant's authority to proceed immediately with the performance of this contract. Performance of the services hereunder shall be completed by _____, provided, however, that if the performance is delayed by earthquake, flood, high water or other Act of God or by strike, lockout or similar labor disturbance, the time for the Consultant's performance of this contract shall be extended by a number of days equal to the number of days the Consultant has been delayed.

5. METHOD AND PLACE OF GIVING NOTICE, SUBMITTING BILLS AND MAKING PAYMENTS: All notices, bills and payment shall be made in writing and may be given by personal delivery or by mail. Notices, bills and payments sent by mail should be addressed as follows:

North Marin Water District
P.O. Box 146
Novato, CA 94948
Attention:

Consultant:

and when so addressed, shall be deemed given upon deposit in the United States Mail, postage prepaid. In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills and payments are to be given by giving notice pursuant to this paragraph.

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AGREEMENT FOR CONSULTING SERVICES

The following is an agreement between **North Marin Water District**, hereinafter "**NMWD**", and **ASSOCIATED RIGHT OF WAY SERVICES, INC.**, hereinafter, "**Consultant**".

WHEREAS, Consultant is a duly qualified consulting firm, experienced in right of way real estate services,

WHEREAS, in the judgment of the Board of Directors of the NMWD, it is necessary and desirable to employ the services of the Consultant to provide miscellaneous right of way services.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, the parties hereto agree as follows:

PART A -- SPECIFIC PROVISIONS:

1. DESCRIPTION OF SERVICES AND PAYMENT: Except as modified in this agreement, the services to be provided and the payment schedule are:

- a. Specific work scope tasks, schedules and estimate of services cost shall be discussed, agreed upon and documented between NMWD and the Consultant prior to beginning any work under this agreement.
- b. The fee and fee payment for such work shall be as stipulated under the fee schedule included in Exhibit A of this agreement. Agreement cost shall not exceed \$25,000 in total without additional Board of Directors' authorization.

PART B -- GENERAL PROVISIONS

1. ASSIGNMENT/DELEGATION: Except as above, neither party hereto shall assign, sublet or transfer any interest in or duty under this agreement without written consent of the other, and no assignment shall be of any force or effect whatsoever unless and until the other party shall have so consented.

2. STATUS OF CONSULTANT: The parties intend that the Consultant, in performing the services hereinafter specified, shall act as an independent contractor and shall have the control of the work and the manner in which it is performed. The Consultant is not to be considered an agent or employee of NMWD, and is not entitled to participate in any pension plan, insurance, bonus or similar benefits NMWD provides its employees.

3. INDEMNIFICATION: NMWD is relying on the professional ability and training of the Consultant as a material inducement to enter into this agreement. The Consultant hereby warrants that all its work will be performed in accordance with generally accepted professional practices and standards, as well as the requirements of applicable federal, state and local laws, it being understood that neither acceptance of the Consultant's work by NMWD nor Consultant's failure to perform shall operate as a waiver or release.

- a. With respect to design professional services provided under this agreement, Consultant shall assume the defense of and defend NMWD, its directors, officers, agents, and employees in any action at law or in equity to the extent that liability is claimed or alleged to arise out of, pertain to, or relate to, either directly or indirectly, the intentional or willful misconduct, recklessness, or negligent act, error, or omission of Consultant (or any person or organization for whom Consultant is legally liable) in the performance of the activities necessary to perform the services for District and complete the task provided for herein. In addition, Consultant shall indemnify, hold harmless, and release NMWD, its directors, officers, agents, and employees from and against any and all actions, claims, damages, disabilities or expenses, including attorney's fees and witness costs, that may be asserted by any person or entity including the Consultant, to the extent arising out of, pertaining to, or relating to, the negligent acts, errors or omissions, recklessness, or intentional or willful misconduct of the Consultant (or any consultant or subcontractor of Consultant) in connection with the activities necessary to perform the services and complete the task provided for herein, but excluding liabilities due to the sole negligence or willful misconduct of NMWD.
- b. With respect to all services other than design professional services provided under this agreement, Consultant shall indemnify, hold harmless, release and defend NMWD, its agents and employees from and against any and all actions, claims, damages, disabilities or expenses, including attorney's fees and witness costs that may be asserted by any person or entity, including the Consultant, arising out of or in connection with the activities necessary to perform those services and complete the tasks provided for herein, but excluding liabilities due to the sole negligence or willful misconduct of NMWD.

This indemnification is not limited in any way by any limitation on the amount or type of damages or compensation payable by or for the NMWD or its agents under workers' compensation acts, disability benefit acts or other employee benefit acts.

4. PROSECUTION OF WORK: The execution of this agreement shall constitute the Consultant's authority to proceed immediately with the performance of this contract. Performance of the services hereunder shall be completed by December 31, 2020, provided, however, that if the performance is delayed by earthquake, flood, high water or other Act of God or by strike, lockout or similar labor disturbance, the time for the Consultant's performance of this contract shall be extended by a number of days equal to the number of days the Consultant has been delayed.

5. METHOD AND PLACE OF GIVING NOTICE, SUBMITTING BILLS AND MAKING PAYMENTS: All notices, bills and payment shall be made in writing and may be given by personal delivery or by mail. Notices, bills and payments sent by mail should be addressed as follows:

North Marin Water District
P.O. Box 146
Novato, CA 94948
Attention: Drew McIntyre

Consultant:
Associated Right of Way Services, Inc.
2300 Contra Costa Blvd., Suite 525
Pleasant Hill, CA 94523
Attention: Larry Castellanos

and when so addressed, shall be deemed given upon deposit in the United States Mail, postage prepaid. In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills and payments are to be given by giving notice pursuant to this paragraph.

6. MERGER: This writing is intended both as the final expression of the agreement between the parties hereto with respect to the included terms of the agreement, pursuant to California Code of Civil Procedure Section 1856 and as a complete and exclusive statement of the terms of the agreement. No modification of this agreement shall be effective unless and until such modification is evidenced by a writing signed by both parties.

7. SEVERABILITY: Each provision of this agreement is intended to be severable. If any term of any provision shall be determined by a court of competent jurisdiction to be illegal or invalid for any reason whatsoever, such provision shall be severed from this agreement and shall not affect the validity of the remainder of the agreement.

8. TERMINATION: At any time and without cause the NMWD shall have the right in its sole discretion, to terminate this agreement by giving written notice to the Consultant. In the event of such termination, NMWD shall pay the Consultant for services rendered to such date.

9. TRANSFER OF RIGHTS/OWNERSHIP OF DATA: The Consultant assigns to NMWD all rights throughout the work in perpetuity in the nature of copyright, trademark, patent, and right to ideas, in and to all versions of any plans and specifications, reports and document now or later prepared by the Consultant in connection with this contract.

The Consultant agrees to take such actions as are necessary to protect the rights assigned to NMWD in this agreement, and to refrain from taking any action which would impair those rights. The Consultant's responsibilities under this contract will include, but not be limited to, placing proper notice of copyright on all versions of any plans and specifications, reports and documents as NMWD may direct, and refraining from disclosing any versions of the reports and documents to any third party without first obtaining written permission of NMWD. The Consultant will not use, or permit another to use, any plans and specifications, reports and document in connection with this or any other project without first obtaining written permission of NMWD.

All materials resulting from the efforts of NMWD and/or the Consultant in connection with this project, including documents, reports, calculations, maps, photographs, computer programs, computer printouts, digital data, notes and any other pertinent data are the exclusive property of NMWD. Re-use of these materials by the Consultant in any manner other than in conjunction with activities authorized by NMWD is prohibited without written permission of NMWD.

Consultant shall deliver requested materials to NMWD in electronic format including but not limited to engineering calculations, plans (AutoCad, current edition) and specifications (MS Word, current edition).

10. COST DISCLOSURE: In accordance with Government Code Section 7550, the Consultant agrees to state in a separate portion of any report provided NMWD, the numbers and amounts of all contracts and subcontractors relating to the preparation of the report.

11. NONDISCRIMINATION: The Consultant shall comply with all applicable federal, state and local laws, rules and regulations in regard to nondiscrimination in employment because of race, color, ancestry, national origin, religion, sex, marital status, age, medical condition or physical handicap.

12. EXTRA (CHANGED) WORK: Extra work may be required. The Consultant shall not proceed nor be entitled to reimbursement for extra work unless it has been authorized, in writing, in advance, by NMWD. The Consultant shall inform the District as soon as it determines work beyond the scope of this agreement may be necessary and/or that the work under this agreement cannot be completed for the amount specified in this agreement. Said review shall occur before consultant incurs 75% of the total fee approved for any phase of the work. Failure to notify the District shall constitute waiver of the Consultant's right to reimbursement.

13. CONFLICT OF INTEREST: The Consultant covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its services hereunder. The Consultant further covenants that in the performance of this contract no person having any such interest shall be employed.

14. INSURANCE REQUIREMENTS FOR CONSULTANTS

Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the consultant, his agents, representatives, employees or subcontractors.

Minimum Scope of Insurance

Coverage shall be at least as broad as:

1. Commercial General Liability coverage
2. Automobile Liability
3. Workers' Compensation insurance as required by the State of California.
4. Professional Liability insurance appropriate to the consultant's profession. Architects' and engineers' coverage is to be endorsed to include contractual liability.

Minimum Limits of Insurance

Consultant shall maintain limits no less than:

1. General Liability (including operations, products and completed operations.): **\$1,000,000** per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this project/location or the general aggregate limit shall be twice the required occurrence limit.
2. Automobile Liability: **\$1,000,000** per accident for bodily injury and property damage.
3. Workers' Compensation Insurance: as required by the State of California.
4. Professional Liability, **\$1,000,000** per occurrence.

Verification of Coverage

Consultant shall furnish the District with original certificates and amendatory endorsements effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the District before work commences. The District reserves the right to require at any time complete and certified copies of all required insurance policies, including endorsements affecting the coverage required by these specifications.

Subcontractors

Consultant shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor to the District for review and approval. All coverage for subcontractors shall be subject to all of the requirements stated herein.

Self-Insured Retentions

Any self-insured retentions must be declared to and approved by the District. At the option of the District, either: the insurer shall reduce or eliminate such self-insured retentions as respects the District, its officers, officials, employees and volunteers; or the Consultant shall provide a financial guarantee satisfactory to the District (such as a surety bond) guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

Other Insurance Provisions

The commercial general liability and automobile liability policies are to contain, or be endorsed to contain, the following provisions:

1. The District, its officers, officials, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Consultant.
2. For any claims related to this project, the Consultant's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the District, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.
3. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.

Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII.

15. DISPUTE RESOLUTION: Any dispute or claim in law or equity between District and Consultant arising out of this agreement, if not resolved by informal negotiation between the parties, shall be mediated by referring it to the nearest office of Judicial Arbitration and Mediation Services, Inc. (JAMS) for mediation. Mediation shall consist of an informal, non-binding conference or conferences between the parties and the judge-mediator jointly, then in separate caucuses wherein the judge will seek to guide the parties to a resolution of the case. If the parties cannot agree to mutually acceptable member from the JAMS panel of retired judges, a list and resumes of available mediators numbering one more than there are parties will be sent to the parties, each of whom will strike one name leaving the remaining as the mediator. If more than one name remains, JAMS arbitrations administrator will choose a mediator from the remaining names. The mediation process shall continue until the case is resolved or until such time as the mediator makes a finding that there is no possibility of resolution.

At the sole election of the District, any dispute or claim in law or equity between District and Consultant arising out of this agreement which is not settled through mediation shall be decided by neutral binding arbitration and not by court action, except as provided by California law for judicial review of arbitration proceedings. The arbitration shall be conducted in accordance with the rules of Judicial Arbitration Mediation Services, Inc. (JAMS). The parties to an arbitration may agree in writing to use different rules and/or arbitrators.

16. BILLING AND DOCUMENTATION: The Consultant shall invoice NMWD for work performed on a monthly basis and shall include a summary of work for which payment is requested. The invoice shall state the authorized contract limit, the amount of invoice and total amount billed to date. The summary shall include time and hourly rate of each individual, a narrative description of work accomplished, and an estimate of work completed to date.

17. REASONABLE ASSURANCES: Each party to this agreement undertakes the obligation that the other's expectation of receiving due performance will not be impaired. When reasonable grounds for insecurity arise, with respect to performance of either party, the other may, in writing, demand adequate assurance of due performance and until the requesting party receives such assurance may, if commercially reasonable, suspend any performance for which the agreed return has not been received. "Commercially reasonable" includes not only the conduct of the party with respect to performance under this agreement but also conduct with respect to other agreements with parties to this agreement or others. After receipt of a justified demand, failure to provide within a reasonable time, not to exceed 30 days, such assurance of due performance as is adequate under the circumstances of the particular case is a repudiation of this agreement. Acceptance of any improper delivery, service, or payment does not prejudice the aggrieved party's right to demand adequate assurance of future performance.

18. PREVAILING WAGE REQUIREMENTS: Prevailing Wage Rates apply to all Consultant personnel performing work under the Agreement for which wage determinations have been made by the Director of Industrial Relations pursuant to California Labor Code Sections 1770– 1782,. Consultant shall comply with all applicable prevailing wage labor code requirements.

**NORTH MARIN WATER DISTRICT
"NMWD"**

Dated: _____

Drew McIntyre, General Manager

**ASSOCIATED RIGHT OF WAY SERVICES, INC.
"CONSULTANT"**

Dated: _____

Larry Castellanos, Vice President

FEE SCHEDULE



AR/WS FEE SCHEDULE 2019

CONSULTING CATEGORY	HOURLY RATE
Principal Consultant	\$225.00
Managing Consultant	\$195.00
Consultant III	\$150.00
Consultant II	\$130.00
Consultant I	\$115.00
Right of Way Technician	\$80.00
Administrative Support	\$65.00
Appraisal Reports	Lump Sum
Appraiser III (MAI) (Hourly)	\$225.00
Appraiser II (Hourly)	\$200.00
Appraiser I (Hourly)	\$175.00
Subcontractors	Cost + 10%
Depositions, Court Appearances, Arbitrations / Mediations, Hearings, and Testimony (including preparation)	\$300.00

10

MEMORANDUM

To: Board of Directors February 1, 2019

From: Rocky Vogler Chief Engineer *RV*

Subject: Approve – On-Call Construction and Repair Services Contracts with Team Ghilotti and Ghilotti Construction

R:\NON JOB No ISSUES\On-Call\OnCall Services Approve Contract Award BOD Memo 2-5-19.doc

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

FINANCIAL IMPACT: \$200,000 each for a total amount of \$400,000

Background

On April 7, 2015, the Board authorized staff to proceed with solicitation of a Request for Proposal for on-call construction services in order 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. On February 2, 2016, the Board authorized the General Manager to execute agreements with Team Ghilotti and Ghilotti Construction for the purpose of providing On-Call Construction and Repair Services. The District's traditional advertise-bid-award procedure for hiring contractors continues to be utilized for most projects.

The original agreement with each of the construction firms provided an initial term through June 30, 2017, and also reserved the right for the District to extend the agreement for two (2) one-year contract extensions. The District is currently on the second annual extension with both firms, with agreements slated to expire June 2019. Since inception of these agreements, the following projects have been completed:

- Stafford Dam Spillway Repairs – 2016 (Team Ghilotti)
- Zone 1 Pressure Improvements (Ghilotti Construction)
- Stafford Dam Piezo Wellhead Repair (Ghilotti Construction)
- Stafford Dam Apron Repairs (Ghilotti Construction)
- Stafford Dam Spillway Repairs – 2017 (Ghilotti Construction)
- Center Road Pipeline Replacement (Ghilotti Construction)

Current Agreement

As in the past, 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 minimizes District administrative costs associated with developing multiple construction contracts and allows the smaller Capital Improvement Projects (CIPs) to be implemented more quickly and cost effectively.

The new agreement as proposed will include an initial three-year term, with the option for the District to extend the term for up to two (2) subsequent one-year periods.

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 FY19 approved projects that may be utilized for construction and repair services in the Novato Water System include, but are not limited to:

1. Montego Keys Pipe Replacement - \$140,000
2. Country Lane 2" Plastic - \$150,000
3. Automate Zone Valve (Slowdown Court) - \$100,000
4. Other Main Replacements - \$160,000
5. DCA Repair/Replacement - \$60,000
6. Relocations to Sync w/ City & County CIP - \$70,000

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 \$200,000 each.

11

MEMORANDUM

To: Board of Directors

February 1, 2019

From: Pablo Ramudo, Water Quality Supervisor *PR*Subject: Approve: Consulting Services Agreement with SRT Consultants
(Stafford Lake Watershed Sanitary Survey)

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RECOMMENDED ACTION: Authorize the General Manager to execute a Consulting Services Agreement with SRT Consultants**FINANCIAL IMPACT:** Not to exceed \$36,300
(Funded from FY19 Special Studies Budget)

California regulations for potable water systems which use surface water as a source require that the system conduct periodic updates to their Watershed Sanitary Surveys. The last update to NMWD's Stafford Lake Watershed Sanitary Survey was completed in 2002. SRT Consultants (SRT) proposed scope of work is attached. The not-to exceed fee of \$36,300 would be paid from unspent funds in the FY19 Special Studies Budget of \$335,000.

The sanitary survey contains several elements including:

1. A description of the geology and geography, land use, hydrology, and present facilities.
2. A survey for potential contaminants that takes into account all activities on each parcel within the watershed which includes conducting site visits and interviews with landowners.
3. A review of the monitoring programs and resulting data from the watershed and water source.
4. A review of the 2003 watershed management plan.

SRT Consultants are well qualified at conducting sanitary surveys and formulating management plans. Additionally, SRT is already familiar with Stafford Lake and some of the watershed activities which contribute to water quality issues in the raw water. SRT previously produced the district's Taste and Odor Control Strategy report and did some preliminary work towards the Watershed Sanitary Survey in 2016. This contract would authorize SRT Consultants to conduct an update to the district's 2002 Sanitary Survey with a goal of completion by June 2019.

RECOMMENDATION

That the Board authorize the General Manager to execute a Consulting Services Agreement with SRT Consultants, for an amount not to exceed \$36,300.



Water Resources Engineers

90 New Montgomery St. #905
San Francisco, CA 94105
415 776 5800 tel
415 776 5200 fax
www.SRTconsultants.com

January 30, 2019

Pablo Ramudo
Water Quality Supervisor
North Marin Water District
999 Rush Creek Place
Novato, CA 94945

SUBJECT: Stafford Lake Watershed Sanitary Survey - SRT Consultants Proposal

Dear Mr. Ramudo,

SRT Consultants (SRT) is pleased to present for your consideration this proposal for the development of an updated Stafford Lake Watershed Sanitary Survey. This proposal follows on a previous agreement between the North Marin Water District (NMWD or District) and SRT, as proposed in the March 18, 2016 letter from SRT to the District: North Marin Water District 2016 Watershed Sanitary Survey - SRT Consultants Proposal. Unforeseen circumstances resulted in a delay of the original project. SRT understands that NMWD wishes to proceed with an update to the 2002 Stafford Watershed Survey, which is a slightly different scope of work than what was originally planned in 2016.

We are interested, qualified, and available to perform the forthcoming tasks and guarantee the availability of our key and support staff for the entire duration of this contract.

1. Project Background and Understanding

The District requested SRT to provide a scope of work for the development of a watershed sanitary survey (WSS) for the Novato Creek and the Stafford Lake Water Treatment Plant (SLWTP) Watershed. The California Surface Water Treatment Rule (SWTR), Title 22, Article 7, §64665 of the California Code of Regulations, requires every public water system (PWS) using surface water to complete a watershed sanitary survey at least every five years. The Code states:

§64665(c) The survey and report shall include physical and hydrogeological description of the watershed, a summary of source water quality monitoring data, a description of activities and sources of contamination, a description of any significant changes that have

occurred since the last survey which could affect the quality of the source water, a description of watershed control and management practices, an evaluation of the system's ability to meet requirements of this chapter, and recommendations for corrective actions.

This proposal outlines the services that SRT offers the District for the purpose of developing a WSS as per the above referenced regulation, and specifically to update the existing 2002 Stafford Watershed Survey.

2. Technical Approach

This technical approach outlines the project tasks necessary as a minimum to accomplish the scope of work. In general, a review of background data, meetings with key District staff to collect information required for the WSS, development of draft and final WSS documents, and response to regulatory comments or requested actions are the key tasks proposed by SRT.

Task 1 - Kickoff Meeting

An initial project kick off meeting is essential to confirm the project understanding, identify the project stakeholders, and establish the normal course of communications and submittal review. Since some relevant information collection has already been conducted for this project, SRT and the District will also review work completed to date at the kickoff meeting. SRT and the District will agree on the schedule of completion for subsequent tasks during the kick-off meeting. SRT will coordinate to implement a kick-off meeting at a location suitable to meet with key project participants.

SRT Deliverables

SRT will provide an agenda and meeting minutes by e-mail for the kick-off meeting to the District staff for review and approval within one (1) week of the meeting.

District Deliverables

District will review and approve the minutes of the kick-off meeting within one (1) week.

Task 2 - Information Review and Data Gathering

SRT will review the 2002 Stafford Watershed Survey, its appendices, and other information provided by the District. SRT will develop a list of additional information required for the WSS update, and will collect this information from the District or in Task 3 during site inspections. This information is expected to include GIS data, water quality sampling results, parcel ownership data, and watershed management information.

SRT Deliverables

Information gathered by SRT will be collected in an electronic file for this project and will be available to the District and its stakeholders.

District Deliverables

The District will provide access to the requested, available materials and will acknowledge the accuracy and completeness of the initial project information.

Task 3 - Site Visits and Interviews

Updating the 2002 Stafford Watershed Survey will involve gathering information directly from landowners and land managers in the watershed. SRT will develop a questionnaire for these parties and will visit properties to observe land management and runoff management practices. SRT is sensitive to the District's relationship with these parties and will work closely with the District to develop the questionnaires and conduct the site visits.

SRT Deliverables

Information gathered by SRT will be collected in an electronic file for this project and will be available to the District and its stakeholders.

District Deliverables

The District will participate in the development of the landowner and land manager questionnaires, provide a list of landowners in the watershed, including assessor parcel numbers (APNs) and available contact information, and participate in site visits, if necessary.

Task 4 - Update Watershed Sanitary Survey

SRT will update the content of the 2002 Stafford Watershed Survey to meet the current California Code of Regulations Surface Water Treatment Rule, Title 22, Article 7, §64665. These requirements include:

- physical and hydrogeological description of the watershed
- summary of source water quality monitoring data
- description of activities and sources of contamination
- description of any significant changes that have occurred since the last survey which could affect the quality of the source water
- description of watershed control and management practices
- evaluation of the system's ability to meet requirements of the Surface Water Treatment Rule
- recommendations for corrective actions

The draft WSS will be submitted to the District and required regulatory agencies for review.

SRT Deliverables

SRT will provide a draft WSS report by e-mail to the District staff for review and approval. SRT will address the District's comments and will provide a revised draft WSS for regulatory submittal within two (2) weeks of receiving District comments.

District Deliverables

The District will review and approve the draft and revised WSS within two (2) weeks of receipt.

Task 5 - Address Review Comments and Finalize Watershed Sanitary Survey

After the draft WSS is submitted to regulatory agencies, the District will receive a letter listing deficiencies and/or recommendations that must be addressed within a specified time frame. SRT will address these response letters and requests, will identify corrective actions, timelines, and alternatives, and will accordingly prepare the final WSS. SRT assumes that the District's and other land owners' management practices are largely in compliance with state requirements and has allocated budget to address regulators' comments on the content of the report. Should the comments focus more heavily on issues with watershed management practices, SRT will work with the District to develop a more detailed scope of work and budget to respond accordingly and develop a plan to improve deficiencies.

SRT Deliverables

SRT will provide draft responses to regulatory agencies and a final WSS report by e-mail to the District staff for review and approval within four (4) weeks of receipt of regulatory response letters. SRT will address the District's comments and will provide a revised final WSS for regulatory submittal within two (2) weeks of receiving District comments.

District Deliverables

The District will review and approve the final WSS within two (2) weeks of receipt.

3. Project Assumptions

The following assumptions were made regarding project responsibilities, staff engagement, and project deliverables:

- District staff will be available to provide feedback and direction to SRT regarding water system details, water quality sampling practices, watershed sanitary sources, and managerial documentation.
- The District will provide historical water quality data and past Watershed Sanitary Surveys completed for the District.
- The District will provide information about property owners within the watershed, and assist in gaining SRT access to properties for onsite inspection.
- The District will provide one set of consolidated comments to each deliverable.

- The District's watershed management practices are largely in compliance with state requirements and therefore, comments from regulators on the draft WSS will be primarily related to the information presented in the draft report.

4. Schedule

The schedule of these tasks is variable and dependent upon the District's needs. SRT is available to start the work immediately upon receiving Notice to Proceed. SRT and the District will agree on a project schedule at the kick-off meeting.

5. Fee Estimate

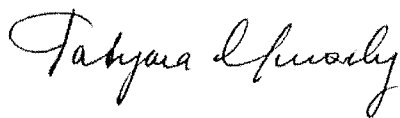
SRT will complete the work described above for an estimated not-to-exceed budget of \$36,300. A task by task breakdown of effort and SRT's proposed hourly rates are provided below.

Task 1: Kickoff Meeting	\$1,600
Task 2: Information Review and Data Gathering	\$8,200
Task 3: Site Visits and Interviews	\$5,500
Task 4: Update WSS	\$15,000
Task 5: Address Review Comments and Finalize WSS	\$5,000
Other Direct Costs (mileage, printing, etc)	\$1,000
Total Fee	\$36,300

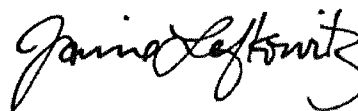
Role	Rate
Principal	\$220
Project Manager/Senior Engineer	\$180
Project Engineer	\$130

SRT Consultants feels strongly qualified to complete this important work for the District and is looking forward to being of service on this assignment. Please contact us at 415-776-5800, extension 301, with any questions.

Sincerely,



Tanya Yurovsky, PE



Jamie Lefkowitz, PE

Principal

Project Manager

12

MEMORANDUM

To: Board of Directors February 1, 2019

From: Drew McIntyre, General Manager 

Re: Amend Consulting Engineering Services Agreement – Michael Baker International

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RECOMMENDED ACTION: Authorize General Manager to Amend the Consulting Engineering Services Agreement with Michael Baker International

FINANCIAL IMPACT: \$17,800 plus \$3,200 contingency (No FY19 Ops Budget Augmentation is required)

The purpose of this memo is to request an amendment to the Consulting Engineering Services Agreement with Michael Baker International (MBI) to prepare an additional inundation map for the Stafford (aka Novato Creek) Dam Weir Spillway failure scenario. This additional failure analysis is being requested by the Division of Safety of Dams (DSOD) in their correspondence dated January 3, 2019 (Attachment 1). MBI is a nationwide civil engineering consulting firm specializing in dam safety with California offices in Oakland and Santa Ana. On March 3, 2015, the Board approved an Agreement with MBI and established an initial budget of \$90,000, plus a \$9,000 contingency.

Primary work performed by MBI under the Agreement included development of a Stafford Dam Emergency Action Plan with the following elements:

- Notification flowchart
- Emergency detection, evaluation and classification
- Responsibilities
- Preparedness
- Inundation maps, and
- Appendices

The Board accepted the Final EAP in October 2015 and it was subsequently submitted to both DSOD and the California Office of Emergency Services (Cal OES) on October 22, 2015 (Attachment 2). No comments have been received on the 2015 report prior to the recent DSOD January 3, 2019 letter.

The original 2015 MBI contract was for \$99,000 (including contingency) and final MBI costs totaled \$90,000. An additional \$21,000 (~\$17,800 scope of work plus a contingency of \$3,200) is being requested to provide MBI with the funds necessary to address the FY19 work requested by DSOD. MBI's proposal is provided in Attachment 3 and costs will be based on actual expenditures with a not-to-exceed limit of \$17,800. It is estimated that total FY19 costs for this work (MBI billings plus internal staff time) will not exceed \$25,000.

The table below provides the breakdown.

Original MBI Contract Budget in FY16	Amount MBI Expended in FY16	Total Project Costs in FY16 (MBI plus staff)	Additional Budget to complete DSOD requested work in FY19* (MBI)	Additional Staff Budget for FY19 (NMWD)	Total Additional FY19 Budget Required
\$99,000	\$90,000	\$ 97,000	\$21,000	\$4,000	\$25,000

* included \$3,200 contingency

FINANCIAL IMPACT

The cost for this work will be funded by the FY19 Novato Operations Budget. No budget augmentation is required since the FY19 Budgeted Stafford Lake Water Rights Update project (\$50,000) is not ready to proceed at this time.

RECOMMENDATION

That the Board authorize the General Manager to amend the Consulting Engineering Services Agreement between NMWD and Michael Baker International and increase the budget by \$17,800 with a contingency of \$3,200.

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

**RECEIVED****JAN 10 2019**

JAN 03 2019

North Marin Water District

North Marin County Water District
Post Office Box 146
Novato, California 94948

Attention: Mr. Drew MacIntyre, Chief Engineer

Novato Creek Dam, No. 88
Marin County

Dear Mr. MacIntyre:

This is in reply to your electronic email sent to us on June 28, 2018, enclosing the inundation map for Novato Creek Dam. This submittal was made in response to the requirements of Division 3, Part 1, Chapter 4, section 6161(a) of the California Water Code.

The Division of Safety of Dams is reviewing inundation maps based on the priorities specified in section 6161(d) of the CA Water Code. We will notify you as to our progress in reviewing your submitted information or if additional information is required.

In addition, section 6161(a) of the CA Water Code requires the preparation of inundation maps for a dam's critical appurtenant structures as defined in section 6002.5 of the CA Water Code. We have identified Novato Creek Dam has the following critical appurtenant structures:

1. Ogee Spillway

California Governor's Emergency Services (Cal OES) requires all inundation maps for a dam system to be approved and incorporated into the EAP to be considered complete. By February 1, 2018, please submit the additional map for the spillway or provide a plan and schedule for our review and approval.

Your upcoming submittal must include separate inundation maps associated with each critical appurtenant structure identified. All new maps must be prepared in accordance with Title 23, Division 2, Chapter 1, Article 6 of the California Code of Regulations.

In addition, upon our approval, your inundation map(s) will be made publicly available as required by section 6161(c) of the CA Water Code.

Mr. Drew MacIntyre
JAN 03 2019
Page 2

If you have any questions or need additional information, you may contact Design Engineer Blake Dolve at (916) 227- 6540 or me at (916) 227-6742.
Sincerely,

A handwritten signature in black ink, appearing to read 'A. Be', with a horizontal line extending from the end.

Ariya Balakrishnan, Chief
Re-evaluation Engineering Branch
Division of Safety of Dams

cc: Mr. Jose Lara, Chief
Dam Safety Planning Division
California Governor's Office of Emergency Services
3650 Schriever Avenue
Mather, California 95655



**NORTH MARIN
WATER DISTRICT**

October 22, 2015

999 Rush Creek Place
P.O. Box 146
Novato, CA 94948

PHONE
415.897.4133

FAX
415.892.8043

EMAIL
info@nmwd.com

WEB
www.nmwd.com

Jose Lara
Program Manager
California Office of Emergency Services
3650 Schriever Ave.
Mather, CA 95655

RE: Emergency Action Plans for High Hazard Potential Dams – Final Report
NMWD File: DSOD
NMWD Job File 1 7140.00

Dear Mr. Lara:

The North Marin Water District (NMWD) is pleased to submit the Final Emergency Action Plan that was approved by our Board of Directors on October 20, 2015. An updated milestone schedule is provided as follows:

DATE	DESCRIPTION	STATUS
FY2013-14	Approve \$100,000 budget for preparation of EAP	Completed
FY2013-14	Develop Requests for Proposal	Completed
FY2013-14	Solicit RFPs	Completed
FY2014-15	Prepare EAP	Completed
FY2015-16	Approve final EAP	Completed

If you have any questions or need additional information please contact me at your convenience at 1-415-761-8912.

Sincerely,



Drew McIntyre
Chief Engineer

Enclosure

cc: Michael Waggoner, Chief, Field Eng. Branch
David Gutierrez, Chief
Division of Safety of Dams
2200 X Street, Suite 200
Sacramento, CA 95818

DM:edm
R:\NON JOB No ISSUES\Stafford Dam\Ltr to DSOD re Final EAP 10-22-15.docx

DIRECTORS: JACK BAKER • RICK FRAITES • STEPHEN PETTERLE • DENNIS RODONI • JOHN C. SCHOONOVER
OFFICERS: CHRIS DEGABRIELE, General Manager • KATIE YOUNG, Secretary • DAVID L. BENTLEY, Auditor-Controller • DREW MCINTYRE, Chief Engineer

ATTACHMENT 2

January 23, 2019

Mr. Drew McIntyre
General Manager
North Marin Water District
999 Rush Creek Pl,
Novato, CA 94945

Subject: Novato Creek Dam – Dam Inundation Mapping Analysis

Dear Mr. McIntyre:

Michael Baker International has prepared this contract proposal to address the review comments from CA DWR Division of Safety of Dams. This proposal includes updating the technical analysis and maps to satisfy the review comments.

Attached are Exhibits "A", "B" and "C" that define our proposed work efforts, fees and schedule associated with these tasks. Additional services, beyond those that are specified, can be completed as an amendment to this agreement.

We appreciate the opportunity to submit this proposal and look forward on continuing to provide professional services on this interesting and challenging project. Should you have any questions, please do not hesitate to contact me at (949) 855-7006.

Sincerely,



John Moynier, CEP, CFM
Vice President
916-660-6683 (cell)

cc: Mujahid Chandoo, Michael Baker International

“Exhibit A”

Scope of Services

Novato Creek Dam - Dam Inundation Mapping Analysis

January 23, 2019

Michael Baker International (Michael Baker) shall update the Novato Creek Dam Inundation study to address DSOD review comments. This proposal includes updating the technical analysis and maps to satisfy the review comments. The proposal includes an optional task for EAP updating (if necessary).

Task 1 – Inundation Mapping

Task 1.1 – Dam Break and Inundation Mapping. Michael Baker will prepare an additional dam break inundation for the Dam based on the failure scenario of the critical appurtenant structure i.e. spillway system. The BREACH software will be used to obtain the outflow hydrograph based on the critical appurtenant structure. The inundation study will evaluate the movement of the flood wave through the downstream channels and urban overflow areas taking into account various routing features including road/bridge crossings, overpass, blockages, etc. Flood routing shall be performed in accordance with the California Code of Regulations, Title 19, Division 2, Chapter 2, Subchapter 4, “Dam Inundation Mapping Procedures.” The analysis will be updated using the existing Flo-2d model prepared and submitted previously. This task will include addressing the DSOD comments submitted on December 21, 2018 and January 3, 2019.

***Deliverables:** Inundation Maps, GIS Shapefiles for the Inundation Boundary, Max Depth, Arrival Time, Velocity*

Task 1.2 – Dam Inundation Map Processing and Coordination. Michael Baker will provide engineering services for the processing and approval of the Dam Inundation Map. Processing will include correspondences with DSOD and NMWD staff. Additional Information Requests from DSOD will be addressed during the review process that may require additional technical analysis to be submitted to satisfy the reviewer questions during this process. This work item is a budget amount since it is difficult to estimate the type or nature of additional information requests that DSOD may initiate, since each project is generally unique in this respect. An amount of 8 hours has been allocated for this work item for addressing review comments and approval of the studies.

Task 2: Emergency Action Plan (EAP) (OPTIONAL)

Michael Baker will update the previously prepared EAP by adhering to FEMA 64, Federal Guidelines for Dam Safety: EAP for Dam Owners (2013). As a starting point for consistent format, Michael Baker will use the latest California DSOD Sample EAP as a template for the dam. In addition, Michael Baker will examine FEMA’s Comprehensive Preparedness Guide (CPG) 101, Guide to Developing Emergency Operations Plans for applicability in the planning process and design of the EAP. CPG-101 provides guidelines on developing emergency plans and promotes a mutual understanding of the fundamentals of risk-informed planning and decision making to help planners examine a hazard or threat (dam failure) and produce an integrated, coordinated, and synchronized plan. The EAP will also be consistent with the National Incident Management System (NIMS), the California

Standardized Emergency Management System (SEMS), and the California Emergency Services Act where applicable.

Assumptions/Constraints

This scope and fee is based on the following assumptions:

- Stage-storage and volume calculations for the existing facilities is to be based on the the Flo-2d model and/or record drawings
- No field surveying services to be provided. Hydraulic modeling for the existing features is to be based on record drawings and County provided processed LiDAR/DEM.
- Application and processing fees are to be paid by the NMWD
- EAP document will only require the addition of the new maps. No additional effort to update the EAP document.

“Exhibit B”
Compensation
Novato Creek Dam - Dam Inundation Mapping Analysis
January 23, 2019

Consultant agrees to perform the Scope of Services as described in Exhibit “A”. Client agrees to compensate Consultant for such services as follows:

TASK	DESCRIPTION	Hour	Avg Hr. Rate	FEE
1.1	Dam Break and Inundation Mapping	54	\$189.00	\$10,212
1.2	Dam inundation Map Processing and Coordination	8	\$194.00	\$1,552
2.0	Emergency Action Plan (Optional)	40	\$148.50	\$5,940
	Total Professional Fee			\$17,316
	Estimated Reimbursable Printing			\$500
	Total Fee			\$17,816

Progress billings will be sent to Client on a Monthly Basis for the time and materials spent performing the work, in accordance with the attached Hourly Rate Schedule, plus reimbursable for the direct cost of printing, deliveries, fees, etc. advanced by Consultant. At such time that consultant reaches 75% of the initial budget, we will meet with you to identify if an additional budget will be required for future work efforts.

"Exhibit C"

Schedule

Task	Start - Date Completion
NTP	February 01, 2019
Dam Break and Inundation Mapping	February 04, 2019 - February 22, 2019
Dam inundation Map Processing and Coordination	February 22, 2019 – April 31, 2019 (or DSOD Approval)

13

MEMORANDUM

To: Board of Directors
 From: Drew McIntyre, General Manager
 Subject: Marin Country Club Recycled Water Service Agreement
t:\gm\agreements\recycled water\mcc rw bod memo 02-01-2019.doc

February 1, 2019

RECOMMENDED ACTION:

1. Board Approve Amendment No. 2 to the MCC Recycled Water Service Agreement
2. Board Authorize General Manager to Execute Assurant (AMLIC) Subordination Agreement
3. Board Authorize General Manager to Execute of the NMWD-MCC Subordinated Deed of Trust

FINANCIAL IMPACT:

None at this time

At the June 2, 2015 meeting, the Board approved a Recycled Water Service agreement between NMWD and Marin Country Club (MCC) for joint participation in the Recycled Water Central Service Area expansion project with the intent to construct an Ignacio Service Area Extension. This extension, identified as Alternative C in the 2014 Feasibility Update to provide recycled water to MCC, is shown on Attachment 1. At the April 18, 2017 meeting, the Board approved Amendment No. 1 to reflect various changes including an update in agreement costs and new financing terms (Attachment 2). The agreement requires execution of a subordinated Deed of Trust in the amount of \$1,695,758 naming the District as a beneficiary to serve as the performance guarantee (similar to what was done for the StoneTree Recycled Water Agreement). Execution of the Deed of Trust did not occur in 2018 due to concerns related to MCC's request for NMWD to sign a Subordination Agreement with the American Memorial Life Insurance Co. (AMLIC) who is MCC's first position lender.

Closed Sessions were held with the Board, General Manager and District legal counsel, Mr. Ari Lauer, during the June 5, 2018 and June 19, 2018 Board meetings to develop a response to MCC's May 23, 2018 letter regarding unresolved subordination issues (Attachment 3). As a result of these meeting, the District issued a counter proposal to MCC dated June 25, 2018 (Attachment 4) and MCC responded on July 17, 2018 (Attachment 5). Said MCC response was reviewed with the Board, General Manager and Mr. Lauer during closed session at the July 17, 2018 Board meeting wherein the Board agreed to issue MCC a temporary recycled water use permit for 2018 with the understanding that MCC would complete the commitments stated in their July 17, 2018 letter.

MCC has now completed the following (refer to NMWD's June 25, 2018 Counter Proposal in Attachment 4):

- Item A – MCC paid off the 10-year loan to NMWD on December 26, 2018 in the amount of \$392,623.54
- Item D - MCC has executed Amendment No. 2 to the Recycled Water Service Agreement that stipulates the District can discontinue either or both recycled water or potable water should MCC default on bi-monthly recycled water bill payments.

With the above actions complete, staff and legal counsel are now recommending moving forward with the other District acknowledged actions outlined in the District's June 25, 2018 counter proposal letter as noted below.

RECOMMENDATION

1. That the Board approve Resolution No. 19- , (Attachment 5) approving and authorizing the actions described below:

- a. Approve - Board approve Amendment No. 2 to the Marin County Country Club Recycled Water Service Agreement (Exhibit A).
- b. Approve – Board authorize General Manager to execute Assurant (AMLIC) Subordination Agreement (Exhibit B)
- c. Approve – Board authorize General Manager to execute NMWD-MCC Subordinated Deed of Trust (Exhibit C)

RESOLUTION NO. 19-
AUTHORIZATING EXECUTION OF
AMENDMENT NO. 2 TO
RECYCLED WATER SERVICE AGREEMENT WITH
MARIN COUNTRY CLUB, INC.; AUTHORIZING GENERAL MANAGER TO EXECUTE
SUBORDINATION AGREEMENT; AND, AUTHORIZING GENERAL MANAGER TO EXECUTE
A SUBORDINATED DEED OF TRUST

WHEREAS, At the June 2, 2015 meeting, the Board approved a Recycled Water Service agreement between NMWD and Marin Country Club Inc. (MCC) for joint participation in the Recycled Water Central Service Area expansion project with the intent to construct an Ignacio Service Area Extension; and

WHEREAS, At the April 18, 2017 meeting, the Board approved Amendment No. 1 to reflect various changes including an update in agreement costs and new financing terms; and

WHEREAS, The Agreement requires execution of a subordinated Deed of Trust naming the District as a beneficiary to serve as the performance guarantee. Execution of the Deed of Trust did not occur in 2018; and

WHEREAS, MCC paid off the 10-year loan to NMWD on December 26, 2018; and

WHEREAS, MCC has executed Amendment No. 2 to the Recycled Water Service Agreement that stipulates the District can discontinue either or both recycled water or potable water should MCC default on bi-monthly recycled water bill payments; and

WHEREAS, in recognition of the above actions, staff and legal counsel are now recommending moving forward with additional District actions as noted below.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of NORTH MARIN WATER DISTRICT that:

1. The President and Secretary of this District are hereby authorized and directed for and on behalf of this District to execute Amendment No 2 to the Recycled Water Service Agreement between this District and MARIN COUNTRY CLUB, INC., a California Corporation, providing for the installation of recycled water storage and distribution facilities to provide recycled water service for landscape irrigation to that certain real property known as MARIN COUNTRY CLUB, INC., Marin County Assessor's Parcel Number 160-040-24, NOVATO, CALIFORNIA, which is attached hereto as Exhibit A and incorporated herein as if fully set forth; and
2. The General Manager is authorized to execute the American Memorial Life Insurance Co. (AMLIC) Assurant Subordination Agreement, which is attached hereto as

Exhibit B and incorporated herein as if fully set forth; and

3. The General Manager is authorized to execute the North Marin Water District-Marine Country Club Inc. Subordinated Deed of Trust, which is attached hereto as Exhibit C and incorporated herein as if fully set forth.

* * *

I hereby certify that the foregoing is a true and complete copy of a resolution duly and regularly adopted by the Board of Directors of NORTH MARIN WATER DISTRICT at a regular meeting of said Board held on the 5th day of February 2019, by the following vote:

AYES:

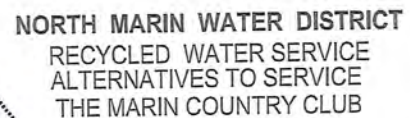
NOES:

ABSENT:

ABSTAINED:

(SEAL)

Theresa Kehoe, Secretary
North Marin Water District



MEMORANDUM

To: Board of Directors

April 14, 2017

From: Drew McIntyre, Assistant General Manager DM

Subject: Marin Country Club Recycled Water Service Agreement Amendment No. 1
t:\gm\agreements\recycled water\nmwd mcc rw agmt amend no 1.doc

RECOMMENDED ACTION: Board authorize Amendment No. 1 to the MCC Recycled Water Service Agreement

FINANCIAL IMPACT: None at this time

At the June 2, 2015 meeting, the Board approved a Recycled Water Service agreement between NMWD and Marin Country Club (MCC) for joint participation in the Recycled Water Central Service Area expansion project with the intent to construct an Ignacio Service Area Extension. This extension, identified as Alternative C in the 2014 Feasibility Update to provide recycled water to MCC, is shown on Attachment 1. The original agreement was approved based solely on estimated amounts for both construction costs and state/federal grants and loans. Now that bids have been opened and more definitive construction costs are known and agreements with state/federal agencies for grants and loans have been executed. Thus it is appropriate to amend the agreement. Amendment No. 1, provided as Attachment 2, encompasses revised agreement pages 1-4A, 1-5A, 1-6A and 1-7A. A compare/contrast version of those same pages is provided in Attachment 3 for ease of reference. The major changes are summarized as follows:

PAGE	SUMMARY OF CHANGE
1-4A	Updated construction costs, federal grants (Bureau of Reclamation) and state grants/loans (Clean Water State Revolving Fund).
1-5A	Updated MCC participation costs, added language regarding payment terms/conditions and added language regarding NMWD financing of \$430,463 at 2.8% over a ten year term. This new ten year NMWD financing is required since the 1% state loan is capped and cannot be increased;
1-6A	Updated payment terms/conditions, revised language regarding the Deed of Trust.
1-7A	Revised language regarding agreement assignment, recovery of attorney fees in the event of legal costs and agreement precedent.

This agreement amendment is the result of several discussions with MCC representatives and includes input from NMWD legal counsel.

RECOMMENDATION

Board authorize this Amendment No. 1 to the Marin County Country Club Recycled Water Service Agreement.



Marin Country Club

May 23, 2018

Drew McIntyre
General Manager
North Marin Water District
999 Rush Creek Place
Novato, CA. 94945

Mr. McIntyre,

After our meeting at Marin Country Club on May 7th - - to discuss the outstanding subordination matter with our recycled water agreement - - we've revisited your concerns about the financial commitment the water district has invested in the facility that will serve our property at 500 Country Club Drive. We believe the country club has operated in good faith on this point of difference for quite some time, and although your attorney has shared his legal opinion, we disagree with his assessment. However, in order to expedite the delivery of water to the club and ensure the needs of both parties are being met, we'd like to offer the following proposal, which we feel addresses the water district's concerns and continues to show our good faith efforts towards an amicable and sustained long-term partnership.

Marin Country Club proposes the following:

- (a) MCC will obtain a \$216,000 letter of credit from Mechanics Bank for the benefit of NMWD ("NMWD Letter of Credit"), which NMWD Letter of Credit will secure MCC's obligation to repay the \$430,463 loan from NMWD. The NMWD Letter of Credit will "burn off" on a quarterly basis in an amount equal to the principal payments made by MCC on the \$430,463 loan during such quarters.
- (b) Additionally, MCC will secure the entire NMWD Loan by the NMWD Deed of Trust and NMWD will enter into the AMLIC Subordination Agreement as originally contemplated.
- (c) At the end of 5 years the AMLIC Loan will have been repaid, the NMWD Letter of Credit will have burned off entirely, and the NMWD Deed of Trust will no longer be subordinate to the AMLIC Deed of Trust, but will still secure the outstanding principal balance of the NMWD Loan. Additionally, upon repayment of the AMLIC Loan, NMWD will agree to subordinate the NMWD Deed of Trust to any new refinancing of the MCC Property so long as MCC provides a new letter of credit securing an amount equal to 50% of the then remaining principal balance of the \$430,463 loan, which letter of credit will also "burn off" on a quarterly basis in an

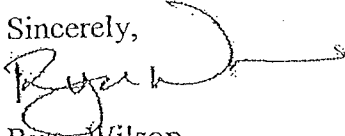
ATTACHMENT 3

amount equal to the principal payments made by MCC on the \$430,463 loan during such quarter.

- (d) Add any additional language into the water agreement that gives the district assurance that should Marin Country Club default on its payments to NMWD for the bi-monthly recycled water bill, that after normal recourse and collection matters are exhausted you will be able to turn off the delivery of recycled water to MCC as specified currently in our recycled water agreement.

We are optimistic that you and the water district board of directors find this proposal agreeable and we can move to execute the final agreements in a timely manner.

Sincerely,

A handwritten signature in dark ink, appearing to read "Ryan Wilson", with a long horizontal flourish extending to the right.

Ryan Wilson
General Manager
Marin Country Club



**NORTH MARIN
WATER DISTRICT**

999 Rush Creek Place
P.O. Box 146
Novato, CA 94948-0146

PHONE
415-897-4133

EMAIL
info@nmwd.com

WEB
www.nmwd.com

June 25, 2018

Marin Country Club, Inc.
Ryan Wilson, General Manager
500 Marin Country Club Drive
Novato, CA 94949

Subject: Marin Country Club – Recycled Water Service Agreement- Deed of Trust
Subordination
NMWD File No. 1 2775.00

Dear Mr. Wilson:

At the North Marin Water District's Board of Director's meeting on June 19th, 2018, the Board reviewed Marin Country Club's (MCC) letter dated May 23, 2018 (enclosed) wherein a proposal was offered to address North Marin Water District's concerns that the District was being asked to sign an onerous Subordination Agreement prior to the District recording its Deed of Trust. The Subordination Agreement contains several provisions that were never discussed between the District and MCC when the Deed of Trust and Recycled Water Service Agreement were being negotiated. Consequently, it is the District's position that Deed of Trust payment guarantee objective outlined in the executed Recycled Water Service Agreement has been compromised.

We too want to expedite the delivery of recycled water to MCC and have given MCC's proposal considerable attention over the last couple of weeks. The following counter proposal is offered in an effort to move beyond this impasse. For ease of readability, the following format provides MCC's initial proposal followed by NMWD's counter proposal:

Item (a) - MCC Proposal - MCC will obtain a \$216,000 letter of credit from Mechanics Bank for the benefit of NMWD ("NMWD Letter of Credit"), which NMWD Letter of Credit will secure MCC's obligation to repay the \$430,463 loan from NMWD. The NMWD Letter of Credit will "burn off" on a quarterly basis in an amount equal to the principal payments made by MCC on the \$430,463 loan during such quarters.

Item (a) - NMWD Counter Proposal – MCC to provide a \$430,463 letter of credit from Mechanics Bank for the benefit of NMWD ("NMWD Letter of Credit"), which NMWD Letter of Credit will secure MCC's obligation to repay the \$430,463 loan from NMWD. The NMWD Letter of Credit will "burn off" on a quarterly basis in an amount equal to the principal payments made by MCC on the \$430,463 loan during such quarters.

ATTACHMENT 4

Item (b) - MCC Proposal - MCC will secure the entire NMWD Loan by the NMWD Deed of Trust and NMWD will enter into the AMLIC Subordination Agreement as originally contemplated

Item (b) - NMWD Counter Proposal – District will agree to enter into the subordination agreement.

Item (c) - MCC Proposal – At the end of 5 years the AMLIC Loan will have been repaid, the NMWD Letter of Credit will have burned off entirely, and the NMWD Deed of Trust will no longer be subordinate to the AMLIC Deed of Trust, but will still secure the outstanding principal balance of the NMWD Loan. Additionally, upon repayment of the AMLIC Loan, NMWD will agree to subordinate the NMWD Deed of Trust to any new refinancing of the MCC Property so long as MCC provides a new letter of credit securing an amount equal to 50% of the then remaining principal balance of the \$430,463 loan, which letter of credit will also “burn off” on a quarterly basis in an amount equal to the principal payments made by MCC on the \$430,463 loan during such quarter.

Item (c) - NMWD Counter Proposal – At the end of 5 years, the AMLIC Loan will have been repaid, 50% of the NMWD Letter of Credit will have burned off, and the NMWD Deed of Trust will not be subordinate to the AMLIC Deed of Trust, but will secure the outstanding balance of the NMWD Loan. The District will not agree to any further subordination at this time and will consider the issue if, and when, it arises after the 5-year period has passed. No promise of further subordination is made.

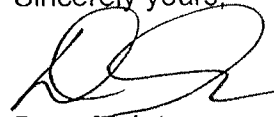
Item (d) - MCC Proposal – Add any additional language into the water agreement that gives the district assurance that should Marin Country Club default on its payments to NMWD for the bi-monthly recycled water bill, that after normal recourse and collection matters are exhausted you will be able to turn off the delivery of recycled water to MCC as specified currently in our recycled water agreement.

Item (d) - NMWD Counter Proposal – MCC will agree to additional language in the recycled water agreement that clearly stipulates that the District can discontinue either or both recycled water or potable water service should MCC default on bi-monthly recycled water bill payments. The District's right to discontinue service will result from nonpayment and not be governed by the District's regulations. The District may discontinue service without first pursuing collection or other legal action.

Marin Country Club – Recycled Water Service Agreement – Deed of Trust
June 25, 2018
Page 3

If you have any questions regarding this counter proposal, please contact me
at (415) 761-8912.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Drew McIntyre', with a stylized flourish at the end.

Drew McIntyre
General Manager

Enclosures: MCC letter dated May 23, 2018

DM: tk

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Marin Country Club

July 17, 2018

North Marin Water District
999 Rush Creek Place
Novato, CA 94945
Attn: Drew McIntyre
General Manager

Re: Recycled Water Service Agreement and Subordinated Deed of Trust

Dear Mr. McIntyre:

As discussed on Wednesday, Marin Country Club ("MCC") is hereby responding to the terms of the counter proposal from North Marin Water District ("NMWD") contained in the letter dated June 25, 2018, a copy of which is enclosed here (the "Counter Proposal") MCC agrees to NMWD's counter proposal items A – D except as follows: MCC agrees to reimburse NMWD for the \$430,463 loan, subject to a full member vote to receive authorization from MCC's members to make this financial commitment. We expect that process to be completed on or around October 1, 2018. Though clearly we cannot guarantee the outcome of the vote, we believe that the MCC members will agree to proceed with the terms of the Counter Proposal, as a majority of our membership were in favor of the Recycled Water Service Agreement the first time it was voted on.

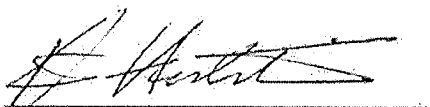
As you know, MCC cannot enter into the Subordinated Deed of Trust in favor of NMWD without consent from our senior lender, American Memorial Life Insurance Company (the "Senior Lender"). The Senior Lender provided NMWD's counsel with a revised version of the Subordinated Deed of Trust that is acceptable to the Senior Lender (the "Subordinated Deed of Trust"). A copy of the redlined Subordinated Deed of Trust from the Senior Lender is enclosed here. The Senior Lender also provided NMWD's counsel with a Subordination Agreement and Assignment of Claims and Rights (the "Subordination Agreement") that is acceptable to the Senior Lender, and is to be entered into by NMWD, MCC, and the Senior Lender concurrently with the Subordinated Deed of Trust. A copy of the redlined Subordination Agreement from the Senior Lender is also enclosed here. We understand that if MCC reimburses the \$430,463 loan as contemplated here, then NMWD shall (a) accept this revised Subordinated Deed of Trust proposed by the Senior Lender, and (b) enter into this revised Subordination Agreement proposed by the Senior Lender.

While we await the membership vote and subsequent payment of \$430,463 loan we request that NMWD issue a one-time, revocable temporary recycled water use permit (the "Use Permit") and begin providing recycled water to MCC through October 31, 2018. Once NMWD is

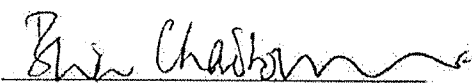
reimbursed for the \$430,463 loan and counter proposal item (D) is incorporated into the Recycled Water Agreement, NMWD shall issue a standard use permit as contemplated under the Recycled Water Services Agreement. We understand that under Part 115 of the Recycled Water Services Agreement, such issuing of the Use Permit and commencement of recycled water service does not waive any of the parties' other obligations.

We appreciate your continued cooperation and look forward to receiving recycled water under the Recycled Water Services Agreement.

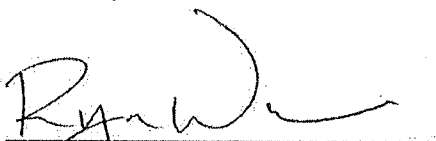
Sincerely,



Keith Hartstein
President



Brian Chadbourne
Secretary



Ryan Wilson
General Manager

AMENDMENT NO. 2
TO
LOW PRESSURE
RECYCLED WATER SERVICE AGREEMENT
FOR
MARIN COUNTRY CLUB-SUPPLEMENTAL IRRIGATION WATER

THAT CERTAIN "Low Pressure Water Service Agreement for MARIN COUNTRY CLUB – SUPPLEMENTAL IRRIGATION WATER," dated June 10, 2015, by and between NORTH MARIN WATER DISTRICT, herein called "District," and MARIN COUNTRY CLUB, INC., a California Corporation, herein called "Applicant," is hereby amended as follows:

Section 5 as set forth on Page 1-6A shall be revised and shall read as set forth on replacement Pages 1-6AA and 1-7AA attached hereto and made a part hereof.

IN WITNESS WHEREOF, the parties hereto have executed this amendment to their agreement on the 15TH day of January, 2019.

NORTH MARIN WATER DISTRICT
"District"


NOTARIZE:

Jack Baker, President

Theresa Kehoe, Secretary

(SEAL)

MARIN COUNTRY CLUB, INC.
a California Corporation
"Applicant"



Joel Jutovsky, President



Ray Jackson, Treasurer

NOTES: *This amendment must be executed by the Applicant and delivered to the District within thirty (30) days after it is authorized by the District's Board of Directors.*

ALL SIGNATURES MUST BE ACKNOWLEDGED BEFORE A NOTARY PUBLIC.

Applicant may payoff the 10-year loan it received from the District without any prepayment penalty. The final payoff amount is \$392,623.54 if payment is received by the District on or before December 31, 2018. If payment is received after December 31, 2018, the District shall provide Applicant an updated payoff amount.

Recycled water service to the Applicant will be disconnected if bi-monthly payments pursuant to this Section and payment of charges for recycled water pursuant to Section 6 are not received within 30 days of the due date printed on the District's bill, which is typically 25 days following the date the bill is mailed to the Applicant. Interest at the maximum amount permitted by law may be added to payments not received by the District as of the due date, provided that the District's bill was received by Applicant a minimum of 14 days prior to its due date.

If Applicant fails to timely make any payment required under the Agreement, the District, in its sole and absolute discretion, may elect to discontinue recycled water service under the Agreement and/or discontinue the provision of potable water service provided to Applicant. The Applicant acknowledges and agrees the District's right to discontinue recycled and/or potable water service for nonpayment is contractual in nature pursuant to this Amendment No. 2 and not governed by, nor subject to, the District's regulations. The District may discontinue water service in accordance with this section without first pursuing collection of delinquent amounts or pursuing any other action.

Prior to January 2018 when the first payment is due pursuant to the payment schedule attached hereto as Exhibit B, the Applicant will record a subordinated deed of trust, the form of which is attached hereto as Exhibit C, in the amount of \$1,695,758 naming the District as beneficiary (the Deed of trust") to serve as the performance guarantee. If a bill remains unpaid for sixty (60) days after being mailed to the Applicant, all amounts owing under this Agreement, including accrued interest and unpaid principal, shall become immediately due and payable and the District may serve upon the Applicant and the Trustee named in the Deed of Trust, a demand for payment of the full amount of initial charges and estimated District costs less Applicant credits within ten (10) days. If the Applicant fails to pay such amount in full within the 10-day period the District may enforce all rights and remedies at law and under the Deed of Trust, including a sale of the subject property through foreclosure. The District acknowledges and agrees that the Deed of Trust shall be subordinated to all existing deeds of trust that currently encumber the Applicant's real property.

6. If recycled water supplies to the Applicant are interrupted or curtailed for any reason, District shall supply temporary potable water to the golf course. Such supply of Zone 1 potable water will not exceed 336,000 gallons per day at a rate at or below 800 gallons per minute and will be charged at the District's Recycled Water rate pursuant to NMWD Regulation 54 then in effect.

7. If recycled water supplies to Applicant are interrupted or curtailed and temporary potable water is not available for any reason, the Applicant's curtailment shall be equal in proportion to the recycled water system-wide curtailment applied to all District recycled water customers.

8. Recycled water furnished by the District through the expanded facilities pursuant to this Agreement will not be used by the Applicant for any purpose other than golf course and adjacent landscape irrigation.

9. The District covenants to own, operate and maintain the Project until the termination of this Agreement. This Agreement shall bind and benefit the successors and assigns of the parties hereto; however, this Agreement shall not be assigned by the Applicant without the prior written consent of the District. Assignment shall be made only by a separate document prepared by the District at the Applicant's written request. The Applicant's rights to recycled water deliveries hereunder are not transferable or assignable. The Applicant shall not sell, give, transfer, or distribute any of the recycled water purchased by it to any other party for any use, and Applicant shall be the sole party using the recycled water.

10. Any notice or other communication to be given to the District under this Agreement may be given by delivering the same in writing to the North Marin Water District, at 999 Rush Creek Place, Novato, California 94945, Attention: General Manager; and any notice or other communication to be given to the Applicant under this Agreement may be given by delivering the same in writing to Marin Country Club, Inc., 500 Country Club Dr., Novato, CA 94949 Attention: General Manager.

11. This Agreement is made solely for the benefit of the District and the Applicant (including successors or assigns) and no other person shall acquire or have any right hereunder or by virtue hereof. The obligations of the Applicant under this Agreement may not be assigned, in whole or in part, without the prior written consent of the District, which consent may be given or denied in the District's sole and absolute discretion; provided, however, that Applicant may without the prior written consent of the District: (i) directly or indirectly assign this Agreement to an affiliate of Applicant and (ii) assign the Agreement to any person or entity in connection with a reorganization, merger, acquisition, change of control, or sale of all substantially all the assets or business of Applicant; however, any such assignment, without prior written consent shall not release Applicant from any of its obligations hereunder.

12. The validity, interpretation and performance of this Agreement shall be governed by the laws of the State of California. Any action or proceeding to enforce or interpret this Agreement shall be brought, commenced or prosecuted in the County of Marin, California. In the event that either party is required to initiate legal proceedings to enforce or interpret the terms of this Agreement, the prevailing party may recover its attorney's fees incurred in such action, in addition to costs and other amounts recoverable at law.

13. This Agreement shall constitute the entire agreement between the District and the Applicant with respect to the subject matter hereof and supersedes all prior and contemporaneous agreements, representations, and understandings of the District and the Applicant.

STATE OF CALIFORNIA

COUNTY OF MARIN

SUBORDINATION AGREEMENT AND ASSIGNMENT OF CLAIMS AND RIGHTS

THIS SUBORDINATION AGREEMENT AND ASSIGNMENT OF CLAIMS AND RIGHTS, made and entered into as of April ___, 2018, by and among **MARIN COUNTRY CLUB, INC.**, a California corporation (hereinafter called "Borrower"), **NORTH MARIN WATER DISTRICT** (hereinafter called "Subordinate Lender") and **AMERICAN MEMORIAL LIFE INSURANCE COMPANY**, a South Dakota corporation (hereinafter called "First Priority Lender").

WITNESSETH:

WHEREAS, First Priority Lender made loans to Borrower evidenced by the following notes: (i) Promissory Note dated as of September 17, 2003 (the "2003 Note") in the original principal amount of Four Million Nine Hundred Seventy Nine Thousand Six Hundred Twenty One and 50/100 Dollars (\$4,979,621.50), (ii) Promissory Note dated as of March 1, 2006 (the "2006 Note") in the original principal amount of One Million Two Hundred Twenty-Five Thousand and No/100 Dollars (\$1,225,000.00), and (iii) Promissory Note dated as of June 28, 2007 in the amount of One Million Six Hundred Thousand and No/100 Dollars (\$1,600,000.00) (the "2007 Note"; the 2003 Note, 2006 Note, and 2007 Note, together with any and all renewals, modifications, consolidations, replacements and extensions thereof, herein referred to collectively as the "First Priority Note"; the loans evidenced thereby are herein referred to as the "First Priority Loan"); and

WHEREAS, the First Priority Loan is further evidenced and secured by certain other documents, including, but not limited to, the following documents:

- (a) a Deed of Trust and Security Agreement (as amended, as set forth below, the "First Priority Mortgage") conveying to First Priority Lender the property (the "Property") described on Exhibit A hereto, dated as of September 17, 2003 from Borrower in favor of or for the benefit of Lender, recorded as Instrument No. 2003 115633, in the real estate records of Marin County, California, as amended by that certain Modification of Deed of Trust and Security Agreement and of Assignment of Revenues, Rents, Leases and Agreements dated as of March 1, 2006 and recorded as Instrument No. 2006-0014039, aforesaid records, and as amended by that certain Second Modification of Deed of Trust and Security Agreement and of Assignment of Revenues, Rents, Leases and Agreements dated as of June 28, 2007 and recorded as Instrument No. 2007-0040326, aforesaid records (the "2007 Modification");
- (b) an Assignment of Revenues, Rents, Leases and Agreements dated September 17, 2003 from Borrower to Lender, recorded as Instrument No. 2003 115634, aforesaid records, as amended by the 2006 Modification and as amended by the 2007 Modification; and
- (c) U.C.C. Financing Statements between Borrower, as Debtor, and First Priority Lender, as Secured Party (the "First Priority U.C.C. Financing Statement").

(collectively with any and all other documents evidencing or securing the First Priority Loan, the "First Priority Loan Documents").

WHEREAS, pursuant to the First Priority Loan Documents, Borrower is prohibited from incurring indebtedness for borrowed money except as permitted thereby; and

WHEREAS, in 2017, Borrower desired to obtain financing from Mechanics Bank, a California banking corporation (hereinafter called "MB") as follows: (i) a Facilities Improvement Non-Revolving Draw to Term Loan in the amount of up to \$8,750,000.00, and (ii) a Revolving Line of Credit in the amount of up to \$500,000.00 (together with any and all renewals, modifications, consolidations, replacements and extensions thereof or further advances or loans to Borrower from Subordinate Lender, herein referred to as the "Subordinate MB Financing"); and

WHEREAS, with respect to the Subordinate MB Financing, pursuant to the First Priority Loan Documents, Borrower was not permitted to obtain the Subordinate MB Financing unless approved by First Priority Lender, but First Priority Lender approved the Subordinate MB Financing pursuant to that certain Subordination Agreement and Assignment of Claims and Rights dated as of March 17, 2017 by and among Borrower, First Priority Lender and MB, recorded as Instrument No. 2017 0012067, in the real estate records of Marin County, California (the "MB Intercreditor Agreement"); and

WHEREAS, Borrower desires to obtain financing from Subordinate Lender as follows: a loan in the amount of \$1,695,758.00 (together with any and all renewals, modifications, consolidations, replacements and extensions thereof or further advances or loans to Borrower from Subordinate Lender, herein referred to as the "Subordinate Financing"); and

WHEREAS, all or portions of the Subordinate Financing are evidenced by one or more notes and shall be further evidenced and secured by certain other documents, including, but not limited to, the following documents:

- (a) Low Pressure Water Service Agreement for Marin Country Club – Supplemental Irrigation Water, dated June 10, 2015 between Borrower and Subordinate Lender, as amended by Amendment No. 1 to Low Pressure Water Service Agreement for Marin Country Club – Supplemental Irrigation Water dated June 27, 2017 (collectively, the "Subordinate Loan Agreement"); and
- (b) a Subordinated Deed of Trust (the "Subordinate Mortgage") conveying to Subordinate Lender the property (the "Property") described on Exhibit A hereto, to be recorded in the real estate or mortgage records of Marin County, California, securing the payment obligations in the Subordinate Loan Agreement; and
- (c) If any, U.C.C. Financing Statements between Borrower, as Debtor, and Subordinate Lender, as Secured Party (the "Subordinate U.C.C. Financing Statement").

(collectively with any and all other documents evidencing or securing the Subordinate Financing, the "Subordinate Financing Documents").

WHEREAS, Borrower is not permitted to obtain the Subordinate Financing unless approved by First Priority Lender; and

WHEREAS, First Priority Lender is willing to permit the Subordinate Financing evidenced by the Subordinate Financing Documents provided that the Subordinate Lender evidences its subordination to the First Loan and the First Loan Documents as hereinafter set forth, in a manner parallel to the terms of the MB Intercreditor Agreement; and

WHEREAS, accordingly, the Subordinate Mortgage excludes conveyance from Borrower to Subordinate Lender of the AMLIC Excluded Claims, Voting Rights, Monies Default Distributions and Bankruptcy Rights (as defined in the Subordinate Mortgage), for so long only as any portion of the First Priority Loan remains unpaid; and

WHEREAS, consistent with the foregoing, First Priority Lender is willing to permit the Subordinate Financing evidenced by the Subordinate Financing Documents only provided that the Subordinate Lender agrees with First Priority Lender and Borrower that Subordinate Lender has not received any conveyance of, and the First Priority Lender retains, the AMLIC Excluded Claims, Voting Rights, Monies Default Distributions and Bankruptcy Rights, for so long only as any portion of the First Priority Loan remains unpaid, and to confirm such agreement and eliminate any doubt as to the intention of exclusion from the Subordinate Financing Documents of the AMLIC Excluded Claims, Voting Rights, Monies Default Distributions and Bankruptcy Rights, Subordinate Lender agrees to the terms of this Agreement and agrees that Subordinate Lender assigns to First Priority Lender, for so long only as any portion of the First Priority Loan remains unpaid, (i) all claims of Subordinate Lender against Borrower arising out of such Subordinate Financing, and all rights and powers respecting such claims, in any judicial or non-judicial (including any receivership, assignment for the benefit of creditors, bankruptcy, insolvency, reorganization, liquidation, or similar) case or proceeding, or voluntary or involuntary debt restructure, or similar proceeding, judicial or otherwise, whether under state or federal law (collectively, "Proceedings"), directly or indirectly arising from, involving or relating to Borrower, First Priority Lender and/or the Subordinate Financing, including, without limitation, any such claims arising from or relating to the Subordinate Financing Documents (such claims, rights and powers being referred to collectively herein as the "Claims"), (ii) all voting rights arising from, involving or relating to any such Claims (the "Voting Rights"), and (iii) all rights of Subordinate Lender to the payment or distributions of sums, dividends or other assets to Subordinate Lender by Borrower during and after either (a) any such Proceeding, or (b) any default (or any event which but for the giving of notice or the passage of time, or both, would constitute a default) under the First Priority Loan Documents (collectively, the "Monies"), all on the terms and conditions set forth hereinbelow; and

WHEREAS, Subordinate Lender is willing to execute and deliver this Agreement to induce First Priority Lender to permit the Subordinate Financing, which Subordinate Financing will benefit Subordinate Lender by permitting Subordinate Lender to receive the returns set forth in the Subordinate Financing.

NOW, THEREFORE, incorporating the foregoing recital of facts, in consideration of TEN DOLLARS (\$10.00) in hand paid by each of the parties to the other and in further consideration of the premises and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Subordination. Subordinate Lender subordinates, upon the terms and conditions contained herein, all its right, title and interest under the Subordinate Financing Documents in and to the Property as against the First Priority Loan to be made by First Priority Lender to Borrower, so that the First Priority Mortgage and the other First Priority Loan Documents shall convey security title to the Property superior to the security title, interest and lien of the Subordinate Financing Documents, and are and shall continue to be subject and subordinate to the liens and security interests created by the First Priority Loan Documents and to any and all amendments, modifications, extensions, replacements or renewals of the First Priority Loan Documents made in accordance with the terms of this Agreement, and to any and all advances heretofore made or hereafter to be made under the First Priority Loan Documents pursuant to the terms thereof. Accordingly, the proceeds of any repossession, foreclosure or other exercise of remedies with respect to the Property shall be applied first to all amounts owing to First Priority Lender with respect to the First Priority Loan and second to all amounts owing to Subordinate

Lender with respect to the Subordinate Financing Documents, except only that in the event of an exercise of remedies under the Subordinate Financing Documents if and to the extent permitted hereunder and in the event that at the time of such default under the Subordinate Financing Documents and upon such repossession, foreclosure or other exercise of remedies under the Subordinate Financing Documents, there is then no default (or an event that but for the giving of notice or the passage of time, or both, would constitute a default) under any of the First Priority Loan Documents (other than by application of Paragraph 3(r) hereof), in such event such proceeds may be applied to first all amounts owing to Subordinate Lender with respect to the Subordinate Financing Documents, and second to all amounts owing to First Priority Lender with respect to the First Priority Loan. Without limiting the foregoing and without amending or waiving any terms of the First Priority Loan Documents, Subordinate Lender acknowledges and agrees that any foreclosure under the Subordinate Mortgage shall not terminate the First Priority Mortgage.

In addition, as set forth in the Subordinate Mortgage, the Subordinate Mortgage and the indebtedness secured by the Subordinate Mortgage shall also at all times be subject to the terms and conditions of the Subordination Agreement by and among Borrower, Subordinate Lender and Mechanics Bank referenced in the Subordinate Mortgage.

2. **Warranty.** Subordinate Lender warrants that (a) Subordinate Lender is the owner and holder of the Subordinate Financing Documents, true, correct and complete copies of which have been provided to First Priority Lender by Subordinate Lender and Borrower as listed on **Exhibit B** attached hereto and made a part hereof; (b) there is no assignment to any party of any of Subordinate Lender's rights under any of the Subordinate Financing Documents; (c) the Subordinate Financing Documents constitute the complete agreement between Borrower and Subordinate Lender with respect to the Subordinate Financing; (d) there is no default, event of default or other event or occurrence that would entitle Subordinate Lender, now or with the giving of notice and/or the passage to time, entitle Subordinate Lender to accelerate the Subordinate Financing and/or take any remedial actions thereunder. First Priority Lender warrants that (a) First Priority Lender is the owner and holder of the First Priority Loan Documents, (b) there is no assignment to any party of any of First Priority Lender's rights under any of the First Priority Loan Documents, and (c) First Priority Lender has provided to Subordinate Lender true, correct and complete copies of the First Priority Loan Documents.

3. **Subordination and Assignment Covenants.**

(a) **Subordination of Payment Rights.** Prior to the occurrence of either (1) any Proceeding or (2) any monetary default (either failure to pay amounts due First Priority Lender or make other payments required under the First Priority Loan Documents) or any acceleration of the First Priority Loan by First Priority Lender after any other default (herein referred to as a "First Priority Default"), Borrower may pay and Subordinate Lender may receive and retain any and all scheduled payments due and payable under the Subordinate Financing Documents, and provided further that such regular monthly payments do not exceed the amount remaining after deducting from all income of the Property for such month the monthly payments due under the First Priority Loan, any escrows payable thereunder, reasonable reserves for taxes, insurance and other expenditures, and all expenses of the Property then due. Without the prior written consent of First Priority Lender in First Priority Lender's sole and absolute discretion, during any Proceeding or while any First Priority Default exists, Subordinate Lender hereby agrees that Subordinate Lender shall not accept or receive any payment or distribution on account of the Subordinate Financing prior to the payment in full of the First Priority Loan (such payments or distributions during any Proceeding or while any First Priority Default exists are herein referred to as "Default Distributions"), and that any such payment or distribution received by Subordinate Lender shall be held in trust for and immediately remitted to First Priority Lender as set forth below. Except as aforesaid, Subordinate Lender shall, during any Proceeding or while any First Priority Default exists, and

without notice or demand from First Priority Lender, promptly assign, transfer and pay over to First Priority Lender, to be applied on the First Priority Loan, any Monies received by Subordinate Lender from Borrower on account of the Subordinate Financing, and any such Monies so received shall be held in trust by Subordinate Lender until such time as it is so delivered.

(b) **Confirmation of Exclusion of Claims, Voting Rights and Monies from Subordinate Lender.** To confirm that Subordinate Lender has not received any conveyance of, and the First Priority Lender retains, the AMLIC Excluded Claims, Voting Rights, Monies Default Distributions and Bankruptcy Rights, for so long only as any portion of the First Priority Loan remains unpaid, and eliminate any doubt as to the intention of exclusion from the Subordinate Financing Documents of the AMLIC Excluded Claims, Voting Rights, Monies Default Distributions and Bankruptcy Rights, for so long only as any portion of the First Priority Loan remains unpaid, Subordinate Lender hereby sells, transfers, assigns, delivers and conveys to First Priority Lender, and its successors and assigns, all right, title and interest of Subordinate Lender in, to and under the Claims, the Voting Rights, and the Monies, provided, however, that First Priority Lender may only exercise rights with respect to the Claims, the Voting Rights, and the Monies during any Proceeding or while any First Priority Default exists. Notwithstanding the rights set forth herein, in the event that Subordinate Lender does not agree with the action of First Priority Lender pursuant to the provisions of this subsection, Subordinate Lender shall have the right (but Subordinate Lender is not obligated) to pay First Priority Lender the unpaid principal balance, plus all accrued interest, outstanding late charges, costs of collection and prepayment premiums, owing on the note secured by the First Priority Loan Documents, in which case the First Priority Loan Documents together with the note secured thereby and all other instruments evidencing and securing said indebtedness will be transferred, assigned and delivered (without recourse) by First Priority Lender to Subordinate Lender.

(c) **Bankruptcy Rights.** Subordinate Lender does hereby acknowledge and confirm that, as a result of this Agreement, First Priority Lender shall have the sole and exclusive right in any Proceeding to be heard and to speak on behalf of Subordinate Lender with respect to the Subordinate Financing and the Subordinate Financing Documents, the Claims, the Voting Rights, and/or the Monies (collectively, the "Bankruptcy Rights"). Subordinate Lender may assert or file any claim or proof of claim as a secured or unsecured creditor in any such Proceeding, but any such claim shall be filed with a copy of this Agreement attached thereto. If required by First Priority Lender (but without limiting any of the rights and privileges granted hereby), in the event of any Proceeding, Subordinate Lender will, at the request of First Priority Lender, file any claim, proof of claim, or other instrument of similar character necessary to enforce the obligations of Borrower in respect of the Subordinate Financing Documents. Without limiting the foregoing, Subordinate Lender further grants to First Priority Lender an irrevocable proxy to exercise any Voting Rights or to take any other action which Subordinate Lender may take or have with respect to the approval or disapproval of a plan of reorganization of Borrower proposed by any person or class of persons in any Proceeding or otherwise with respect to any Claim, and in furtherance thereof, Subordinate Lender hereby irrevocably appoint First Priority Lender the agent and attorney-in-fact of Subordinate Lender so to do. Notwithstanding the rights set forth herein, in the event that Subordinate Lender does not agree with the action of First Priority Lender pursuant to the provisions of this subsection, Subordinate Lender shall have the right (but Subordinate Lender is not obligated) to pay First Priority Lender the unpaid principal balance, plus all accrued interest, outstanding late charges, costs of collection and prepayment premiums, owing on the note secured by the First Priority Loan Documents, in which case the First Priority Loan Documents together with the note secured thereby and all other instruments evidencing and securing said indebtedness will be transferred, assigned and delivered (without recourse) by First Priority Lender to Subordinate Lender.

(d) **Permitted Actions; No Assumption of Liability.** Subordinate Lender acknowledges and agrees that with respect to the rights, title and interests assigned hereby to First Priority

Lender, First Priority Lender may exercise any and all rights and take any and all actions with respect thereto that First Priority Lender may deem necessary, appropriate or desirable in First Priority Lender's sole and absolute discretion including, without limitation, waiving, relinquishing, or not receiving payment of any of the Monies, and First Priority Lender shall have no duty, liability or fiduciary obligation of any kind to Subordinate Lender or to any other parties with respect to the rights, title and interests hereby assigned to First Priority Lender. Nothing in this Agreement shall be construed to obligate First Priority Lender to perform or discharge any obligation, duty or liability under or by reason of the Subordinate Financing Documents, the Property, the Claims, the Voting Rights, the Monies or any of the other rights or powers assigned hereby, and Subordinate Lender hereby acknowledges and agrees that First Priority Lender shall have no such obligation, duty or liability. In the exercise of the rights and powers herein granted First Priority Lender, no liability shall be asserted or enforced against First Priority Lender, all such liability being expressly waived and released by Subordinate Lender. Subordinate Lender hereby acknowledges that in the making of the First Priority Loan under the First Priority Loan Documents, First Priority Lender has the right to require payment in full of the First Priority Loan in the event of the Subordinate Financing and the delivery of the Subordinate Financing Documents, and Subordinate Lender hereby acknowledges that First Priority Lender, in agreeing to issue the consent to the Subordinate Financing and the delivery of the Subordinate Financing Documents under the First Priority Loan Documents, is relying upon the terms of this Agreement.

(e) **Continuing Effectiveness.** Subordinate Lender does hereby agree not to challenge the effectiveness of this Agreement, it being the intention of the parties to fully effectuate the full and complete subordination of the Subordinate Financing and the Subordinate Financing Documents to the First Priority Loan and the First Priority Loan Documents, and Subordinate Lender does hereby expressly waive any right to object to the effectiveness of this Agreement which may arise under the laws of the State of California, the laws of the United States of America or otherwise.

(f) **Casualty/Condemnation.** Subordinate Lender agrees that in the event of a casualty to the buildings or improvements constructed on the Property or a condemnation or taking under a power of eminent domain of all or any portion of the Property, the buildings or improvements thereon, or a threat of such a condemnation or taking, all adjustments of insurance claims, condemnation claims and settlements in anticipation of such a condemnation taking shall be prosecuted, at First Priority Lender's election, by First Priority Lender, and all payments and settlements of insurance claims or condemnation awards or payments in anticipation of condemnation or a taking shall be paid to First Priority Lender or at First Priority Lender's direction for use and application pursuant to the terms and provisions of the First Priority Loan Documents. Subordinate Lender irrevocably assigns to First Priority Lender all of its interest in any such claims, settlements or awards and irrevocably grants to First Priority Lender a power of attorney, coupled with an interest, to execute any and all documents on Subordinate Lender's behalf necessary in connection with the prosecution or settlement of such claims, awards and payments. First Priority Lender shall promptly notify Subordinate Lender of any documents executed under the aforesaid power of attorney. In addition, without limiting the foregoing, the Subordinate Lender agrees that all rights of the Subordinate Lender under the Subordinate Mortgage or under the Subordinate Financing Documents in and to the Property and the proceeds thereof (including assignments of leases and rents, issues and profits) expressly subject and subordinate to the rights of the First Priority Lender in and to the Property and the proceeds thereof (including assignments of leases and rents, issues and profits) on the terms set forth in the First Priority Mortgage and the First Priority Loan Documents.

(g) **Subrogation Rights.** Subordinate Lender waives and releases any and all rights of subrogation which it may have against the Property which subrogation would result in Subordinate Lender obtaining a priority equal or superior to the priority of the First Priority Loan Documents for any funds which Subordinate Lender may advance either to cure defaults under the First Priority Loan Documents or pay liens encumbering the Property or otherwise protect the lien of the Subordinate

Financing Documents. If the Subordinate Lender shall acquire by indemnification, subrogation or otherwise, any lien, estate, right or other interest in the Property, that lien, estate, right or other interest shall be subordinate to the First Priority Mortgage as provided herein, and the Subordinate Lender hereby waives any and all rights it may acquire by subrogation or otherwise to the lien of the First Priority Mortgage or any portion thereof.

(h) **Tenants and Leases.** As to all leases now or hereafter in effect with respect to the property, the Subordinate Lender agrees to approve all leases which are approved or deemed approved by the First Priority Lender, or which the First Priority Lender permits Borrower to make without consent or approval. The Subordinate Lender shall also enter into recognition and non-disturbance agreements with any tenants to whom the First Priority Lender has granted recognition and non-disturbance, on the same terms and conditions given by the First Priority Lender. No tenant under any lease of any portion of the Property will be made a party defendant in any foreclosure of the Subordinate Mortgage nor will any enforcement action under the Subordinate Financing Documents or any other action be taken that would terminate any lease or other rights held by or granted to or by third parties with respect to the Property.

(i) **Escrows.** Subordinate Lender shall not collect payments for the purpose of escrowing taxes, assessments or other charges imposed on the Property or insurance premiums due on the insurance policies required under the First Priority Mortgage or the Subordinate Mortgage if the First Priority Lender is collecting payments for such purposes, however, the Subordinate Lender may collect payments for such purposes if the First Priority Lender is not collecting the same, provided such payments shall be held in trust by the Subordinate Lender to be applied only for such purposes.

(j) **No Assignment of Subordinate Financing.** Subordinate Lender will not, without First Priority Lender's prior written consent in First Priority Lender's sole and absolute discretion, execute, grant or deliver any assignment, transfer, pledge, hypothecation or other conveyance of all or any part of or interest in the Subordinate Financing, the Subordinate Financing Documents, the collateral securing the Subordinate Financing, the Claims, the Voting Rights, the Monies or any of the other rights and powers assigned hereby, except to First Priority Lender.

(k) **First Priority Lender Debt.** First Priority Lender may, at any time and from time to time, without the consent of or notice to Subordinate Lender and without incurring any responsibility or liability to Subordinate Lender, and without impairing or releasing the obligations of Subordinate Lender hereunder, enter into any amendment, deferral, extension, modification, increase, renewal, replacement, consolidation, supplement or waiver (collectively, a "First Priority Loan Modification") of the First Priority Loan or the First Priority Loan Documents provided that, without the prior written consent of Subordinate Lender, which consent may be given or denied in Subordinate Lender's sole and absolute discretion, no such First Priority Loan Modification shall (i) increase the interest rate other than to effect a change provided for in the First Priority Loan Documents, including provisions in the First Priority Loan Documents for changes in the interest rate, interest charged at the default rate, and late charges, (ii) increase the principal amount of the First Priority Loan except for Protective Advances, (iii) shorten the scheduled maturity date of the First Priority Loan, (iv) convert or exchange the First Priority Loan into or for any other indebtedness or subordinate any of the First Priority Loan to any indebtedness of Borrower, (v) amend or modify the provisions limiting transfers of interests in the Borrower or the Property to affect adversely the rights of Subordinate Lender, or (vi) cross default the First Priority Loan with any other indebtedness unrelated to the Property, provided, however, in no event shall First Priority Lender be obligated to obtain Subordinate Lender's consent to a First Priority Loan Modification in the case of a work-out or other surrender, compromise, release, renewal, or indulgence relating to the First Priority Loan if there is a default under the First Priority Loan Documents, except that under no conditions shall clause (ii) (with respect to increase principal amount only) be modified without the written consent of Subordinate Lender. In addition and notwithstanding the

foregoing provisions of this subparagraph, any amounts funded by any First Priority Lender under the First Priority Loan Documents as a result of (A) the making of any Protective Advances by the First Priority Lender or any First Priority Lender, or (B) interest accruals or accretions and any compounding thereof (including default interest), shall not be deemed to contravene this subparagraph. First Priority Lender acknowledges and agrees that pursuant to the terms of the First Priority Loan Documents, the First Priority Loan is not revolving. "Protective Advances" shall mean all sums advanced for the purpose of payment of real estate taxes (including special payments in lieu of real estate taxes), personal property taxes, maintenance and operating costs, refurbishments or other improvements to improve or enhance the Property, insurance premiums or other items (including capital items) reasonably necessary to protect the Property (including, but not limited to, all reasonable attorneys' fees actually incurred, costs relating to the entry upon the Property to make such repairs and replacements, and the payment, purchase, contest or compromise of any encumbrance, charge or lien which is not permitted under the terms of the First Priority Loan Documents) or to otherwise protect the Property from forfeiture, casualty, loss or waste. First Priority Lender may, at any time and from time to time, without the consent of or notice to Subordinate Lender and without incurring any responsibility or liability to Subordinate Lender, and without impairing or releasing the obligations of Subordinate Lender hereunder, release anyone liable in any manner for the payment or collection of the First Priority Loan or any portion thereof, exercise or refrain from exercising any rights against the Borrower and others, and apply any sums by whomsoever paid or however realized to the First Priority Loan or any portion thereof.

(l) **No Modification of Subordinate Financing.** Subordinate Lender will not, without First Priority Lender's prior written consent in First Priority Lender's sole and absolute discretion, enter into any amendment, deferral, extension, modification, increase, renewal, replacement, consolidation, supplement or waiver (collectively, a "Subordinate Financing Modification") of the Subordinate Financing or the Subordinate Financing Documents. Notwithstanding the foregoing, the prior written consent of First Priority Lender shall not be unreasonably withheld or delayed, if the Subordinate Financing Modification shall not (i) increase the interest rate or principal amount of the Subordinate Financing, (ii) increase in any material respect any monetary obligations of Borrower under the Subordinate Financing Documents, (iii) extend or shorten the scheduled maturity date of the Subordinate Financing (except that Subordinate Lender may permit Borrower to exercise any extension options in accordance with the terms and provisions of the Subordinate Financing Documents) or change (to any earlier date) any other dates upon which payments of principal or interest are due thereon, (iv) convert or exchange the Subordinate Financing into or for any other indebtedness or subordinate any of the Subordinate Financing to any indebtedness of Borrower, (v) provide for any additional contingent interest, additional interest or so-called "kicker" measured on the basis of the cash flow or appreciation of the Property, (vi) cross default the Subordinate Financing with any other indebtedness other than the First Priority Loan, or change any event of default hereunder or under the Subordinate Financing Documents, (vii) otherwise materially increase the obligations of Borrower, or (viii) contravene any provision of this Agreement. Subordinate Lender shall deliver to First Priority Lender copies of any and all Subordinate Financing Modifications (including, without limitation, any side letters, waivers or consents entered into, executed or delivered by Subordinate Lender) within a reasonable time after any of such applicable instruments have been executed by Subordinate Lender.

(m) **Refinance of Subordinate Financing.** So long the First Priority Loan or any portion thereof remains outstanding, any refinance of the Subordinate Financing shall be subject to First Priority Lender's prior written approval of the terms thereof and the refinance lender, which approval may be granted or withheld by First Priority Lender in its sole and absolute discretion; except that with prior written notice to First Priority Lender, a refinance by Subordinate Lender that extends the maturity date of the Subordinate Financing to the extended date of the First Priority Loan if the First Priority Loan is extended, and capitalizes any accrued interest and closing costs without further additional principal

advances, may be entered into so long as there is no default under the First Priority Loan Documents and does not effect any modification not permitted by subparagraph (l) above.

(n) **Surplus Funds Upon Foreclosure.** Borrower hereby assigns and transfers unto the Subordinate Lender all surplus funds which may come into the hands of the holder of the First Priority Mortgage upon foreclosure of same and after payment of all amounts secured by the First Priority Loan Documents, and hereby directs that said surplus funds be paid over forthwith to Subordinate Lender in payment of the debt secured by the Subordinate Financing Documents.

(o) **Payment Right.** Notwithstanding any contrary provision, in the event of a default under the First Priority Loan Documents, Subordinate Lender shall have the right (but Subordinate Lender is not obligated) to pay First Priority Lender the unpaid principal balance, plus all accrued interest, outstanding late charges, costs of collection and prepayment premiums, owing on the note secured by the First Priority Loan Documents, in which case the First Priority Loan Documents together with the note secured thereby and all other instruments evidencing and securing said indebtedness will be transferred, assigned and delivered (without recourse) by First Priority Lender to Subordinate Lender.

(p) **Cross Default.** At the option of the Subordinate Lender, the occurrence of an event of default under the First Priority Loan Documents shall constitute an event of default under the Subordinate Financing Documents. In the event of any default in the performance of any obligations under the First Priority Loan Documents, the Subordinate Lender may make any payments or perform any acts necessary to relieve said default, and the cost thereof shall be added to the indebtedness secured by the Subordinate Financing Documents. In addition, at the option of First Priority Lender, the occurrence of an event of default under the Subordinate Financing Documents shall constitute an event of default under the First Priority Loan Documents.

(q) **Notice of Default and Opportunity to Cure; Non-Curable Defaults.** In the event of a default under the First Priority Loan Documents and prior to exercising any right or remedy to which First Priority Lender may be entitled on account of such default, pursuant to applicable law, the First Priority Loan Documents or to the terms of the note secured by the First Priority Mortgage (including the right to accelerate the indebtedness secured by the First Priority Loan Documents) First Priority Lender shall (i) notify Subordinate Lender in writing of such default at the address set forth below, (ii) permit Subordinate Lender (but Subordinate Lender is not obligated) to cure any such default within thirty (30) days from the delivery of such notice by making payment or doing such other act or thing as may be necessary or proper, or, in the case of a default which cannot with due diligence be cured within a period of thirty (30) days, permit Subordinate Lender (but Subordinate Lender is not obligated) to begin to cure such default promptly after the mailing of such notice so long as Subordinate Lender prosecutes the curing with all due diligence and cures such default within sixty (60) days, and (iii) accept all payments made and all acts and things done by Subordinate Lender as though the same had been timely done or performed by Borrower so that they shall be as effective to prevent a default as the same would have been if timely done or performed by Borrower. In the event of the occurrence of a non-curable default under the First Priority Loan Documents prior to any succession to title by the Subordinate Lender under any of the Subordinate Financing Documents or otherwise, First Priority Lender agrees that it will not exercise any of its remedies available to it under the First Priority Loan Documents or any collateral documents so long as all payments under the First Priority Loan are kept current and all curable defaults are cured pursuant to the provisions hereof. Subsequent to any succession to title by the Subordinate Lender under any of the Subordinate Financing Documents or otherwise, First Priority Lender may exercise any of its remedies available to it under the First Priority Loan Documents or any collateral documents in the event of any default under the First Priority Loan, without regard to whether such defaults are curable or not by Borrower or Subordinate Lender.

(r) **First Priority Loan Amount.** First Priority Lender hereby acknowledges that there are no other obligations or indebtedness of Borrower secured by the First Priority Loan Documents other than the First Priority Loan, and, without the prior written consent of Subordinate Lender, First Priority Lender shall make no other advances or loans, except for the First Priority Loan, to Borrower which will be secured by the First Priority Loan Documents other than advances to pay taxes, assessments, insurance premiums, attorneys' fees and funds to repair, maintain or preserve the Property and improvements therein or thereon.

(s) **No Other Amendment.** Except for the subordination herein contained in favor of First Priority Lender, nothing contained herein shall in anywise impair, alter or diminish the effect, security title, security interest, lien or encumbrance of the Subordinate Financing Documents from Borrower to Subordinate Lender on the Property or any of the rights and remedies of Subordinate Lender granted therein.

(t) **Termination of This Agreement.** At such time as the First Priority Loan is paid and satisfied in full, this Agreement shall terminate and First Priority Lender and Subordinate Lender shall each thereupon execute such termination documents as the other may reasonably request. Notwithstanding the immediately preceding sentence, if this Agreement terminates at such time as the First Priority Loan is paid and satisfied in full, all actions taken by First Priority Lender in connection with this Agreement or with respect to the rights, title and interests hereby assigned shall continue to be valid and binding upon Subordinate Lender notwithstanding any such termination, except that any future actions (including payments or distributions) shall no longer be controlled by any actions taken by First Priority Lender prior to termination of this Agreement.

4. **Notices.** Any and all notices, elections, demands, requests and responses thereto permitted or required to be given under this Agreement shall be in writing, signed by or on behalf of the party giving the same, and shall be deemed to have been properly given and shall be effective upon being either (i) personally delivered or delivered by courier or messenger, (ii) delivered by recognized air courier (such as Overnight Delivery, UPS or Airborne), or (iii) deposited in the United States mail, certified with return receipt requested, in each case with all postage or delivery charges prepaid, addressed to the other party at the address of such other party set forth below or at such other address within the continental United States as such other party may designate by notice specifically designated as a notice of change of address and given in accordance herewith; provided, however, that the time period in which a response to any such notice, election, demand or request must be given shall commence on the date of receipt thereof; and provided further that no notice of change of address shall be effective until the date of receipt thereof. Rejection or other refusal to accept or inability to deliver because of changed address of which no notice has been received shall also constitute receipt.

Any such notice, election, demand, request or response, if given to First Priority Lender, shall be addressed as follows:

American Memorial Life Insurance Company
c/o Assurant Asset Management
28 Liberty Street
New York, NY 10005
Attn: General Counsel; Loan No. 4040360-03

With a copy to:

Assurant Asset Management
28 Liberty Street
New York, New York 10005
Attn: Senior Vice President - Mortgages; Loan No. 4040360-03

and, if given to Subordinate Lender, shall be addressed as follows:

North Marin Water District
999 Rush Creek Place
Novato, CA 94948
Attn: _____

and, if given to Borrower, shall be addressed as follows:

Marin Country Club, Inc.
500 Country Club Drive
Novato, CA 94949
Attn: General Manager

Any notice, demand or request which shall be served upon either of the parties in the manner aforesaid shall be deemed sufficiently given for all purposes hereunder (a) at the time such notices, demands or requests are hand-delivered in person or (b) five (5) days after the date of the mailing of such notices, demands or requests in accordance with the preceding portion of this paragraph.

5. Further Actions. This Agreement is absolute and is effective immediately and Subordinate Lender shall, upon request by First Priority Lender, make, execute and deliver, or cause to be made, executed and delivered to First Priority Lender and, where appropriate, cause to be recorded and/or filed and from time to time thereafter to be re-recorded and/or refiled at such time and in such offices and places as shall be deemed desirable by First Priority Lender, any and all such other and further assignments, instruments of further assurance, certificates and other documents as may be reasonably required in order to effectuate, complete, or perfect, or to continue and preserve the obligations of Subordinate Lender and/or the rights of First Priority Lender under this Agreement. Upon any failure by Subordinate Lender so to do, First Priority Lender may make, execute, record, file, re-record and/or refile any and all such assignments, instruments, certificates, and documents for and in the name of Subordinate Lender, and Subordinate Lender hereby irrevocably appoint First Priority Lender the agent and attorney-in-fact of Subordinate Lender so to do. After request by the First Priority Lender, the Subordinate Lender shall within ten (10) days furnish the First Priority Lender with a true and complete copy of all Subordinate Financing Documents (if not theretofore provided), together with a statement, duly acknowledged and certified setting forth the original principal amount owed under the Subordinate Financing Documents, the unpaid principal balance, all accrued interest but unpaid interest and any other sums due and owing thereunder, the rate of interest, the monthly payments and that there exists no defaults under the Subordinate Financing or the Subordinate Financing Documents.

6. Governing Law. This Agreement shall be governed by the laws of the State of California.

7. Counterparts. This Agreement may be executed in several counterparts, each of which shall be considered an original for all purposes.

8. **No Waiver.** No waiver by any party of the compliance of any other party with any term, condition, provision, obligation, or requirement under this Agreement shall constitute a waiver of such party's right to require full compliance therewith. No failure or delay on the part of any party hereto in exercising any right, power or remedy hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right, power or remedy preclude any other or further exercise thereof or the exercise of any other right, power or remedy hereunder.

9. **Expenses.** Borrower will pay all costs and expenses required to satisfy the conditions of this Agreement, including but not limited to, all taxes and recording expenses and all legal fees and expenses of First Priority Lender's and Subordinate Lender's counsel.

10. **Equitable Relief.** Each party hereto acknowledges that to the extent that no adequate remedy at law exists for breach of its obligations under this Agreement, in the event either party fails to comply with its obligations hereunder, the other party shall have the right to seek specific performance of the obligations of such defaulting party, injunctive relief or such other equitable relief as may be available. In case any provision contained in this Agreement shall be unenforceable, the enforceability of the remaining provisions shall not be impaired thereby.

11. **Amendments in Writing.** No amendment, supplement, modification, waiver or termination of this Agreement shall be effective against a party against whom the enforcement of such amendment, supplement, modification, waiver or termination would be asserted, unless such amendment, supplement, modification, waiver or termination was made in a writing signed by such party.

12. **Successors and Assigns.** This Agreement shall be binding upon Borrower, Subordinate Lender, First Priority Lender and their respective heirs, successors, personal representatives and assigns and shall inure to the benefit of Subordinate Lender and First Priority Lender and its successors and assigns.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

SUBORDINATE LENDER:

NORTH MARIN WATER DISTRICT

By: _____

Name: _____

Title: _____

(ATTACH ACKNOWLEDGMENT)

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

SS:

COUNTY OF _____

On _____, 2017 before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Seal)

(Signature of person taking acknowledgment)
(Title or rank)
(Serial number, if any)

BORROWER:

MARIN COUNTRY CLUB, INC., a California corporation

By: _____
Name: _____
Title: _____

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA

SS:

COUNTY OF _____

On _____, 2017 before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Seal)

(Signature of person taking acknowledgment)
(Title or rank)
(Serial number, if any)

FIRST PRIORITY LENDER:

**AMERICAN MEMORIAL LIFE INSURANCE
COMPANY**, a South Dakota corporation

By: _____
Name: _____
Title: _____

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF NEW YORK

COUNTY OF NEW YORK

On _____, 2017 before me, _____, a Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Seal)

(Signature of person taking acknowledgment)
(Title or rank)
(Serial number, if any)

EXHIBIT A

(Legal Description of Real Property)

Tax Map Reference Numbers: 160-422-08; 160-040-24; 160-010-75; 160-382-13

EXHIBIT B

(List All Subordinate Financing Documents; to be Delivered to First Priority Lender)

- 1) Subordinate Loan Agreement;
- 2) the Subordinate Mortgage.

[DRAFT]

Recording requested by:
North Marin Water District

When recorded mail to:

Bold, Polisner, Maddow, Nelson & Judson
500 Ygnacio Valley Road, Suite 325
Walnut Creek, CA 94596
Attn: Ari Lauer

Space above this line for Recorder's use

SUBORDINATED DEED OF TRUST

THIS SUBORDINATED DEED OF TRUST (the "Deed of Trust"), made and entered into effective this _____ day of _____, 2016, between **MARIN COUNTRY CLUB, INC.**, a California corporation (the "Trustor"), whose address is 500 Country Club Drive, Novato, CA 94949; **NORTH MARIN WATER DISTRICT** (the "Beneficiary"), whose address is 999 Rush Creek Place, Novato, CA 94948; and **BOLD, POLISNER, MADDOW, NELSON & JUDSON**, a California Professional Corporation (the "Trustee"), whose address is 500 Ygnacio Valley Road, Suite 325, Walnut Creek, CA 94596;

TRUSTOR HEREBY irrevocably grants, transfers, and assigns to Trustee, in trust, with power of sale, all of Trustor's right, title and interest in that certain real property in the City of Novato, County of Marin, State of California, commonly known as Assessor's Parcel Numbers 160-422-08, 160-040-24, 160-010-75 and 160-382-13, as more particularly described on Exhibit A attached hereto and incorporated herein (the "Property").

ARTICLE I. THIS CONVEYANCE IS FOR THE PURPOSE OF SECURING:

1. Payment of the indebtedness [evidenced by that certain Promissory Note of even date herewith] in the stated principal amount of One Million Six Hundred Ninety-Five Thousand Seven Hundred Fifty-Eight Dollars (\$1,695,758), which is executed by Trustor and payable to Beneficiary (the "Note"), together with interest thereon and late charges as provided by the Note, which are made a part hereby reference.

2. The payment of additional sums and interest thereon which may hereafter be incurred by or loaned to Trustor, or its successors or permitted assigns, when evidenced by another note or notes, reciting it is so secured by this Deed of Trust, and made by Trustor or any successor in ownership, and all renewals, extensions, modifications or amendments of such note or notes; and

3. The performance of each obligation of Trustor contained in this Deed of Trust.

ARTICLE II. TO PROTECT THE SECURITY OF THIS DEED OF TRUST, TRUSTOR AGREES:

1. To keep the Property in good condition and repair and to not to commit or permit waste of the Property.

2. To provide, maintain, and deliver to Beneficiary a policy of fire insurance satisfactory to and with loss payable to Beneficiary. If Trustor is not in default hereunder, Trustor shall have the right, within Trustor's sole discretion, to apply the insurance proceeds under any fire insurance policy to restore or rebuild any portion of the Property that has been damaged or destroyed to the same condition, character and value as existed prior to such damage or destruction, so long as the value of the property is

not less than the value of the outstanding balance of the Note. If the value of the property is less than the value of the total outstanding indebtedness secured against the Property, and Trustor does not apply the insurance proceeds as set forth in the preceding sentence, then Trustor shall apply such insurance proceeds to reduce the amount of the indebtedness under the Note by the amount of such insurance proceeds to the extent of the outstanding balance of the Note. In the event that Trustor is in default hereunder, Beneficiary shall have the option, to apply the insurance proceeds to cure the default under the Deed of Trust, and release the remaining proceeds to Trustor to restore or rebuild the Property that has been damaged or destroyed.

3. To appear in and defend, and to pay all costs and expenses of, including costs of evidence of title and attorneys' fees in a reasonable sum, in any action or proceeding purporting to affect the security of this Deed of Trust or purporting to affect the rights and powers of Beneficiary or Trustee.

4. To pay, at least 10 days before delinquency, all taxes and assessments affecting the Property, and all costs, fees, and expenses described in this Deed of Trust. If Trustor fails to make any payment or to do any act as provided in this Deed of Trust, then Beneficiary or Trustee may (but is not obligated to), without any notice to Trustor, make the payment or do the act in the required manner and to the extent deemed necessary by Beneficiary or Trustee to protect the security of this Deed of Trust.

ARTICLE III. THE PARTIES AGREE THAT:

1. This Deed of Trust and the indebtedness secured by this Deed of Trust shall at all times be subject to the terms and conditions of a Subordination and Intercreditor Agreement, dated January 7, 2015, by and among Beneficiary, Trustor and American Memorial Life Insurance Company ("**Senior Lender**") (as amended or otherwise modified from time to time, the "**Subordination Agreement**"). Pursuant to the Subordination Agreement, Beneficiary agreed to subordinate this Deed of Trust to that certain Deed of Trust dated as of January 7, 2015 for the benefit of "Senior Lender," as beneficiary ("**Senior Deed of Trust**") which Senior Deed of Trust encumbers the Property. The rights of the Beneficiary to receive payment and to exercise rights hereunder shall at all times be subject and subordinate to the payment of all senior loan obligations pursuant to the terms of the Subordination Agreement.

2. Upon default by Trustor in the payment of any indebtedness secured by this Deed of Trust or in the performance of any obligation under this Deed of Trust, Beneficiary may declare all sums secured by this Deed of Trust immediately due and payable by delivering to Trustee (a) a written declaration of default and demand for sale, and (b) a written notice of default and election to sell the Property. Trustee shall duly record the notice of default and election to sell. Beneficiary also shall deposit with Trustee this Deed of Trust, and all documents evidencing any additional expenditures secured by this Deed of Trust.

After the required time period has lapsed following the recordation of the notice of default, and after notice of sale has been given as required by law, Trustee, without demand on Trustor, shall sell the Property at the time and place specified in the notice of sale, either as a whole or in separate parcels, and in any order determined by Trustee, at public auction to the highest bidder for cash in lawful money of the United States, payable at the time of sale. Trustee may postpone sale of all or any portion of the Property by public announcement at the time and place of sale, and from time to time thereafter may postpone the sale by public announcement at the time fixed by the preceding postponement. Trustee shall deliver to the purchaser at the auction its deed conveying the Property sold, but without any covenant or warranty, express or implied. The recital in the deed of any matter or fact shall be conclusive proof of the truthfulness thereof. Any person, including Trustor, Trustee, or Beneficiary, may purchase at the sale.

After deducting all costs, fees, and expenses of Trustee and Beneficiary under this Paragraph 1 of Article III, including costs of procuring evidence of title incurred in connection with sale, Trustee shall apply the proceeds of sale to payment of: all sums expended under the terms of this Deed of Trust, not then repaid, with accrued interest at the rate then in effect as of the date hereof (but not in excess of the maximum rate of interest then permitted by law); all other sums then secured by this Deed of Trust; and the remainder, if any, to the person or persons legally entitled thereto.

3. If all or any part of the Property, or any interest therein, is sold, conveyed, transferred, disposed of, or alienated by Trustor, or by the operation of law or otherwise, all sums secured by this Deed of Trust shall, at the option of Beneficiary, become immediately due and payable. Trustor shall not assign this Deed of Trust without the prior written consent of Beneficiary, which consent shall not be unreasonably withheld, provided that (a) Beneficiary shall have no right to approve the sale of the Property, and (b) Beneficiary's right to approve the sale of assets of the Trustor is limited to situations where those assets remaining after such sale are less than the total outstanding indebtedness secured against the Property, as valued by an appraisal obtained at the time of such sale. An assignment of this Deed of Trust by Trustor in violation of this Section 3 shall be deemed a sale of the Property and all sums secured by this Deed of Trust shall, at the option of Beneficiary, become immediately due and payable.

4. Notwithstanding anything to the contrary in this Deed of Trust, Trustor shall have the right, without the consent of Beneficiary, but upon written notice to the Beneficiary, and upon provision of an appraisal (which at the option of Trustor may be obtained at the time of the proposed encumbrance or may preexist such proposed encumbrance), to further encumber the Property by recording additional security instruments in positions senior to this Deed of Trust after the date hereof and this Deed of Trust shall be made subordinate to any additional indebtedness that is secured by the Property after the date of this Deed of Trust, provided, however, that the total outstanding indebtedness secured against the Property does not exceed one hundred percent (100%) of the appraised value of the Property at the time of securing a new loan against the Property. If Trustor elects to further encumber the Property by additional indebtedness, Trustor shall obtain an appraisal to determine the appraised value of the Property at the time of securing a new loan against the Property, which such appraiser shall be selected by Trustor, subject to the consent of Beneficiary, which consent shall not be unreasonably withheld.

5. By accepting payment of any sum secured by this Deed of Trust after its due date, Beneficiary does not waive its right either to require payment when due of all other sums so secured or to declare default for failure to pay any indebtedness secured by this Deed of Trust.

6. That upon written request of Beneficiary stating that all sums secured hereby have been paid, and upon surrender of this Deed of Trust [and the Note] to Trustee for cancellation and retention and upon payment of its fees, Trustee shall reconvey, without warranty, the Property then held hereunder. The recitals in such reconveyance of any matters or facts shall be conclusive proof of the truthfulness thereof. The grantee in such reconveyance may be described as "the person or persons legally entitled thereto."

7. Upon written request of Beneficiary and presentation of this Deed of Trust [and the Note] for endorsement, and without notice to Trustor, Trustee may reconvey all or any part of the Property. The exercise by Trustee of any of the foregoing powers shall not affect the personal liability of any person for payment of the indebtedness secured by this Deed of Trust, or the lien of this Deed of Trust as security for the repayment of the full amount secured by this Deed of Trust.

8. Any award of damages in connection with any taking or condemnation, or for injury to the Property by reason of public use, or for damages for injury to the Property, up the outstanding balance of

the Note at such time, shall be paid by Trustor to Beneficiary as further security for all obligations secured by this Deed of Trust. Upon receipt of such proceeds, Trustor shall have the right to apply them to the Property in the same manner and with the same effect as provided herein for the disposition of proceeds of fire insurance. In the event that Trustor is in default hereunder, Beneficiary shall have the option to apply proceeds to cure the default under the Deed of Trust, and release the remaining proceeds to Trustor to restore or rebuild the Property that has been injured or damaged. Nothing herein shall prevent the accrual of interest on any portion of the proceeds to be applied to the principal balance due under the Note until the proceeds are received by Beneficiary.

9. All notices hereunder shall be deemed to have been duly given if personally delivered or mailed by United States registered or certified mail, with return receipt requested, postage prepaid to the parties at the following addresses (or at such other addresses as shall be given in writing upon any party to the others) and shall be deemed complete upon any such mailing:

To Trustor:	Marin Country Club, Inc. 500 Country Club Drive Novato, CA. 94949 Attention: Board of Directors and General Manager Telephone: (415) 382-6700
-------------	---

To Beneficiary:	North Marin Water District _____ _____ Attention: _____ Telephone: _____ Facsimile: _____
-----------------	--

Trustor requests that a copy of any notice of default and of any notice of sale hereunder be mailed to Trustor at the address set forth above.

10. This Deed of Trust applies to, inures to the benefit of, and binds all parties to this Deed of Trust and their heirs, legatees, devisees, administrators, executors, successors, and assigns. The term "Beneficiary" shall mean the NORTH MARIN WATER DISTRICT, and its successors, and assigns. In this Deed of Trust, whenever the context so requires, the masculine gender includes the feminine and/or neuter, and the singular number includes the plural. This Deed of Trust may only be modified or amended by a formal written instrument executed by the party against whom enforcement of the amendment or modification is sought.

11. Trustee accepts the rights and obligations hereunder when this Deed of Trust, duly executed and acknowledged, is made a public record as provided by law. Trustee is not obligated to notify any party to this Deed of Trust of pending sale under any other deed of trust or of any action or proceeding in which Trustor, Beneficiary, or Trustee shall be a party unless brought by Trustee.

12. Beneficiary, or any successor in ownership of any indebtedness secured by this Deed of Trust, may from time to time, by written instrument and notice to Trustor, substitute a successor or successors to any Trustee named in or acting under this Deed of Trust. When executed by Beneficiary and duly acknowledged and recorded in the office of the recorder of the county where the Property is situated, the substitution instrument shall be conclusive proof of proper substitution of the successor Trustee or Trustees, whereupon the successor Trustee or Trustees shall, without any other instrument of conveyance, succeed to all of the title, estate, rights, powers, and duties formerly held by the predecessor

[DRAFT]

Trustee or Trustees. Said instrument must contain the name of the original Trustor, Trustee and Beneficiary hereunder, the book and page where this Deed of Trust is recorded and the name and address of the new Trustee.

13. The rights, powers, and remedies conferred in this Deed of Trust are concurrent and cumulative to all other rights, powers, and remedies provided in this Deed of Trust or given by law. These rights, powers, and remedies may be exercised singly, successively, or together, and as often as deemed necessary, and, except to the extent required by law, the exercise of one right, power, or remedy shall not affect any other right, power, or remedy or cure or waive any default or notice of default under this Deed of Trust.

14. The recitals contained in any reconveyance, trustee's deed, or any other instrument executed by the Trustee from time to time under the authority of this Deed of Trust or in the exercise of its powers or the performance of its duties under this Deed of Trust, shall be conclusive evidence thereof, and the recitals shall be binding and conclusive upon the Trustor, its partners, successors, and permitted assigns, and all other persons.

15. Beneficiary or Trustee shall also have the right and power to enter upon the Property for the foregoing purposes, to appear in and defend any action or proceeding purporting to affect the security of this Deed of Trust or the rights or powers of Beneficiary or Trustee, to employ counsel; and to pay necessary expenses and costs, including reasonable attorneys' fees.

16. Without affecting the liability or obligations of any person, including Trustor, for the performance of any obligations secured hereby (excepting only any person or property otherwise expressly released in writing by Beneficiary), Beneficiary may from time to time and without notice release any person liable for payment of any of said indebtedness or the performance of said obligations, extend the time of payment or otherwise alter the terms of any of said obligations, accept additional security therefor of any kind, including trust deeds or mortgages, or alter, substitute or release any property securing said obligations.

MARIN COUNTRY CLUB, a California corporation

By: _____
Its : President

[DRAFT]

[Notary Acknowledgment]

[DRAFT]

EXHIBIT A

(Legal Description)

TO BE INSERTED

14

MEMORANDUM

To: Board of Directors
From: Pablo Ramudo, Water Quality Supervisor *PR*
Subject: Point Reyes System -Disinfection Byproduct Operational Evaluation
P:\LAB\WQ Supv\2019\DBP Eval in PR.doc

February 1, 2019

RECOMMENDED ACTION: Information
FINANCIAL IMPACT: None at this time

One of the samples recently collected for compliance with the Disinfection Byproduct Rule had a concentration for total trihalomethanes (THM) above the level of the Maximum Contaminant Limit (MCL). This sample was collected at the location representing the maximum water age of the system as required by the regulations. The sample at this same location in the previous quarter was also above the level of the maximum contaminant limit. Although these test results were both above the MCL, the running annual average remained below the MCL so the exceedances did not put the district into a violation of the rule. The two exceedances did cause the Operational Evaluation Level to exceed the MCL. (See attached January 11, 2019 letter to the General Manager) The district is required by the California Division of Drinking Water (DDW) to evaluate any and all conditions that contributed to the high disinfection byproducts and submit a report of the evaluation by February 28, 2019. This evaluation is currently being finalized.

A temporary operating plan was formulated along with Brad Stompe, Treatment and Distribution Supervisor, in order to minimize THM formation potential while continuing to provide adequate disinfection for simultaneous compliance with the Total Coliform and Groundwater Rules.

SYSTEM EVALUATION

An analysis of the water sources, treatment practices, and distribution system operation has clearly identified salinity intrusion at the Coast Guard Wells as the most significant factor contributing to the increase in disinfection byproducts in the Point Reyes system. A decade of measurements of chemical and physical qualities of the water as well as operational variables was evaluated, with the marked increase in bromide being identified as the responsible chemical constituent.

HISTORY of SALINITY INTRUSION

The wells adjacent to the former Coast Guard Housing in Point Reyes Station have always been susceptible to seawater intrusion into the aquifer during very high tides. For many years an inflatable dam was used downstream of the wells in order to impound fresh water in the recharge area. This effectively stopped any seawater from entering the aqueduct from which the Coast Guard wells draw water. The use of the inflatable dam ceased in the 1980's as part of a settlement with environmental groups concerned with the ability of migrating salmon to move upstream and downstream.

HISTORY OF SALINITY INTRUSION (continued)

In response to the removal of the inflatable dam, the district developed a practice of off-tide pumping to avoid drawing salty water into the aquifer. The practice was frequently successful although some years seawater did enter the aquifer, temporarily increasing measurable salts just after the king tides in mid-summer. In the last 10 or 12 years however, salinity intrusion has been more severe and long-lasting. Salinity constituents have not returned to their baseline levels since 2013.

In 2014 and 2015, NMWD completed a pipeline and facilities to pump source water from a well on the Gallagher ranch to the Point Reyes Treatment Plant as a new source that would be out of the reach of tidal influence and would not be susceptible to salinity intrusion. This well has been instrumental in the District's ability to remain in compliance with the Disinfection Byproduct Rule as well as the Lead and Copper Rule (salty water is more corrosive of metal plumbing components in customers' homes). But despite being able to supply approximately 50% of demand from Gallagher well, salinity has risen by so much at the Coast Guard Wells that their influence is now putting that compliance at risk. Apart from the increase in all constituents associated with seawater (sodium, chloride, hardness) the dramatic increase in bromide of 3,000% is by far the most serious.

TEMPORARY OPERATING CHANGES

In response to the risk of a violation of the Disinfection Byproduct Rule we have developed a set of criteria to minimize the formation of THMs. The target concentration for chlorination at the Point Reyes treatment plant will be decreased from 0.90 mg/L to 0.80 mg/L. Additionally, the target concentration for the chlorine booster at the PRE 1 pump station will be halved to 0.4 mg/L. To mitigate for the decreased protection from microbial regrowth and risk from contamination, we will be increasing the bacterial monitoring in the Paradise Ranch Estates Zones. Any increase in the heterotrophic plate counts and/or any counts above 500 CFU/ml will prompt a corrective action appropriate for the result (flushing, re-chlorination, increasing tank turnover).



GAVIN NEWSOM
GOVERNOR



JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

January 11, 2019

Water System No. 2110006

Drew McIntyre
North Marin Water District – Pt. Reyes
P.O. Box 146
Novato, CA 94948

DISINFECTION BYPRODUCT OPERATIONAL EVALUATION LEVEL EXCEEDANCE FOR NORTH MARIN WATER DISTRICT – PT. REYES

Based on the most recent Total Trihalomethanes (TTHM) results for the North Marin Water District – Pt. Reyes (System), sampled November 13, 2018, the Operational Evaluation Level (OEL) has exceeded 0.080 milligrams per liter (mg/L). Section 64400.90 Chapter 15, Title 22 of the California Code of Regulations defines the OEL for TTHM as "... the sum of the two previous quarters' TTHM results plus twice the current quarter's TTHM result, divided by 4 to determine an average." Each quarter, the System must calculate the locational running annual average (LRAA) and OELs to demonstrate that the LRAA is below the maximum contaminant levels (MCLs) and the OELs are below report trigger levels.

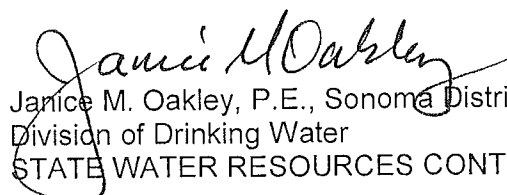
The most recent TTHM OEL is 0.088 mg/L for the DIST – PRE #4 SAMPLE STATION (2110006-008) location. The System must complete the **Operational Evaluation Reporting** form, found at:

http://www.waterboards.ca.gov/drinking_water/programs/districts/sonoma_district.shtml#oel.

The evaluation report is designed to aid the water system in identifying problematic areas that are contributing to the formation of disinfection byproducts. Ideally the System should take action to remediate the problematic areas prior to the next quarterly DBP sample in order to avoid an MCL exceedance. The evaluation must include Source Water, Treatment Process, and Distribution System and the System should use the associated evaluation checklists found on the website. The System is required to submit a written report of the evaluation to the Department **no later than 90 days after being notified by the laboratory** of the analytical result that caused the OEL exceedance. The evaluation report must be submitted to our office by **February 28, 2019**.

If you have any questions regarding this letter, please contact Waldon Wong at (707) 576-2764.

Sincerely,


Janice M. Oakley, P.E., Sonoma District Engineer
Division of Drinking Water
STATE WATER RESOURCES CONTROL BOARD

RECEIVED

JAN 15 2019

North Marin Water District

CC: Brad Stompe, P.O. Box 146, Novato, CA 94948
Pablo Ramudo, P.O. Box 146, Novato, CA 94948

FELICIA MARCUS, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

15

MEMORANDUM

To: Board of Directors February 1, 2019
From: Pablo Ramudo, Water Quality Supervisor *PR*
Subject: Revised Report - Taste and Odor Control Strategy for Stafford Lake Treatment Plant
p:\lab\wq supv\2019\memo to board re t and o study revision.doc

RECOMMENDED ACTION: Information only.

FINANCIAL IMPACT: None at this time

North Marin Water District contracted SRT Consultants In 2015 to help develop a control strategy for taste and odor which occurs periodically in water sourced from Stafford Lake Reservoir. The study was completed in December 2015 and presented to the Board at the March 1, 2016 meeting. The report includes a summary of the pertinent monitoring data, identifies sources of the nutrients fueling algae blooms in Stafford Lake and offers practical steps which the District can employ to control taste and odor events in drinking water produced at Stafford Lake Treatment Plant.

After the report was accepted, Dominic Grossi, one of the landowners on the Stafford Lake Watershed and operator of the Grossi and Sons Dairy raised concerns about some of the language in the report that he felt inaccurately described the potential contribution that his operation had on the problem. NMWD asked SRT Consultants to review Mr. Grossi's comments and make any revisions necessary to address his concerns that any inaccuracy could mischaracterize Mr. Grossi's responsible land management or minimize other potential external sources of nutrients. SRT has revised the report which is attached for board review.

TASTE & ODOR CONTROL STRATEGY

FOR NORTH MARIN WATER DISTRICT

STAFFORD LAKE TREATMENT PLANT

REVISED - JANUARY, 2019

NMWD JOB # 1.6600.81



SRT CONSULTANTS | 792 BAY STREET, SAN FRANCISCO, CA 94109

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SECTION 1 INTRODUCTION & PURPOSE

The North Marin Water District (NMWD or District) retained SRT Consultants (SRT) to evaluate the causation and potential mitigation of taste and odor (T&O) issues observed in the water of Stafford Lake. NMWD experiences seasonal T&O issues at Stafford Lake and within the distribution system indicative of Geosmin-producing algal blooms.

Stafford Lake, as shown in Figure 1, is a 1,210 acre-foot surface water detention lake within Marin County and the Novato Creek Watershed. Stafford Lake was created with the construction of Stafford Dam on Novato Creek in 1951 in order to provide a drinking water supply source for the growing community of the City of Novato, which lies four miles east of the lake.



Figure 1 Stafford Lake

Stafford Lake has a surface area of approximately 183 acres and drainage basin for a watershed of approximately 8.3 square miles. Primary land uses in the Stafford Lake watershed include: the Indian Valley Golf Club, Stafford Lake Park, the George Grossi & Sons Dairy, small wineries, low-density residential housing with septic systems, and a horse ranch with associated grazing. Additional Stafford Lake and its watershed uses include incidental flood control and cattle grazing.

NMWD is committed to the protection of the source of drinking water for Novato. NMWD serves a suburban population of approximately 61,000 people over a 75 square mile service area, as shown in Figure 2.

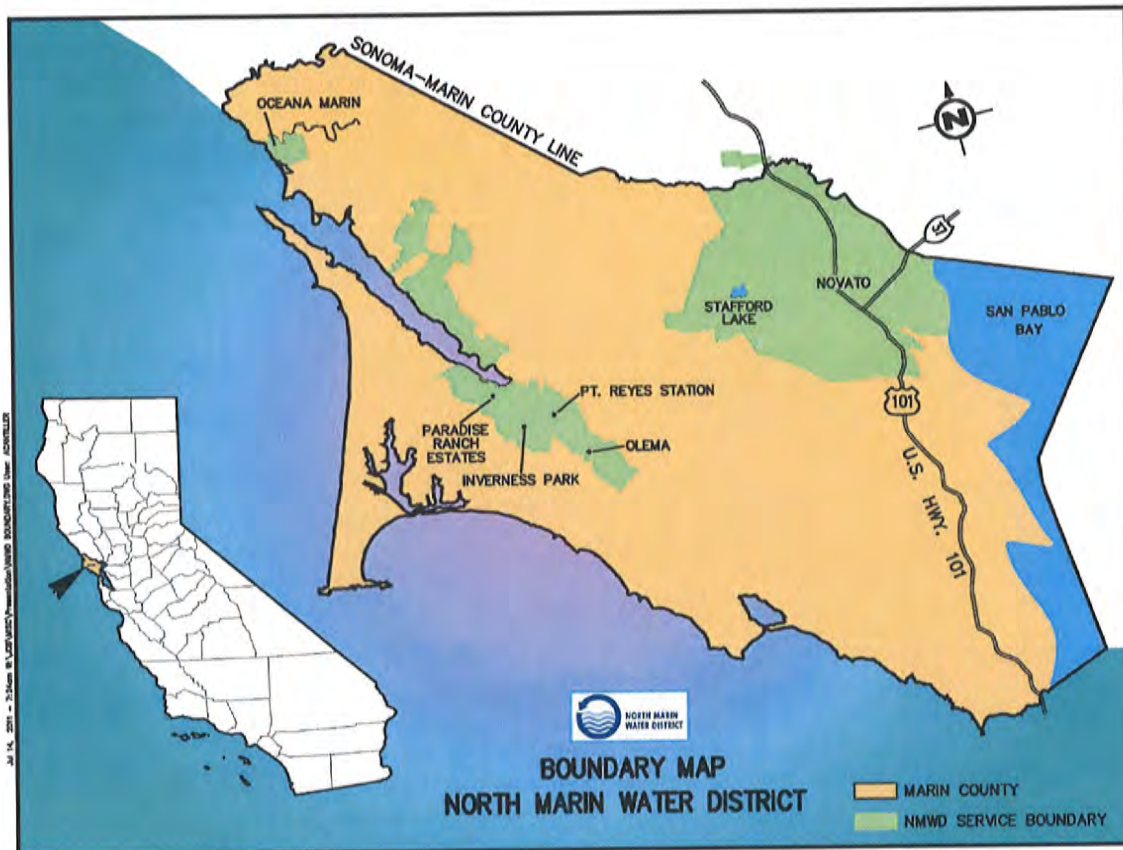


Figure 2 North Marin Water District Service Area

Water from Stafford Lake is treated at the Stafford Lake Water Treatment Plant (STP) located directly below the Stafford Dam. Stafford Lake provides, on average, 20-percent of the water served by NMWD, when the STP is in operation.

1.1 Purpose

Due to a continuous occurrence of customer T&O complaints resulting from water quality issues at Stafford Lake, NMWD has initiated the Stafford Lake Taste and Odor Control Project (Project). This Comprehensive T&O Control Strategy Technical Memorandum (TM) is the project's final deliverable.

Per the NMWD objectives, a successful T&O Control Strategy would optimize the current water treatment system to the best of its ability, while minimizing capital improvement costs, to effectively control T&O. NMWD used copper sulfate previously as the primary approach for managing algae and T&O issues, however it was found ineffective and was discontinued. NMWD does not intend to use copper sulfate in the future and instead will continue to

implement other measures to control T&O. A graphical depiction of the NMWD T&O Control Strategy objective is presented in Figure 3.

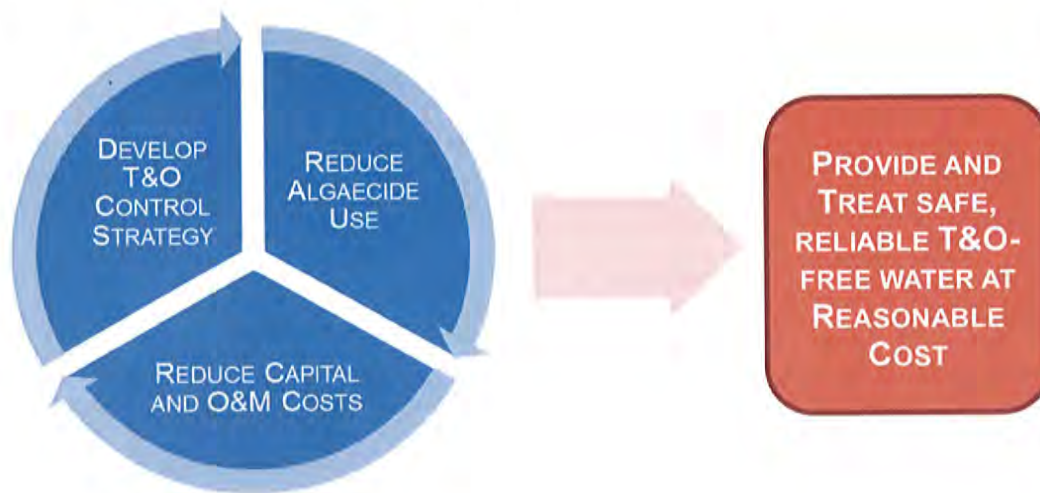


Figure 3 Comprehensive T&O Control Study Objectives

The primary task for the T&O Control Project was the completion of the Water Quality Evaluation TM, which included a comprehensive water quality evaluation and characterization of T&O causation at Stafford Lake. The findings and recommendations of this TM form the basis of this T&O Control Strategy TM.

The T&O Control Strategy includes the following:

- (1) Characterization of the T&O issues at Stafford Lake;
- (2) Descriptions of preferred T&O mitigation measures for NMWD and associated costs, as applicable;
- (3) A phased strategy for T&O control at Stafford Lake, including cost estimates for capital improvements and cost-savings for optimized operations;
- (4) A long-term implementation schedule of the T&O control strategy; and
- (5) An annual T&O mitigation schedule for operational optimization.

SECTION 2 CHARACTERIZATION OF T&O CAUSATION

The Stafford Lake water quality evaluation demonstrated that nutrient loading encourages Geosmin-producing algae growth in the late spring/summer, and subsequent algae die-off in the summer/fall, causing T&O issues and mid- and end-of-season STP shutdowns. This phenomenon occurs due to thermal stratification, anoxic conditions in the hypolimnion, and external and internal nutrient loading to Stafford Lake. Although significant efforts have been attempted by NMWD in the past to mitigate the T&O issues, the existing source control and treatment methods do not appear to adequately control the STP finished water quality. A summary of the observations that led to this conclusion follows:

1. **Nutrient Loading:** Nutrient concentrations – specifically phosphorus, as the lake is phosphorus-limited – are sufficiently high to cause significant algal blooms.
 - **External Nutrient Loading:** The watershed sampling points at the Fishing Bridge and Grossi Culvert, both of which drain Grossi & Sons Dairy property, and Park Residence, which drains the Stafford Lake Park area, release higher concentrations of nutrients, specifically phosphorus. External nutrient loading from sources in the watershed over time has led to the accumulation of nutrients in the sediments of the lake, and is responsible for the high concentration of nutrients available for release into the water column (internal nutrient loading).
 - **Internal Nutrient Loading:** Increased levels of Manganese (Mn) at the intake during anoxic conditions and recurrent algal bloom patterns indicate that significant internal nutrient loading is occurring in the lake. Internal nutrient loading perpetuates the algae growth cycle by feeding nutrients into the water column during anoxic conditions, and subsequently becoming available to algae in the epilimnion after a winter turnover event. Internal nutrient loading is likely the dominant form of nutrient loading in the lake.
2. **Algae Growth:** Based on algae data recorded by NMWD, high concentrations of algae occur annually in the late spring/early summer after a turnover event.
 - Cell counts for the Geosmin-producing algae (*Anabaena*, *Aphanizomenon*, *Planktothrix*) are much greater than for the MIB-producing bacteria, and algal peaks occur with a slight lag to the phosphorus concentration peaks.
3. **Taste and Odor:** T&O events occur in the summer/fall, typically following periods of Geosmin-producing algae growth and subsequent die-off. Algae decomposition also decreases DO concentrations in the hypolimnion to anoxic levels and releases nutrients from the lake sediments into the water column.
 - Limited Geosmin concentration data indicates that Stafford Lake's Geosmin concentrations before treatment are extremely high (450-500 ppt), and even though removal is approximately 97 percent, effluent Geosmin concentrations are well above the average human detection limit (9-14 ppt).
4. **Existing Treatment:** Source control and treatment methods have been implemented to mitigate the T&O causing compounds in the lake and in the STP finished water.

- The reservoir is actively aerated using a 12-acre aeration bed; however, the hypolimnion remains anoxic during certain times of the year resulting in the release of nutrients from the reservoir sediments.
- Epilimnetic SolarBees[®] are utilized to mix the epilimnion and disrupt the algae growth cycle. It is inconclusive as to whether the SolarBees[®] are effective.
- Efforts to improve primary coagulation have proved inefficient in removing suspended/dissolved solids without substantial chemical additions. Inefficient coagulation impedes the filtration efficiency.
- The removal of Mn with oxidation in the influent chamber followed by filtration has proved difficult during peaks of Mn in source water. High levels of Mn that remain in the water at STP ultimately use up capacity in the GAC units that should be reserved for Geosmin treatment.

SECTION 3 RECOMMENDED T&O CONTROL MITIGATION MEASURES

T&O mitigation strategies have been developed for Stafford Lake and the STP based on the findings presented in the Water Quality Evaluation TM and are summarized in Section 6 therein. SRT and NMWD staff reviewed the recommended mitigation strategies to determine feasibility and to prioritize the recommendations based on anticipated effectiveness, ease of implementation, and cost.

The mitigation strategies considered to be effective and feasible for implementation are detailed in the sections below. Cost of implementation and/or anticipated cost savings are included for each mitigation strategy, as applicable. Mitigation strategies are categorized as follows:

- 1) Source Control at Stafford Lake;
- 2) Optimized Removal of Geosmin; and
- 3) Treatment Process Improvements at STP.

The selected alternatives were evaluated to create an initial phased approach for the T&O Control Strategy, as presented in Section 4.

3.1 Source Control

In congruence with the actions that NMWD has already taken to improve the source water quality conditions, mitigating the source of the algae blooms is recommended as the primary means of facilitating T&O control at Stafford Lake. Although NMWD staff has previously employed several different methods to prevent algal blooms, the growth of algae continues to recur in Stafford Lake on an annual basis. The following section details the recommended mitigation alternatives that would control internal and external nutrient loading and subsequent algae growth in the lake.

3.1.1 Additional Water Quality Monitoring

Additional monitoring of key water quality parameters should be implemented to better understand the algae growth cycles and to optimize treatment techniques. Specifically, the following parameters need to be monitored on a more frequent schedule:

- Geosmin in raw water and in the STP finished water to better understand the levels of Geosmin that are occurring in the lake and the efficiency of Geosmin removal provided at STP. Additionally, if NMWD decides to convert to GAC-Capped Actifloc units, Geosmin should be sampled after the Actifloc units and prior to the GAC units to quantify the effectiveness. Geosmin should be sampled at least weekly during the time of year when T&O episodes most commonly occur (May through October, depending on the annual weather patterns).
- Oxygen Reduction Potential (ORP), Mn, Iron (Fe), and DO at the lake bottom to track the internal nutrient loading that is occurring in Stafford Lake on a daily basis. NMWD staff has indicated that it was feasible to install a monitoring probe near the intake, close to the bottom of the lake.

The water quality monitoring already conducted by NMWD with the addition of the above

parameters forms the basis of a T&O control water quality action plan that includes identified triggers to assist NMWD staff in addressing T&O-causing conditions before a significant T&O event occurs. Section 4.2 includes an initial template for the water quality action plan, which can be adjusted at the discretion of NMWD operations staff based on water quality data trends.

Schedule and Estimated Cost

It is recommended that additional water quality monitoring be initiated immediately to further inform NMWD as to the algal growth cycles within Stafford Lake. The cost of additional water quality monitoring will vary based on the resources currently available (i.e., monitoring probe, installation equipment). Additional monitoring of Geosmin will cost about \$10,000 per year, based on a monitoring schedule of 24 weeks per year and the collection of 3 samples per week (raw water, after the GAC-cap, and finished water).^{1,2}

3.1.2 Strategic Planning for Watershed

Strategic planning for any watershed that feeds a drinking water reservoir is necessary. For Stafford Lake, specifically, a comprehensive Sanitary Survey is recommended to better quantify the external nutrient loading sources coming from the watershed. A Sanitary Survey would inform a general strategic plan for watershed management, would specifically aid in the development of a nutrient management approach and sampling plan, and would provide further insight into Phosphate sources within the watershed.

Schedule and Estimated Cost

It is recommended that NMWD conduct a Sanitary Survey of the Stafford Lake Watershed in the first or second quarter of 2016. It is anticipated that a qualified consultant can complete a Sanitary Survey for approximately \$30,000.

3.1.3 Nutrient Management at Grossi Dairy

Although there are other external sources of phosphates entering Stafford Lake, watershed sampling conducted has indicated that the most substantial, quantifiable external source of phosphates is the Grossi Dairy Farm (Dairy) in close proximity to Stafford Lake, as indicated by the relative phosphorus concentrations entering Stafford Lake from eight (8) points throughout the watershed between 2010 and 2013.³ Although the Dairy has developed a set of nutrient management BMPs, run-off from the Dairy continues to feed nutrients into Stafford Lake. Additionally, there is no required nutrient or water quality monitoring plan in place as a means of tracking the nutrient loading from the Dairy.

¹ This estimate based on \$129/sample from EMSL Analytics in San Leandro, and 3 samples a week for 24-weeks. If this is determined to be cost-prohibitive for the District, the number of samples and/or number of weeks can be reduced, however the results will not be as comprehensive.

² Marin Municipal Water District (MMWD) was contacted to obtain an estimate for a Geosmin sample, as the only data received by SRT for Geosmin testing was completed at MMWD. MMWD was not able to provide a sample cost, however, it is recommended that NMWD explore this option based on the existing relationship between the water districts.

³ External phosphorus loading has been monitored by NMWD through watershed sampling. The highest levels of phosphorus in the watershed are from sample points at the Grossi Culvert and the Fishing Bridge, both of which drain the Grossi property (NMWD Water Quality Evaluation Technical Memorandum, September, 2015). Other sources of phosphorus also enter the lake around its perimeter, however these sources cannot be quantified.

It is critical that the Dairy institutes a more effective nutrient management program that includes a water quality monitoring component to ensure that nutrient loading is not occurring from agricultural run-off. It is anticipated that monitoring requirements will be included in the new waste discharge permit (or waiver) from the Regional Water Quality Control Board (RWQCB) and an annual report should be generated from the monitoring program for review by the RWQCB and NMWD. Attachment A includes guidelines for dairy waste management.

Controlling the nutrient inputs to Stafford Lake is essential to resolving the algal blooms and T&O issues at STP, and would not be effective without managing nutrient concentrations from the Dairy run-off. If the implementation of additional BMPs and specific monitoring requirements are not possible at the Dairy, it is recommended that NMWD consider negotiations with the landowner to relocate the waste produced by the Dairy operation, including manure application, to land further removed from the drinking water source, or outside of the drinking water source watershed. Additionally, NMWD could consider purchasing the land on which the Dairy currently operates to increase control and oversight on the watershed should external nutrient loading into Stafford Lake from the Dairy continue.

Schedule and Estimated Cost

It is recommended that NMWD continue discussions with Grossi Dairy Farm and Marin County regarding the external nutrient inputs that have been feeding Stafford Lake and the alternatives for nutrient management, as listed above. Based on the issues identified above, the following recommended implementation milestones are proposed⁴:

- **January 2016:** Development of a joint-party annual monitoring program (NMWD and Grossi Dairy) to track the nutrient inputs to Stafford Lake.
- **March 2016** (prior to STP startup): Based on the historical nutrient data, implement any necessary BMPs to ensure that external nutrient inputs are not entering Stafford Lake. See BMP guidelines included in Attachment A.
- **January 2017:** Development of first annual monitoring report, to be delivered to the County and NMWD for review and evaluation for compliance. The annual report will include the monitoring results and summary of BMPs currently in use.
- **March 2017** (prior to STP start up): Based on the data reported, evaluate the effectiveness of the additional BMPs. If deemed ineffective, initiate discussions to mitigate external nutrient inputs, including relocation of high waste facilities and grazing lands where nutrients are applied.

It is anticipated that external nutrient management will not be an additional expense for the District. As the responsible party, Grossi Dairy has been directed to protect the Lake from external nutrient input from the Dairy operation, and, therefore, should bear the cost of implementing additional water quality monitoring, implementation of BMPs, and additional mitigation actions, as necessary. The foreseen District expenses will be the staff and legal counsel hours committed to meetings and negotiations with the Dairy.

⁴ Any formal schedule of implementation would need to be negotiated with Grossi Dairy Farm.

3.1.4 Installation of In-Situ Oxygenation (I-SO)

Maintaining DO concentrations above 2.5 mg/L at the bottom of the lake is critical for mitigating internal nutrient loading, which is likely the most significant form of nutrient loading in the lake under the current conditions. Although data is inconclusive as to the degree of internal nutrient loading in the lake, the recurrent cycle of algal growth and anoxic conditions at the intake tower indicate that Stafford Lake is being fed phosphorus internally, stimulating the growth of algae after the nutrients are mixed during the winter turnover event. Maintaining oxygenated conditions in the bottom levels of the lake will also prevent Mn from reducing and dissolving into the water column, which would ultimately improve treatment efficiency.

Although NMWD currently aerates Stafford Lake utilizing a 12-acre aeration bed, it is likely that using pure oxygen to oxygenate the hypolimnion between the Stafford Lake Island and the STP's intake would be a more effective method of controlling algae growth. Since Stafford Lake is not sufficiently deep to utilize pure oxygen through diffusers (see Attachment B), different methods were researched to provide appropriate oxygen rates and pressures for effective oxygenation.

The installation of one Praxair® In-Situ Oxygenation (I-SO™) unit is one option for increased oxygenation near the intake. The eleven-foot diameter, transportable, floating I-SO™ system operates by feeding oxygen into a water body at a depth of six feet through a draft tube facing the lake bottom, as shown in Figure 4. Oxygen is pumped as a jet stream to the bottom of the lake and is recirculated to the lake's surface after reaching the lake floor. The power of the jet stream breaks through the thermocline and efficiently oxygenates the hypolimnion.

I-SO™ units offer improved oxygen utilization efficiency of at least 90%, compared to 25% with air-based aeration systems. I-SO™ units are typically used for aeration at wastewater treatment plants; however, they have also been successfully used in the oxygenation of shallow drinking water reservoirs of up to sixty feet in depth.⁵

At Stafford Lake, it is anticipated that an I-SO™ unit would aerate an area near the STP intake, which would help control internal nutrient loading at the one of the deepest parts of the lake, as well as reduce Mn loading, a critical improvement for treatment process efficiency at STP.

⁵ Contra Costa Water District, Contra Loma Reservoir since 2000.

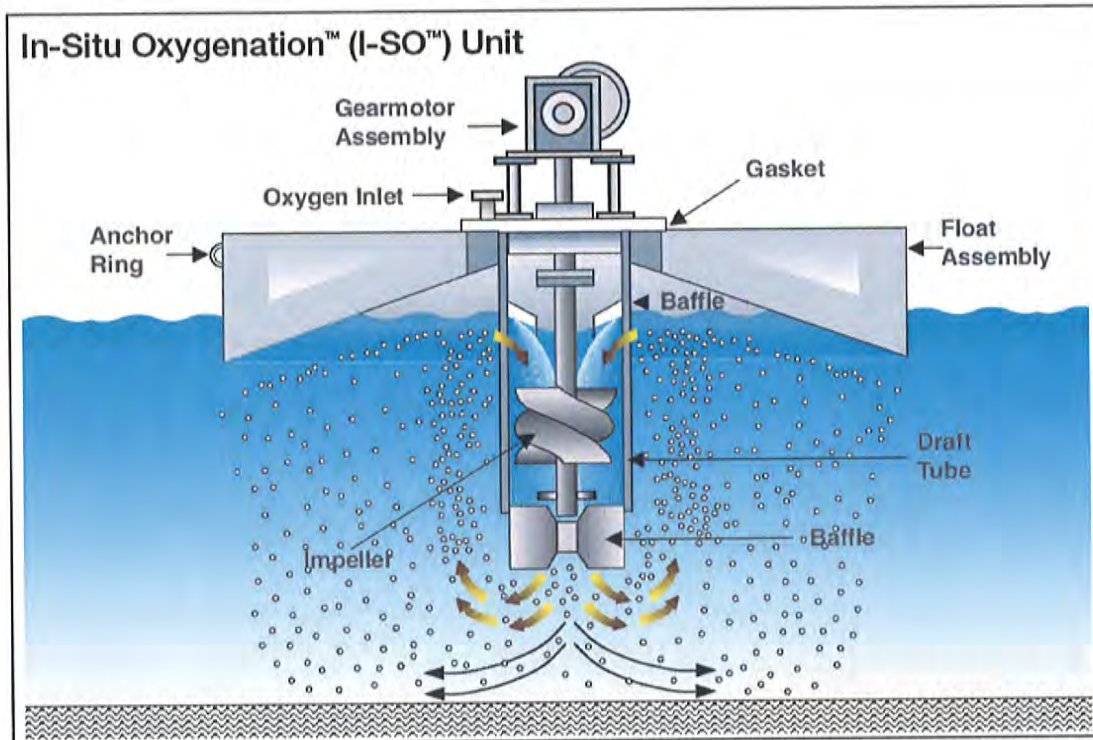


Figure 4 In-Situ Oxygenation Unit

Design Parameters

The amount of oxygen delivered by the I-SO™ system is automatically or manually regulated according to a pre-determined target concentration. An I-SO™ system should be sized for Stafford Lake based on the basic design parameters included in Table 1.

Since the I-SO™ units are typically utilized for wastewater treatment ponds, it is recommended that a pilot study with one (1) I-SO™ unit be conducted to determine their effectiveness at Stafford Lake. Equipment rental is available through Praxair and should be installed at the lake temporarily to establish whether full-scale implementation is feasible and cost-effective for the District. Additionally, system operation can be optimized during an I-SO™ system pilot study, as reservoir conditions will impact oxygenation efficiencies. It is recommended that the pilot study be carefully documented, as the results at Stafford Lake could form the basis of critical industry developments for hyper-eutrophic surface water sources as well as provide a wealth of information for the District's source water management.

Table 1 Oxygenation Design Parameters

Parameter	Value
Maximum Oxygen Depletion Rate ⁶	0.17 mg/L/day
Average Oxygen Depletion Rate ⁷	0.11 mg/L/day
Target Oxygen Level	4 mg/L
Anoxic Oxygen Level	2.5 mg/L
Maximum Period of Anoxic Oxygen Level	April – November (8 months)
Average Elevation of Lake ⁸	186.7 ft
Average Volume per Acre ⁹	4.53 MG
Maximum Oxygen Requirement <i>per Acre</i>	6.43 lb/acre/day
Average Oxygen Requirement <i>per Acre</i>	4.16 lb/acre/day

The requirements for an I-SO™ system at Stafford Lake were established based on the assumption that a system would be sized to oxygenate the deepest 35 acres near the intake, as shown in Figure 5, below. Assuming an oxygenation area of 35 acres and an oxygen utilization efficiency of 90%, the I-SO™ unit would require a supply of 162 lb/day of pure liquid oxygen, on average, when in use. I-SO™ units are capable of oxygenating at rates of approximately 150 lb/hr, therefore the capacity of one I-SO™ unit is sufficient for Stafford Lake's estimated needs. The estimated requirements for an I-SO™ unit at Stafford Lake are included in Table 2. These design parameters are based on the recorded conditions at Stafford Lake, however, a pilot test of one (1) I-SO™ unit, as discussed above, is necessary to understand the sizing and effectiveness of an I-SO™ system.

⁶ Based on Stafford Lake depletion periods between 2010 and 2014, a maximum oxygen depletion rate of 0.17 mg/L/day was established.

⁷ Based on Stafford Lake depletion periods between 2010 and 2014, an average oxygen depletion rate of 0.11 mg/L/day was established.

⁸ The average elevation of the lake for April through November (1957-2014) was used as an input for the total volume calculation, as the volume to be oxygenated is considered the entire reservoir.

⁹ The volume per acre was calculated by using the formula developed by NMWD (Lake Elevation vs. Volume.xls), based on a lake elevation of 186.7' and ratio of: *surface water area to be oxygenated to total surface water area at 186.7'*; 1 acre : 173.6 acres = 0.0058.



Figure 5 Proposed Oxygenation Area in Stafford Lake

Table 2 I-SO Unit Estimated Requirements

Parameter	Value
Surface Area to be Oxygenated ¹⁰	4 acres
Volume of Reservoir to be Oxygenated ¹¹	159 MG
Estimated Oxygen Transfer Efficiency	90%
Daily Average Oxygen Requirement	162 lb/day
Maximum System Capacity	250 lb/day

Operational Requirements

Operation of the I-SO™ unit requires a pure oxygen source and storage, oxygen tubes, and a 40-Volt power supply, and ideally can be connected at the existing compressor station near Stafford Dam. Power operation is required semi-continuously; the I-SO™ units may be turned off for a few hours or days at a time, however extraction from lake and proper indoor storage is recommended if the I-SO™ units would not be in use for months at a time. Using integrated energy turndown automation, I-SO™ systems may reduce power consumption by at least 40% compared to mechanical aeration systems. Pure oxygen and power are transmitted to

¹⁰ The surface area to be oxygenated could change depending on the effectiveness of the I-SO unit. A pilot test of the unit will confirm surface area and equipment requirements.

¹¹ The volume to be oxygenated by an I-SO unit was calculated by using the formula developed by NMWD (Lake Elevation vs. Volume.xls), based on a lake elevation of 186.7' and ratio of: surface water area to be oxygenated to total surface water area at 186.7'; 35 acres : 173.6 acres = 0.202.

the I-SO™ unit via the hose assembly shown in Figure 6. Pure oxygen supply may be contracted directly with Praxair®, or with a supplier of NWMD's preference.

Installation Requirements

For installation, two subassemblies, as shown in Figure 7, are bolted together on-site and are lifted into the lake for immediate floating. The approximate weight of each unit is 4,100 pounds and no support structure would be required. A minimum of five (5) feet should be maintained between the I-SO™ system and the existing aeration bed to prevent oxygen stripping.

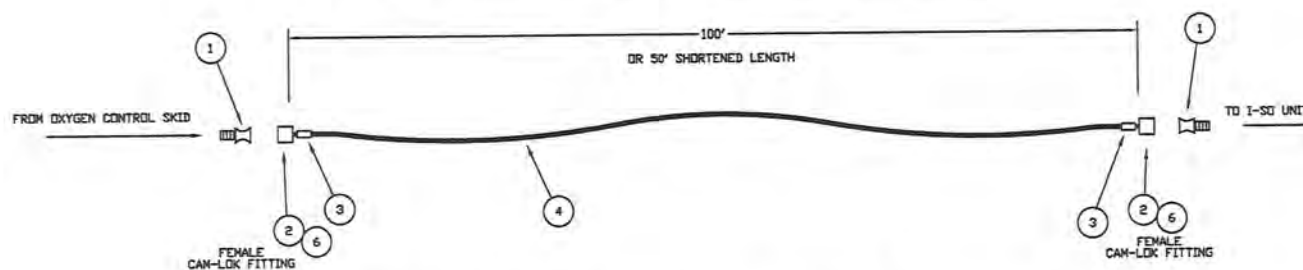
It is recommended that the I-SO™ system be installed close to the intake tower to maximize the precipitation of nutrients (Mn, Fe) back into the lake sediment prior to treatment at STP. The effectiveness of the location can be tested when the technology is piloted at Stafford Lake.

NOTES:

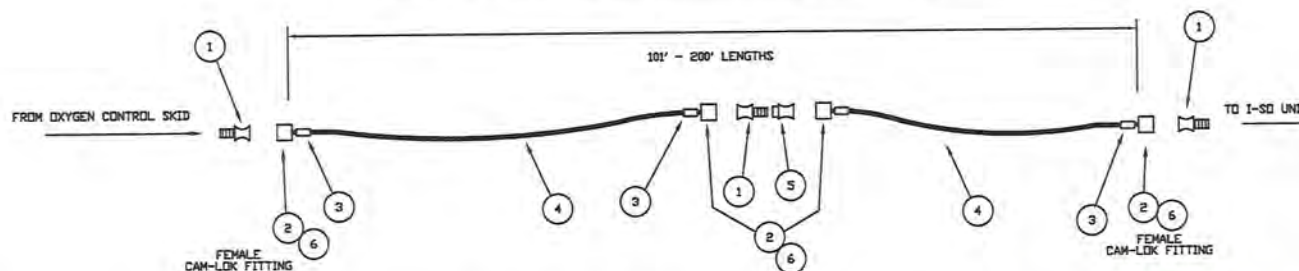
- 1.) ALL ITEMS TO BE GS-38 CLEANED, THEN ASSEMBLED AND BAGGED
- 2.) ALL-STAINLESS ASSEMBLIES ARE ALSO AVAILABLE FOR SPECIAL APPLICATIONS

ITEM	PART NUMBER	DESCRIPTION
1	200-F-3R	2" TYPE F MALE ADAPTER X 2" MALE NPT, BRASS, BIXON VALVE & COUPLING
2	3C-000	2" TYPE C FEMALE COUPLER X 2" HOSE SHANK, BRASS, BIXON VALVE & COUPLING
3	BU-019	2" TWO-PIECE 4-BOLT CLAMP, PLATED BRN, BIXON VALVE & COUPLING
4	2"-NBS39	2" SCARFING HOSE 100' LONG, GODDALL RUBBER INC.
5	200-A-3R	2" TYPE A MALE ADAPTER X 2" FEMALE NPT, BRASS, BIXON VALVE & COUPLING
6	200-G-TES	2" GASKET, TFE ENCAPSULATED SILICONE, BIXON VALVE & COUPLING

FOR HOSE LENGTHS UP TO 100'



FOR HOSE LENGTHS OVER 100'



PRESSURE DROP = 0.30 PSI / 100' AT 70F, 0 PSIG (56 FPS VELOCITY)
AT 4300 SCFH OXYGEN. ASSEMBLY RATING PRESSURE = 250 PSIG.

PULSAFE CORPORATION PULSAFE TECHNOLOGY CENTER PULSAFE BUILDING, SUITE 100, 10000 PULSAFE, OHIO 43067-1000		FILE NO.	REV. NO.	REV. DATE
STANDARD HOSE ASSEMBLIES FOR ALL I-SO INSTALLATIONS		SK-LMC-HOSE		

Figure 6 I-SO™ Unit Hose Installation

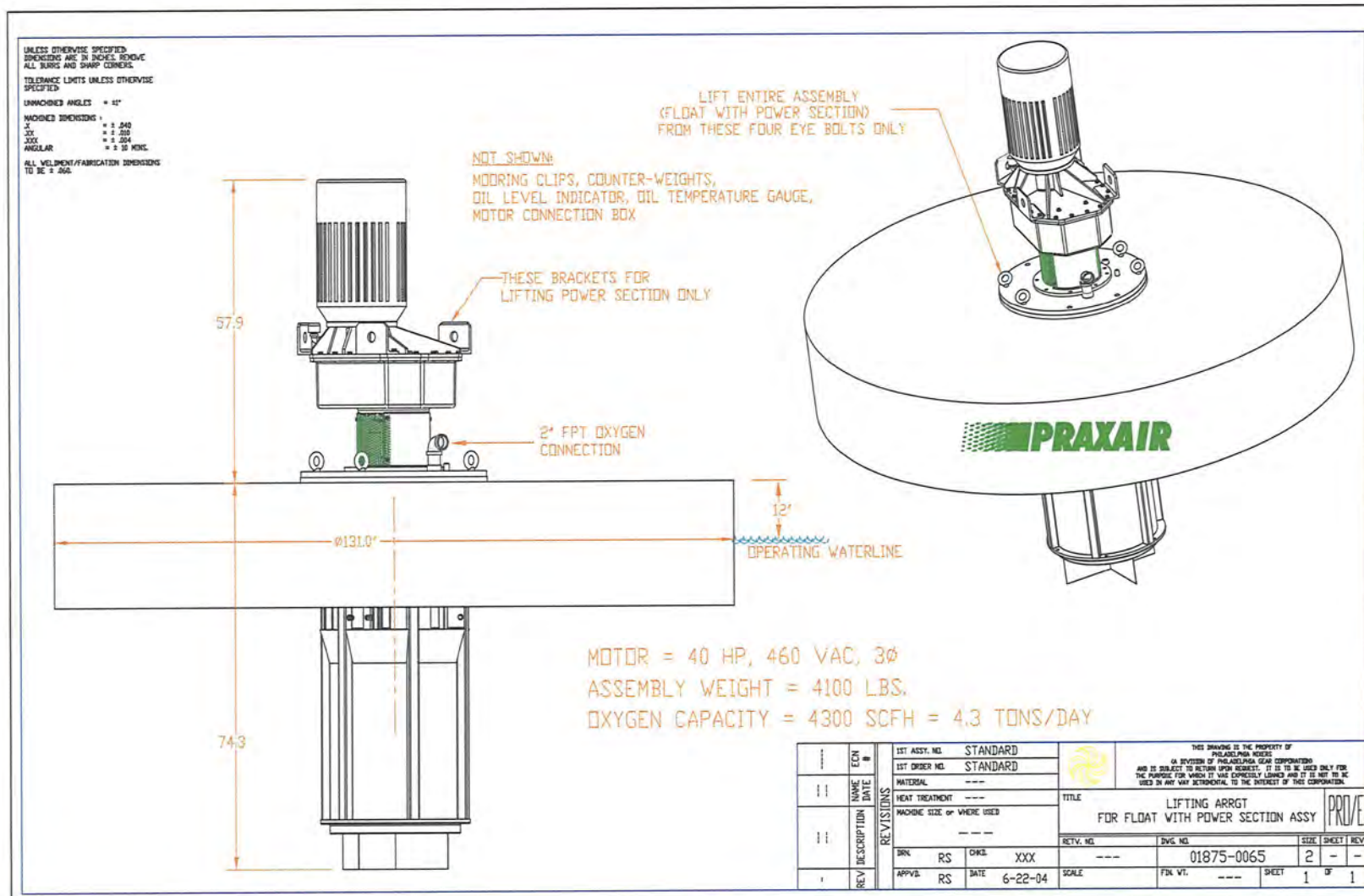


Figure 7 I-SO™ Unit Assembly

Schedule and Cost Estimate

Implementation schedules and cost estimates have been developed for both a pilot-scale ISO system and a full-scale system, as well as annual O&M costs for the full-scale system:

Pilot System

Praxair® offers a monthly pilot rental of an I-SO™ unit that could be installed at the Stafford Lake for the next T&O season, at the request of the District. It is recommended that the pilot unit be installed for a total of one (1) or two (2) months, depending on available budget, during the T&O season to observe its effectiveness. It is recommended that the system be installed during the T&O season in 2018, pending budget approval. The schedule for the pilot unit installation will depend on reservoir conditions and reported water quality, however, the pilot unit should be installed for one (1) or two (2) months between May and October of 2018, preferably early in the season.

Rental of the I-SO™ unit would cost approximately \$10,695 per month (*Praxair®* quote). The rental package includes one (1) I-SO™ unit (\$10,000), including mixing and hose equipment and assembly parts and the control system, and a 1,500-gallon temporary liquid oxygen storage tank (\$695).

As-needed oxygen supply would be purchased separately at a rate of \$0.08125/lb¹². Based on the preliminary calculations, NMWD would need a maximum of 250 lb/day (\$20.31/day) or 7750 lb/month (\$630/month). Based on initial calculations, a 1,500-gallon storage tank would be sufficient to store liquid oxygen for approximately 1.5 months¹³.

For a one (1) month pilot study, the I-SO™ system would cost approximately \$12,000. For a two (2) month pilot study, the I-SO™ system would cost approximately \$24,000.

Full-scale System

Installation of a full-scale Praxair® I-SO™ system would depend on the success and schedule of the pilot study. A full-scale system could be installed prior to the 2019 or 2020 T&O season.

The estimated capital cost of the full-scale installation is about \$200,000 for a package including one (1) I-SO™ unit, mixing and hose equipment and assembly parts, a liquid oxygen storage tank, and the control system.

- The average annual O&M Costs include the following components:
 - Oil change: approximately \$300 annually
 - Pure oxygen: \$0.02174/lb¹⁴ at 162 lb/day = \$3.52/day
\$3.52/day, April – November (244 days) = \$859.33 annually
 - Power: 24 kW at \$0.12/kWh (est. 2015), 8 hrs/day = \$23.04/day
\$69.12/day April – November (244 days) = \$5,622 annually

¹² Rate provided by Praxair, includes delivery fees.

¹³ 7750 lbs of liquid oxygen is equal to approximately 814 gallons of liquid oxygen. Therefore, a 1,500-gallon tank would not need to be re-filled if the District decides to conduct a month-long pilot test.

¹⁴ Rate provided by Praxair, does not include delivery fees.

- Liquid Oxygen Telemetry Unit Servicing: \$520 annually
- Hazardous material handling, freight, and energy and fuel charge¹⁵: \$550
- Total Annual O&M Costs, Approximately: \$7,900/year
- Long-term O&M Costs include the following:
 - Gearbox reconstruction: approximately \$8,000, every ten years

3.1.5 Upsizing of Existing 12-Acre Aeration Bed

The existing 12-acre aeration diffusion system near the intake tower is likely increasing the DO at the bottom of the lake, however it is not sufficiently sized for the sharp drop in DO caused by a mass algae die-off. Based on conversations with Keeton representatives, this system was designed as a pilot installation to test the level at which aeration in Stafford Lake can augment Fe and Mn oxidation.

It is possible that expanding the existing system to cover 35 acres near the intake (see Figure 5) could oxygenate Stafford Lake to a level at which anoxic conditions are prevented and algae growth is controlled. The existing NMWD system, shown in Figure 8, is a Keeton QR Series aeration system comprised of two ½-HP Model QR-16DP-2 compressors in two long (20"W x 36"L x 27"T) recycled plastic cabinets. Each cabinet contains one 275 cfm cooling blower, a sound reduction package, and operation controls.



Figure 8 *Stafford Lake Existing Keeton Aeration System*

¹⁵ Based on the installation of a 1,500-gallon tank, a delivery of liquid oxygen every 1.5 months, and five (5) liquid oxygen deliveries per season.

An expanded system would include two (2) additional aeration beds located near the inlet and at the deepest parts of the lake. The deepest parts of Stafford Lake are north and east of the Stafford Lake Island and across the inlet, as shown in Figure 9, and have been identified for expansion of the aeration system. Two (2) additional aeration systems, both of equivalent capacity to the existing system and with dedicated compressor stations, are proposed to be installed as shown in Figure 9.

This arrangement is proposed as the most cost-effective solution, as the installation of two (2) new compressors would cost significantly less than utilizing the existing compressor to supply the proposed area of Stafford Lake (see Attachment B). Installation of these compressors assumes use of NMWD-owned shoreline land, with no leasing or land use costs, based on preliminary conversations with operations staff.

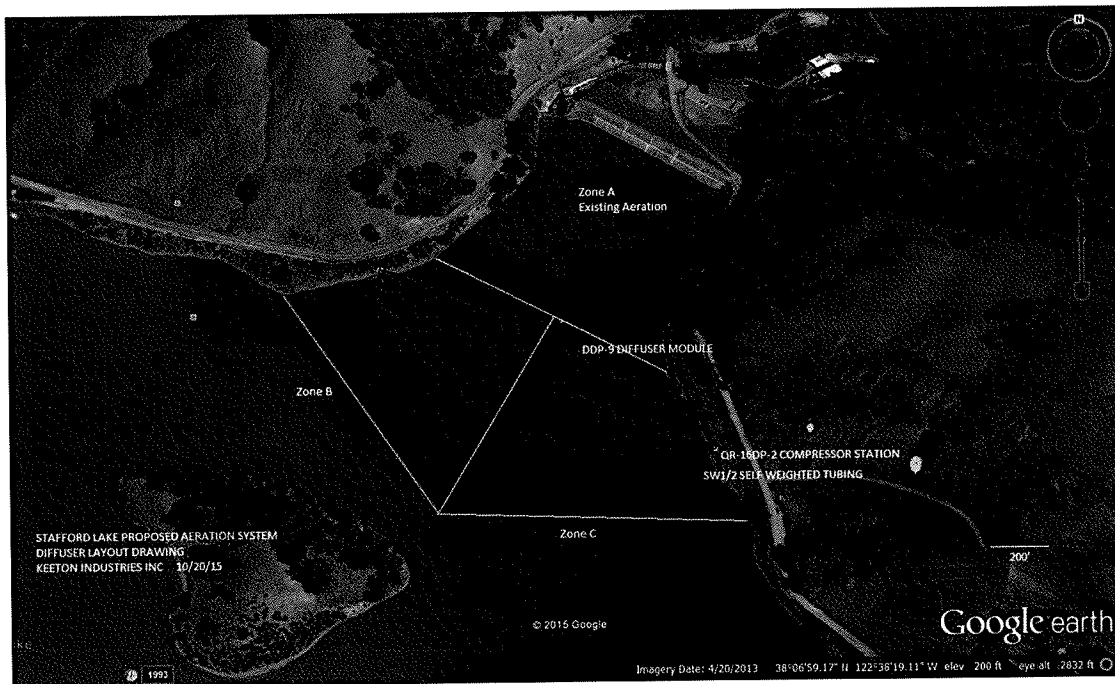


Figure 9 *Proposed Stafford Lake Keeton Aeration System Expansion*

Each compressor continuously provides 21.2 cfm of air flow (1.1 to 1.3 cfm per emitter) at 5 psi pressure, and requires a 230-Volt power source. The proposed aeration bed expansion would therefore provide 63.3 cfm of air to the area of Stafford Lake shown in Figure 9. However, aeration may not be able to provide enough oxygen to counteract the average oxygen depletion rate of 0.11 mg/L/day during the T&O season in Stafford Lake.

The most reliable method to calculate the expected oxygenation level from the proposed aeration bed expansion is to shut down the existing aeration system for one month and to monitor DO concentration at various depths. After one month, the existing aeration system should be restarted, and DO concentrations at various depths should be monitored on a

weekly basis for two months. The resulting data could then be extrapolated to quantify the estimated level of aeration with the proposed aeration bed expansion.¹⁶

Schedule and Cost Estimate

It is recommended that the Keeton QR Series aeration bed expansion, as proposed, is not installed until several other alternatives are piloted and/or implemented. It is likely that this alternative would not be installed until the 2018-2019 off-season (December – March), after several other mitigation measures have been tested and/or deemed infeasible.

It is recommended that the effectiveness of the existing aeration system be tested shortly after STP start-up in 2016, as described above, prior to expanding the system. Testing the existing system will also assist in estimating the effectiveness of the proposed expanded aeration bed.

Keeton Industries estimates a cost of \$39,500 for the expanded system as proposed in Figure 9, including the equipment pad, tubing, emitters, compressors, cabinets, and all ancillary equipment. There is no known additional cost of using the NMWD-owned land for the two new compressor stations.

The Keeton aeration system requires the following O&M:

- Annual O&M Costs:
 - Air filter replacement: \$60.00, every three months, per system
Annual Cost for two (2) additional systems, 3 replacements per year: \$360
 - Power, excluding consumption by the existing aeration system: 3.22 kW at \$0.12/kWh (est. 2015) for 24 hours per day = \$9.27/day
\$9.27/day, April – November (244 days) = \$2,263
 - Annual Cost: \$2,600
- Long-term O&M Costs:
 - Compressor replacement: \$2,000, every four years, per system
 - Cooling blower replacement: \$150, every four years, per system

3.2 Optimized Removal

Optimized removal of Geosmin is dependent upon maximizing the efficiency of all treatment processes at the STP. It is critical that the GAC units maintain a high capacity for Geosmin adsorption throughout the operating season, which is reliant upon removal of solids and Mn prior to the GAC units. The recommendations below are designed as improvements to the current treatment processes at STP that would indirectly influence Geosmin removal.

3.2.1 GAC Specification and Bidding Process

Optimization of the STP purchasing procedures is recommended to ensure the technologies in place function to the best of their capacity. Specifically, it is recommended that NMWD

¹⁶ Recommendation provided by Keeton Industries.

develop very stringent specifications for the GAC procurement. Currently, the STP purchases GAC based on the most competitive price and has previously used various types of GAC.

Without having WWTP effluent data, it is difficult to determine if the conversion from coconut-based GAC to coal-based GAC increased or decreased the capacity for T&O removal. However, because of the continued T&O complaints after the change, it is assumed that there was no significant improvement. Example purchasing specifications for GAC are presented in Attachment C. The adoption of specifications that are specific to the water quality received by the GAC units would help ensure that the STP utilizes the most effective GAC for Geosmin removal.

Schedule and Cost Estimate

Developing specifications for the purchase of GAC can be initiated by the District immediately and be completed by District staff. The foreseen District expenses will be the staff hours committed to the development of GAC specifications.

3.2.2 GAC Testing and Replacement Strategy

It is recommended that the GAC units undergo substantial performance and capacity testing throughout the operating season and specifically prior to the T&O season at Stafford Lake. Evaluating the state of the GAC on a regular basis would better inform NMWD staff as to whether or not the GAC can handle a potential algal bloom. This information is critical in establishing trigger points for GAC replacement, and ultimately a replacement strategy that can be anticipated by the District at regular intervals. The replacement strategy will likely change when improvements are made to the system that will extend the life of the GAC. Generally, GAC replacement should be coordinated such that fresh GAC is available at the onset of the T&O season.

Schedule and Cost Estimate

Implementing a testing and replacement strategy for GAC can be initiated by the District immediately and can be completed by District staff. A testing and replacement strategy needs to include monitoring the removal efficiency of the GAC units, evaluating the condition of the media, and determining appropriate schedules for replacement. The foreseen District expenses will be the staff hours committed to the implementation of a testing and replacement strategy.

3.2.3 Coagulant Optimization

Enhanced removal of suspended and dissolved solids at the influent chamber of the STP is a critical treatment recommendation for optimizing the effectiveness of the filtration units at STP. Optimizing coagulant dosing upstream of STP's filtration units can both enhance removal of suspended and dissolved solids and significantly reduce NMWD's chemical expenditures. Installation of a submersible Evoqua (formerly Siemens) 5FX 5-HP Water Champ® FX Chemical Induction System (Water Champ®) in place of the existing mechanical flash mixer would provide the conditions necessary for instantaneous mixing of ferric chloride coagulant, while requiring at least 50% less of the volume of coagulant currently used.

The submersible Water Champ® FX Chemical Induction System, shown in Figure 10, includes a hermetically-sealed motor constructed of stainless steel and chemically wetted components made of Grade II unalloyed Titanium.

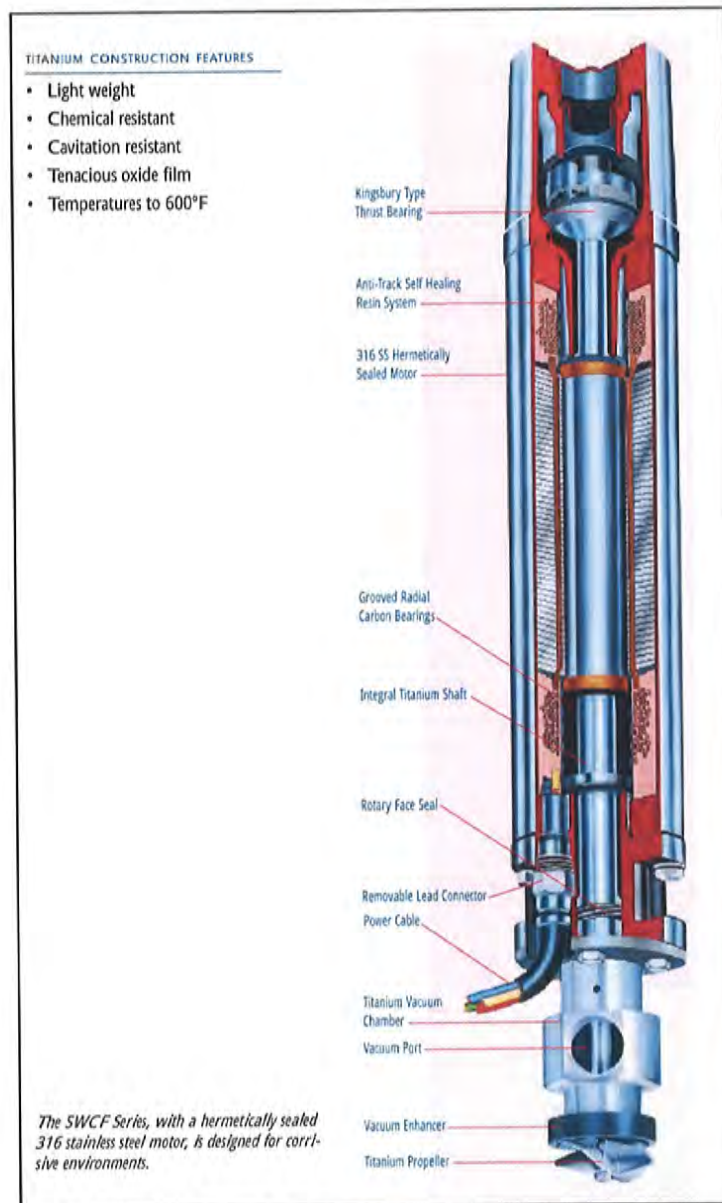


Figure 10 Water Champ® FX Chemical Induction Unit

The STP currently doses 35 to 50 mg/L Ferric Chloride using a flash mixer in an 18-inch diameter tee downstream of the chlorine contact basin. One (1) Water Champ® can be installed in place of the flash mixer to feed and mix ferric chloride or other coagulant; no ancillary pumps, strainers, mixers, injectors or diffusers would be required. The Water Champ® system may be equipped with an "Alternate Feeding System," to simultaneously dose two liquid or gas chemicals, if desired.

The horizontal counter-flow configuration in a pipeline, shown in Figure 11, is recommended for the STP and achieves the greatest chemical diffusion zone without requiring major infrastructure modifications. With this configuration, rapid mixing of the coagulant occurs in the “zone of influence,” which is approximated as a three-dimensional cone with a highly turbulent axial flow pattern, extending away from the Water Champ® propeller and against the flow of water. Facilitated by a 4-blade 2,450 rpm propeller, the coagulant is dispersed directly into the process stream without the need for dilution water, and a homogeneous solution is instantly created. The flexible guiderails and the unit's pivot bracket design are positioned to optimize the zone of influence for mixing.

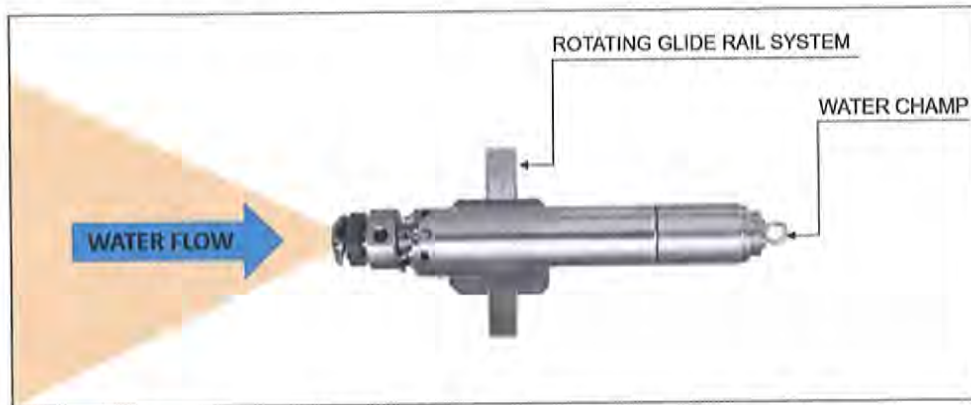


Figure 11 *Water Champ® Horizontal Counter-flow Configuration*

Operational Requirements

Water Champ® is recommended as an optimization strategy for STP, as the system provides significant chemical and energy savings over conventional mechanical mixing methods. The lightweight airfoil design of the propeller enables the Water Champ® to achieve maximum energy transfer, and eliminates the need for energy-intensive pumps. Process connections are made via flexible PVC-hose and couplings to the unit and via a 1-½-inch FPT chemical hose assembly. A continuous power supply of 460-Volt is required; the electrical supply is connected to the motor control panel and to the power cable from the unit.

Installation Requirements

The Water Champ® unit is approximately six (6) inches in diameter and 34 inches long, and weighs 90 pounds with all components. The system is mounted on stainless steel rails and may be installed in a pipe or contact basin; the rails allows the system to automatically move and pivot into positions that optimally release target doses of chemicals in varying flow conditions. The package includes a control panel with a motor protection device housed in a corrosion-resistant enclosure.

The unit is shipped pre-assembled and the guiderail system is designed to fit each application, requiring minimal downtime for installation. Once the rail system is installed, the pipeline does not need to be drained to initiate operation of the unit or to remove it for inspection and service. Since the STP shuts down for several months a year, NMWD could

also install the system off-season. Installation of the guiderail requires use of a davit crane or other lifting device.

Overall, the Water Champ® offers reduced downtime and less maintenance than mechanical mixing systems. The system utilizes a close-coupled connection between the vacuum body, propeller, and submersible motor so that the motor shaft is isolated and may be serviced in the field. Serviceable components are limited to the motor, stationary bushings, and o-ring seals.

Schedule and Cost Estimate

The Water Champ® installation, as proposed, could be implemented as early as the 2015-2016 off-season (December – March).

G3 Engineering, Inc., the local Evoqua Water Champ® representative, estimates a total cost of \$50,000 for a Water Champ® FX Chemical Induction System package including one Water Champ® unit (approximately \$25,000), one control panel (approximately \$7,000), one customized guiderail system (approximately \$10,000), and miscellaneous ancillary equipment (approximately \$8,000). This price excludes installation costs.

If redundancy is desired, two Water Champ® units of the same capacity can be installed in parallel on separate guiderails for an estimated additional cost of \$38,000, or in series on one guiderail system for an estimated additional cost of \$28,000.

The Water Champ® system requires the following O&M:

- Annual O&M Costs¹⁷:
 - Ferric Chloride (1.40% sp. gr.) Coagulant: est. \$25,000, annually for coagulated pH target of 6.3¹⁸
 - Power: 3.7 kW at \$0.12/kWh (est. 2015) = \$0.44/hour
\$0.44/hour¹⁹, April – November (3,490 hours in 244 days) = \$1,550
 - Annual Cost: \$27,000
- Long-term Costs:
 - O-ring seal replacement: \$800, every five to ten years
 - Chemical feed hose replacement: \$200, every five years

Annual Chemical Cost Savings

It is estimated by operations staff that NMWD uses approximately 390,000 lbs of ferric chloride annually to maintain a pH of 6.3, at a cost of approximately \$50,000. To maintain the same pH, it is estimated that the Water Champ unit would use 50% of the coagulant at 50% of the cost. Therefore, the annual chemical cost savings is anticipated to be \$25,000. The chemical costs savings realized through the installation of the Water Champ would cover the

¹⁷ The system will require additional O&M, including annual and monthly service inspections, which are assumed to be completed by District staff internally.

¹⁸ The vendor will need to know specific flow volumes and levels within the pipe in order to confirm the amount and cost of coagulant.

¹⁹ Assuming 16 and 10 hours of operation per day on weekdays and weekends, respectively.

cost of installation after 2 years in operation, and would provide an additional \$75,000 of savings after 5 years in operation.

3.3 Treatment Process Improvements

Another method of treating T&O problems would be to improve treatment processes at the STP to maximize removal of Geosmin. Several recommendations were presented in the Water Quality Evaluation, however, it has been determined that only one recommended treatment process improvement is feasible at STP: GAC-Capped Actifloc™ filters²⁰. The following section details the installation, operational, and cost requirements of installing GAC-Capped filters.

3.3.1 GAC-Capped Filters

Improved T&O control is possible by using GAC in place of anthracite in the existing Actifloc™ filters. It is anticipated that GAC-capping of the Actifloc™ filters would improve the Geosmin removal at STP and extend the lifetime of the downstream post-filtration GAC adsorption units.

GAC-capped filters have been shown to remove as much as 50-percent of Geosmin when utilized early in the treatment train. Given that the STP currently removes a high percentage of Geosmin, using GAC-capped filters would likely improve the removal of Geosmin in STP to below detection limits and increase the life of the GAC units when the Geosmin level in the reservoir remains below the 500 ppt level.

The 18-inch depth of anthracite in the existing Actifloc™ filters may be replaced with an 18-inch depth of GAC, at the top layer of each filter, where "Mixed Media" is labeled in Figure 12. Based on the existing flow rates and treatment processes at STP, it is estimated that GAC-capped filtration would increase EBCT by approximately two (2) to five (5) minutes.

²⁰ Ozonation was determined to be too expensive of a capital improvement for the District and powered activated carbon (PAC) was determined to be operationally infeasible and too expensive of an O&M cost.

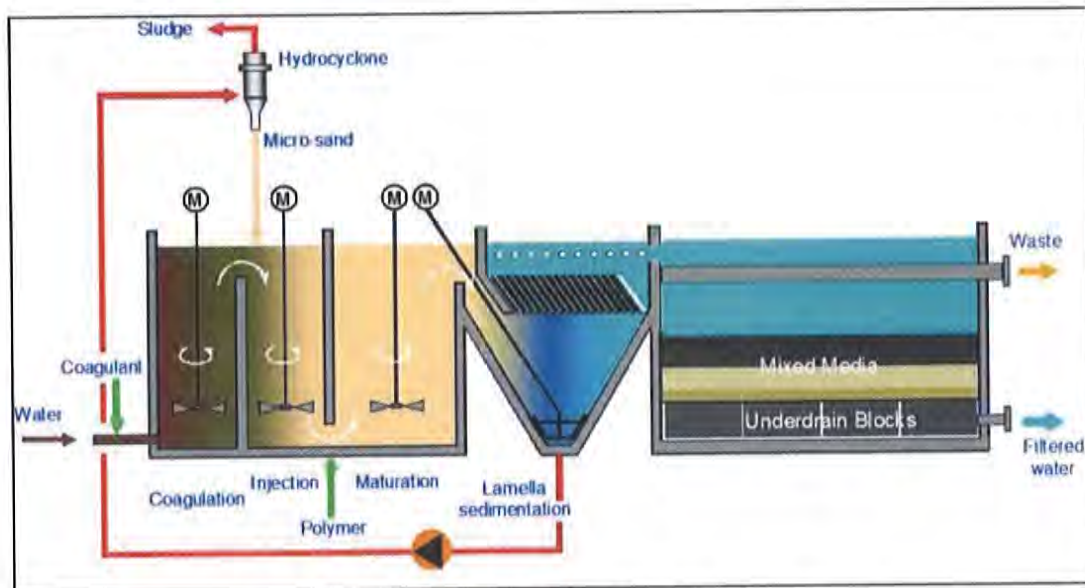


Figure 12 Actifloc™ Unit GAC-cap Location

This GAC will be operated as biologically activated carbon (BAC) whereby an active, aerobic microbial community on the filter media will be maintained. The significant surface area provided by the porous GAC filtration media offers ample opportunity for microbial growth. The objective of BAC is to grow bacterial filaments to assist in the attachment of contaminant particles in the influent to the GAC media.

GAC as BAC is typically installed at depths of 24 to 36 inches. Greater depths do not improve fresh GAC removal efficiency, however, depth increases the lifetime of the GAC-cap. With time, GAC's media depth degrades with use and through loss of GAC by underlying media intermixing. Therefore, greater initial installation depths of GAC media would increase the overall lifetime of the GAC-cap. For the STP, it is recommended that the maximum depth of GAC-cap (18 inches) be installed for lifetime cost savings. According to the Actifloc™ manufacturers, there are no concerns with using a GAC-cap in the filters, and a maximum GAC-cap depth of 18 inches may be installed. Carbon for the GAC-cap should be selected based on comparative testing and carbon that has been effective in the existing GAC units. It is recommended that the effective size of the carbon is approximately 1.5mm so that the media is not compromised during backwash.

A GAC-cap may be installed on one (1) existing Actifloc™ unit and used to pilot this T&O mitigation alternative as a means to test the effectiveness prior to full-scale installation in all three of STP's Actifloc™ filters. Pilot tests should be run to ensure that a reduction in the depth of the finer sand does not reduce the quality of the effluent and to optimize operation of the GAC-cap and chemical dosing throughout the treatment process before full-scale installation. Additionally, the lifetime extension of the downstream post-filtration GAC adsorption units may be measured during the GAC-cap pilot installation.

Operational Requirements

The GAC-cap is expected to last approximately five (5) years before replacement is required, as opposed to the current biannual replacement/refilling of anthracite filter media in the Actifloc™ units. The GAC in the Actifloc™ filters can be replaced less frequently than with typical adsorption units in order to allow stalked bacteria to colonize carbon granules.

Lower dosages of chlorine will be critical in maintaining healthy conditions for the biological activity of the GAC-capped filter. The conversion to GAC-capped filters necessitates that dosing of free chlorine, currently utilized as an oxidant, upstream of the Actifloc™ filters be substantially lowered or discontinued in order to maintain an active microbial community on the GAC-cap. Should manganese removal be optimized in the reservoir, the use of free chlorine can be discontinued.

Schedule and Cost Estimate

Implementation schedules and cost estimates have been developed for both pilot-scale and full-scale installation, as well as annual O&M costs for the full-scale system:

Pilot System

One (1) Actifloc™ filter could be converted to a GAC-capped filter at STP before the next T&O season, at the request of the District. It is recommended that one (1) Actifloc™ filter be converted in the STP off-season this year (December 2015 – March 2016), prior to plant start-up in 2016.

Conversion of one (1) Actifloc™ filter from anthracite to GAC would cost approximately \$21,000. Calgon Carbon Corp. estimates that 12,000 pounds of either Filtrasorb 300-M or 400-M would be required for an 18-inch GAC-cap over a 260 square foot area of the filter. Both Filtrasorb GAC media are estimated to cost \$1.75/lb, including installation.

Full-scale System

Conversion of the additional two (2) Actifloc™ filters would depend on the success and schedule of the pilot-scale conversion. A full-scale conversion could be completed no earlier than the STP off-season of 2017, and would more likely be installed during the STP off-season of 2018 or 2019.

Conversion of the two (2) remaining Actifloc™ filters from anthracite to GAC would cost approximately \$42,000. Calgon Carbon Corp. estimates that 12,000 pounds of either Filtrasorb 300-M or 400-M would be required for an 18-inch GAC-cap over the 260 square foot area of each filter. Both Filtrasorb GAC media are estimated to cost \$1.75/lb, including installation.

The GAC-capping system requires the following O&M:

- Annual O&M Costs: None; maintain aggressive Actifloc™ backwashing frequency
- Long-term O&M Costs:
 - Replace GAC-cap: \$21,000 per Actifloc™ filter, every five years
 - Total Cost for GAC-cap Replacement: \$63,000, every five years

O&M Cost Increase

The installation of GAC-caps in the Actifloc units would eliminate any costs associated with O&M of the anthracite filters. NMWD currently spends approximately \$4,000 every two (2) years to top-off anthracite in all three filters. Assuming that the full-scale GAC-capped system is installed, and that the GAC will require replacement every five years, as discussed above, the following table projects the estimated O&M costs for the District over the next ten (10) years.

Table 3 Estimated O&M Cost Increases

Year	Anthracite Cost Savings	GAC-Capping Costs
2016 (Pilot Installation)		\$21,000
2017	(\$4,000)	
2018 (Full-Scale Implementation)		\$42,000
2019	(\$4,000)	
2020		
2021 (Replacement of 1 GAC Cap)	(\$4,000)	\$21,000
2022		
2023 (Replacement of 2 GAC Caps)	(\$4,000)	\$42,000
2024		
2025	(\$4,000)	
Total O&M Cost Increase		\$106,000
Average Annual O&M Cost Increase		\$10,600

SECTION 4 TASTE & ODOR CONTROL STRATEGY SCHEDULE

That T&O control strategy for NMWD has been developed as a combination of various measures to maximize effectiveness while minimizing cost-intensive capital improvements. Based on conversations with District staff, evaluation of feasibility, and cost estimates, SRT has developed long-term and annual T&O Control Strategies presented in this section.

4.1 Long-Term T&O Control Strategy

The long-term T&O Control Strategy includes two phases:

- (1) **Phase 1:** Initial Implementation Strategies and Associated Cost and/or Cost Savings
- (2) **Phase 2:** Secondary Implementation Strategies: Recommended Capital Improvements

The long-term T&O Control Strategy was developed in phases based on the District's interest in implementing low-cost capital and operational improvements prior to implementing more expensive capital improvements. This strategy is an effort to control T&O issues as quickly as possible and utilize operational optimization strategies to save on O&M costs and ultimately fund future cost-intensive capital improvements, if required.

Development of cost estimates and discussions with NMWD have informed the long-term T&O Control Strategy, and the recommended alternatives presented above have been categorized into Phase 1 or Phase 2 projects. Phase 1 projects are lower cost options that can be initiated within the next two (2) years, while Phase 2 projects are more cost-intensive and can be implemented within the next ten (10) years, depending on the results of Phase 1 implementation. Table 4, below, defines each phase based on recommended alternatives, and Table 5 and Table 6 on the following pages detail each phase and the associated recommended projects.

Table 4 *Phased Approach Recommended Alternatives*

	Category	Recommended Alternatives
PHASE 1 PROJECTS	Source Control	Additional Water Quality Monitoring
		Strategic Planning
		Nutrient Management at Grossi Dairy
	Operations Optimization	Installation of Water Champ®
		GAC Specifications
		GAC Replacement Strategy
PHASE 2 PROJECTS	Treatment Process Improvements	Pilot-Scale Conversion of an Actifloc™ Filter from Anthracite to GAC-Capped
		Pilot-Scale Installation of In-Situ Oxygenation
		Full-Scale Installation of In-Situ Oxygenation
	Source Control	Upsize the Existing 12-acre Aeration Bed
		Full-Scale Conversion of an Actifloc™ Filter from Anthracite to GAC-Capped

Table 5 Initial Implementation Strategies, Estimated Costs and Associated Cost Savings

Category	Task Description	Implementation Schedule	Estimated Cost	Cost and/or Savings at 5 Years
Source Control: Additional Monitoring	Additional Water Quality Monitoring: Additional monitoring of Geosmin and ORP will allow NMWD to better understand the conditions in Stafford Lake that lead to T&O episodes, and the effectiveness of the STP in removing Geosmin. Additional monitoring includes defining trigger points and establishing actions in a water quality action plan (Section 4.2).	Initiated April 2016, May – October Annually	Geosmin Sampling ^{21,22} ; \$10,000/year	TBD ²³
Source Control: External Nutrient Management	Strategic Planning: Conduct a sanitary survey of the Stafford Lake watershed.	1 st or 2 nd Quarter, 2016	Sanitary Survey: \$30,000	TBD
	Nutrient Management at Grossi Dairy: Continue negotiations with Grossi Dairy and the County regarding the elimination of nutrient input from Dairy run-off.	Immediate, continuous	Work completed by NMWD staff	TBD
Operations Optimization	Installation of Water Champ®: Install Water Champ® hydraulic mixing system to optimize coagulation at STP and reduce the amount of coagulant necessary.	STP Off-Season, 2016	Installation: \$50,000 O&M: \$27,000 annually for coagulant and power costs.	O&M Cost Savings - Installation = \$125,000 ²⁴ - \$50,000 = \$75,000 (Savings, 5 Years)
	GAC Specifications: Develop GAC specifications for the primary GAC units based on water quality and observed performance.	1 st Quarter, 2016 Prior to next purchase of media, if possible	Work completed by NMWD	TBD ²⁵
	GAC Replacement Strategy: Implement a media replacement strategy that will maximize the GAC adsorption for the start of T&O season.	1 st Quarter, 2016 Prior to next start of T&O season, if possible	Work completed by NMWD	TBD ²⁶
Treatment Process Improvements	Pilot-Scale Conversion of an Actifloc™ Filter from Anthracite to GAC-Capped: Convert one (1) Actifloc™ filter from anthracite to GAC to quantify the effectiveness of this strategy in reducing Geosmin loading to GAC units.	STP Off-Season, 2016	Pilot purchase and installation in one Actifloc™ filter would cost \$21,000.	Pilot: \$3,333 ²⁷ - \$21,000 = -\$17,667 ²⁸ (Cost, 5 Years)
Minimum Anticipated O&M Savings (5 Years)				Approx. \$57,500

²¹ Cost is not included for a probe to measure ORP and other water quality parameter, as it is likely that NMWD has this equipment.

²² This estimate is based on \$129/sample from EMSL Analytics in San Leandro, and 3 samples a week for 24-weeks. If this is determined to be cost-prohibitive for the District, the number of samples and/or number of weeks can be reduced, however the results will not be as comprehensive. Marin Municipal Water District (MMWD) was contacted to obtain an estimate for a Geosmin sample, as the only data received by SRT for Geosmin testing was completed at MMWD. MMWD was not able to provide a sample cost, however, it is recommended that NMWD explore this option based on the existing relationship between the water districts.

²³ Additional water quality monitoring could result in additional cost savings due to less frequent replacement of the existing GAC units due to early mitigation of T&O episodes.

²⁴ Cost savings is based on \$25,000 savings in coagulant annually. Power costs (approximately \$2,000) were considered to be negligible, as the power costs of mechanical mixing is likely higher than the power costs of hydraulic mixing.

²⁵ The development of GAC specifications and GAC replacement strategy could result in additional cost savings due to less frequent replacement of the existing GAC units.

²⁶ The development of a GAC replacement strategy could result in additional cost savings due to less frequent replacement of the existing GAC units.

²⁷ Installation of anthracite typically costs \$1,333/filter every 2 years.

²⁸ Conversion of the Actifloc™ filter could result in additional cost savings due to less frequent replacement of the existing GAC units. The effectiveness of the pilot conversion will be evaluated through Geosmin removal effectiveness.

Table 6 Secondary Implementation Strategies: Recommended Capital Improvements

	Task Description	Implementation	Estimated Capital Cost	Long-Term Cost (10-Year) ²⁹
Source Control: Aeration Optimization	Pilot-Scale Installation of In-Situ Oxygenation: Rent and install one (1) I-SO unit near the intake to increase DO levels in Stafford Lake and control internal nutrient loading, algal growth, and subsequent die-off. Monitor the results of the I-SO unit to determine the effectiveness in increasing oxygen, decreasing algal counts, and decreasing Mn loading to STP.	STP Off-Season, 2018	\$11,000	\$11,000 No Additional O&M Requirements
	Full-Scale Installation of In-Situ Oxygenation: If the pilot-scale installation is deemed effective, purchase and install one (1) or more I-SO units near the intake to increase DO levels in Stafford Lake and control internal nutrient loading, algal growth, and subsequent die-off. The number of units required will be based on the results of the pilot-scale installation.	STP Off-Season, 2019 ³⁰	\$130,000	Capital Cost: \$200,000 Annual O&M Costs: \$6,700 10-Year O&M Costs: \$75,000 ^{31,32}
	Upsizing 12-acre Aeration Bed: Upsize the existing aeration bed to three (3) times the size of the existing design to cover a 35-acre area near the intake. Upsizing the aeration bed is only recommended if I-SO is cost-prohibitive and other methods of T&O Control are deemed ineffective.	STP Off-Season 2019	\$40,000	Capital Cost: \$40,000 Annual O&M Costs: \$2,600 10-Year O&M Costs: \$35,000 ^{33,34}
Treatment Process Improvements	Full-Scale Conversion of an Actifloc™ Filter from Anthracite to GAC-Capped: Convert the remaining (2) Actifloc™ filters from anthracite to GAC to reduce Geosmin loading to GAC units.	STP Off-Season, 2017 ³⁵	\$42,000	Capital Cost: \$42,000 10-Year O&M Costs: \$105,000 O&M Savings: \$20,000 Net additional O&M Cost, 2016-2025: \$126,000 ³⁶ - \$20,000 = \$106,000 ³⁷

²⁹ All final values are estimated and rounded to the nearest thousand.

³⁰ Schedule of installation highly dependent upon performance of I-SO pilot.

³¹ Summation of annual O&M costs and the cost to replace the gearbox after 10 years (\$8,000).

³² The implementation of I-SO could result in additional cost savings due to less frequent replacement of the existing GAC units.

³³ Summation of annual O&M costs and the cost to replace the compressors (\$2,000) and cooling blowers (\$150) every four years for each system (\$8,600).

³⁴ The implementation of the 12-acre aeration bed could result in additional cost savings due to less frequent replacement of the existing GAC units.

³⁵ Schedule of installation highly dependent upon performance of GAC-Capped Actifloc™ pilot.

³⁶ Includes 10-year costs for GAC conversion of all three (3) Actifloc™ filters. Excludes costs of the initial Actifloc™ pilot conversion.

³⁷ Based on the assumption that GAC would need to be replaced every 5 years. Anthracite is currently being replaced every 2 years (at \$4,000 total).

As noted above, the phased T&O Control Strategy is based on the objective to limit significant capital expenditures upfront, and instead implement low-cost projects that would allow the District to save money over time. As shown in Table 5, above, it is recommended that the District implement seven (7) strategies to mitigate T&O at Stafford Lake and the STP. Implementation of hydraulic mixing (Water Champ® technology) is the most expensive alternative recommended for initial implementation, however, it is anticipated to offer the long-term savings for the District over time. After five (5) years, it is projected that the Water Champ® would have saved the District about \$125,000 in chemical costs, with a net savings of \$75,000 after taking into account the capital cost of installation of about \$50,000.

The conversion of one (1) Actifloc™ filter would also require an upfront investment at an estimated cost of \$21,000. Additionally, it is anticipated that the O&M cost on this filter would be approximately \$21,000 every 5 years as the media would need to be replaced. However, the improvement is highly recommended, as it is likely that the installation of a GAC-cap would reduce loading of Geosmin and other contaminants (Mn, etc.) to the existing GAC units, improving the overall removal of Geosmin and life of the existing GAC units.

Cost savings associated with the conversion of the Actifloc™ filters have not been calculated, as it is unknown to what extent the conversion would extend the life of the media in the existing GAC units. However, it should be noted that it is likely that savings would be realized from the conversion of the Actifloc™ filters and additional recommended alternatives. Given that the replacement of GAC currently costs the District over \$150,000 every year, extending the life of this media would result in significant savings for the District. Table 7, below, presents the savings that would be realized should the life of the GAC media be extended by either one (1) or two (2) years.

Table 7 Extended Life of GAC Filter Media: Potential Savings

Life of Filter Media	Cost per Year	Annual Savings
1 Year (Current)	\$150,000	NA
2 Years	\$75,000	\$75,000
3 Years	\$50,000	\$100,000

Should the life of the filter media be extended by even one (1) year, the District would save \$75,000 annually, which would increase the amount of funding available for capital improvements and advance the implementation schedule of Phase 2 projects substantially.

Phase 2, presented in **Table 6**, is highly dependent on the success of the projects implemented during Phase 1 and the budget available for capital improvements. Increasing aeration to the reservoir is one of the most sustainable solutions to the T&O issues at Stafford Lake, however these options are also the most expensive to implement. The conversion of the remaining Actifloc™ filters would be dependent upon the results of the pilot test; as noted above, the conversion of the filters could result in substantial savings for the District.

The long-term strategy (Phase 1 and Phase 2) and associated costs for the next ten (10) years is summarized in the implementation schedule included on the following pages.

Table 8 Implementation Schedule

	Task	2016				2017				2018				2019	
		1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter
Source Control	Phase 1 Additional Water Quality Monitoring		WQ Monitoring, May - October				WQ Monitoring, May - October				WQ Monitoring, May - October				WQ Monitoring, May - October
	Cost/Savings			-\$10,000				-\$10,000				-\$10,000			
	Phase 1 Strategic Planning: Conduct a Sanitary Survey	Conduct Survey, 1st or 2nd Quarter													
		-\$30,000													
	Phase 1 Nutrient Management at Grossi Dairy	Develop Monitoring Program	Implement Additional BMPs			Dairy submits 2016 Monitoring Report	Implement BMPs or negotiate with Dairy			Dairy submits 2017 Monitoring Report	Implement BMPs or negotiate with Dairy			Dairy submits 2018 Monitoring Report	Implement BMPs or negotiate with Dairy
		Monitor Nutrient Inputs (Continuous)				Monitor Nutrient Inputs (Continuous)				Monitor Nutrient Inputs (Continuous)					
	Phase 2 Pilot-Scale Implementation of I-SO										Install Pilot I-SO Unit	Monitor Effectiveness			
	Cost/Savings										-\$12,000				
	Phase 2 Full-Scale Implementation of I-SO														
	Cost/Savings														
Operational Optimization	Phase 2 Upsize 12-acre Aeration Bed	Test existing Aeration Bed (April)													
	Cost/Savings														
	Phase 1 Installation of Water Champ	Install during STP Off-Season		Monitor Effectiveness				Monitor Effectiveness				Monitor Effectiveness			
	Cost/Savings		-\$50,000		\$25,000				\$25,000				\$25,000		
Treatment Process	Phase 1 Develop GAC Specifications	Develop Specs prior to Plant Start-up													
	Phase 1 Implement GAC Replacement Strategy			Determine GAC Efficiency at end of STP Season		Replace GAC as necessary		Determine GAC Efficiency at end of STP Season		Replace GAC as necessary		Determine GAC Efficiency at end of STP Season		Replace GAC as necessary	
	Phase 1 Pilot-Scale Conversion of an Actifloc™ Filter	Convert 1 Actifloc Filter	Measure Effectiveness of Actifloc Conversion				Measure Effectiveness of Pilot Actifloc Conversion								
	Cost/Savings	-\$21,000													
	Phase 2 Full-Scale Conversion of an Actifloc™ Filters									Convert 2 Additional Actifloc Filters	Measure Effectiveness of Full-scale Actifloc Conversion				Measure Effectiveness of Actifloc Conversion
	Cost/Savings								\$4,000	-\$42,000					
	Estimated Savings for increased life of GAC												\$75,000		
	Quarterly Change in Expenditures	-\$51,000	-\$50,000	-\$10,000	\$25,000	\$0	\$0	-\$10,000	\$29,000	-\$42,000	-\$12,000	-\$10,000	\$100,000	\$0	\$0
	Cumulative Change in Expenditures		-\$101,000	-\$111,000	-\$86,000	-\$86,000	-\$86,000	-\$96,000	-\$67,000	-\$109,000	-\$121,000	-\$131,000	-\$31,000	-\$31,000	-\$31,000

Table 8 (Continued) Implementation Schedule

	Task	2019		2020				2021				2022			
		3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Source Control	Phase 1	Additional Water Quality Monitoring	WQ Monitoring, May - October			WQ Monitoring, May - October			WQ Monitoring, May - October				WQ Monitoring, May - October		
		Cost/Savings	-\$10,000			-\$10,000				-\$10,000				-\$10,000	
	Phase 1	Strategic Planning: Conduct a Sanitary Survey													
	Phase 1	Nutrient Management at Grossi Dairy			Dairy submits 2019 Monitoring Report	Implement BMPs or negotiate with Dairy		Dairy submits 2020 Monitoring Report	Implement BMPs or negotiate with Dairy			Dairy submits 2021 Monitoring Report	Implement BMPs or negotiate with Dairy		
				Monitor Nutrient Inputs (Continuous)				Monitor Nutrient Inputs (Continuous)				Monitor Nutrient Inputs (Continuous)			
	Phase 2	Pilot-Scale Implementation of I-SO													
		Cost/Savings													
	Phase 2	Full-Scale Implementation of I-SO				Install Full-scale I-SO system, if deemed best option	Monitor effectiveness, correlate with WQ		Monitor Effectiveness, correlate with WQMP				Monitor Effectiveness, correlate with WQMP		
		Cost/Savings				-\$200,000	-\$7,900			-\$7,900				-\$7,900	
	Phase 2	Upsize 12-acre Aeration Bed		Expand Aeration Bed, if deemed best option		Monitor Effectiveness, correlate with WQMP			Monitor Effectiveness, correlate with WQMP				Monitor Effectiveness, correlate with WQMP		
		Cost/Savings			-\$40,000		-\$2,600			-\$2,600				-\$2,600	
Operational Optimization	Phase 1	Installation of Water Champ	Monitor Effectiveness			Monitor Effectiveness			Monitor Effectiveness				Monitor Effectiveness		
		Cost/Savings		\$25,000			\$25,000				\$25,000				\$25,000
	Phase 1	Develop GAC Specifications													
	Phase 1	Implement GAC Replacement Strategy	Determine GAC Efficiency at end of STP Season	Replace GAC as necessary	Determine GAC Efficiency at end of STP Season	Replace GAC as necessary	Determine GAC Efficiency at end of STP Season	Replace GAC as necessary	Determine GAC Efficiency at end of STP Season	Replace GAC as necessary	Determine GAC Efficiency at end of STP Season	Replace GAC as necessary	Determine GAC Efficiency at end of STP Season	Replace GAC as necessary	Determine GAC Efficiency at end of STP Season
Treatment Process	Phase 1	Pilot-Scale Conversion of an Actifloc™ Filter						Replace GAC in 1 Actifloc Filter							
		Cost/Savings						-\$21,000							
	Phase 2	Full-Scale Conversion of an Actifloc™ Filters	Measure Effectiveness of Actifloc Conversion			Measure Effectiveness of Full-scale Actifloc Conversion			Measure Effectiveness of Full-scale Actifloc Conversion				Measure Effectiveness of Full-scale Actifloc Conversion		
		Cost/Savings		\$4,000							\$4,000				
		Estimated Savings for increased life of GAC		\$75,000			\$75,000				\$75,000				\$75,000
		Quarterly Change in Expenditures	-\$10,000	\$104,000	-\$40,000	-\$200,000	-\$20,500	\$100,000	-\$21,000	\$0	-\$20,500	\$104,000	\$0	\$0	-\$20,500
		Cumulative Change in Expenditures	-\$41,000	\$63,000	\$23,000	-\$177,000	-\$197,500	-\$97,500	-\$118,500	-\$118,500	-\$139,000	-\$35,000	-\$35,000	-\$55,500	\$44,500

Table 8 (Continued)

Implementation Schedule

		Task	2023				2024				2025			
			1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Source Control	Phase 1	Additional Water Quality Monitoring		May - October				May - October				May - October		
		Cost/Savings			-\$10,000				-\$10,000				-\$10,000	
	Phase 1	Strategic Planning: Conduct a Sanitary Survey												
	Phase 1	Nutrient Management at Grass Dairy	Dairy submits 2022 Monitoring Report	Implement BMPs or negotiate with Dairy			Dairy submits 2023 Monitoring Report	Implement BMPs or negotiate with Dairy			Dairy submits 2024 Monitoring Report	Implement BMPs or negotiate with Dairy		
			Monitor Nutrient Inputs (Continuous)				Monitor Nutrient Inputs (Continuous)				Monitor Nutrient Inputs (Continuous)			
	Phase 2	Pilot-Scale Implementation of I-SO												
		Cost/Savings												
	Phase 2	Full-Scale Implementation of I-SO		Monitor Effectiveness, correlate with WQMP				Monitor Effectiveness, correlate with WQMP				Monitor Effectiveness, correlate with WQMP		
		Cost/Savings			-\$7,900				-\$7,900				-\$7,900	
	Phase 2	Upsize 12-acre Aeration Bed		Monitor Effectiveness, correlate with WQMP				Monitor Effectiveness, correlate with WQMP				Monitor Effectiveness, correlate with WQMP		
Operational Optimization		Cost/Savings			-\$2,600				-\$2,600				-\$2,600	
	Phase 1	Installation of Water Champ		Monitor Effectiveness				Monitor Effectiveness				Monitor Effectiveness		
		Cost/Savings				\$25,000				\$25,000				\$25,000
	Phase 1	Develop GAC Specifications												
	Phase 1	Implement GAC Replacement Strategy	Replace GAC as necessary		Determine GAC Efficiency at end of STP Season		Replace GAC as necessary		Determine GAC Efficiency at end of STP Season		Replace GAC as necessary		Determine GAC Efficiency at end of STP Season	
Treatment Process	Phase 1	Pilot-Scale Conversion of an Actifloc™ Filter												
		Cost/Savings												
	Phase 2	Full-Scale Conversion of an Actifloc™ Filters	Replace GAC in 2 Actifloc Filters	Measure Effectiveness of Actifloc Conversion				Measure Effectiveness of Actifloc Conversion				Measure Effectiveness of Actifloc Conversion		
		Cost/Savings	-\$42,000			\$4,000								\$4,000
		Estimated Savings for increased life of GAC				\$75,000				\$75,000				\$75,000
		Quarterly Change in Expenditures	-\$42,000	\$0	-\$20,500	\$104,000	\$0	\$0	-\$20,500	\$100,000	\$0	\$0	-\$20,500	\$104,000
		Cumulative Change in Expenditures	\$2,500	\$2,500	-\$18,000	\$86,000	\$86,000	\$86,000	\$65,500	\$165,500	\$165,500	\$165,500	\$145,000	\$249,000

4.2 Annual T&O Control Strategy

The annual T&O control strategy recommended for NMWD includes a Water Quality Action Plan and Annual Monitoring and Maintenance Schedule.

The water quality monitoring already conducted by NMWD with the addition of the recommended parameters forms the basis of a T&O control water quality action plan that includes identified triggers to assist NMWD staff in resolving T&O-causing conditions before a significant T&O event occurs. An initial template for the water quality action plan is included as Table 9 below, and can be adjusted at the discretion of operations staff based on water quality data trends.

The annual monitoring and maintenance schedule is based on the long-term strategy recommendations, and is included as Table 10 on the following page.

Table 9 **Water Quality Action Plan**

Parameter	Action Level	Action Taken
Geosmin in Raw Water	12 ppt	More frequently monitor Geosmin in raw water and STP finished water. Reduce dependency on surface water source, if possible.
Geosmin in STP Finished Water	3 ppt	More frequently monitor Geosmin in raw water and STP finished water. Reduce dependency on surface water source, if possible.
	6 ppt	Remove source from system.
Geosmin Removal Efficiency	< 85%	It is anticipated that the removal efficiency should be uniform up to breakthrough. If the removal efficiency drops below 85 to 90%, GAC should be replaced.
ORP	0 (Neutral)	Increase aeration efforts, if possible.

Table 10 Annual T&O Control Strategy

January	February	March	April	May	June	July	August	September	October	November	December	
				Monitor for Geosmin once per week								
				Install probe to measure ORP, DO	Measure ORP, DO continuously							
Analyze water quality data and make decisions based on Water Quality Action Plan												
Dairy submits Annual Monitoring Report from previous year												
		Dairy implements BMPs deemed necessary										
Dairy conducts monitoring of runoff nutrient concentrations, as applicable												
		Replace GAC, as necessary, based on GAC specifications										
				Measure removal efficiency of GAC units based on Geosmin data (before and after filtration)								
Determine GAC Efficiency at end of STP Season											Determine GAC Efficiency at end of STP Season	

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MEMORANDUM

To: Board of Directors
From: Pablo Ramudo, Water Quality Supervisor *PH*
Subject: Second Quarter FY 18/19– Water Quality Report
p:\lab\wq sup\wq reports\2019\1st qtr fy19 wq rpt 2.1.19.doc

February 1, 2019

RECOMMENDED ACTION: Information**FINANCIAL IMPACT:** None

The water served to the communities of Novato and Point Reyes met federal and state primary and secondary water quality standards during the second quarter of fiscal year 2018-2019.

Following is a review of the activities and water quality issues in regards to:

- Source Water
- Treatment Performance
- Distribution System Water Quality
- Novato Recycled Water

NOVATO SYSTEM**Source Water: Stafford Lake**

Stafford Lake water was used as a source of drinking water during the second quarter until October 31st. Water quality was monitored on a biweekly basis for chemical and mineral components as well as microbiological activity.

Algae from the raw water intake were identified and enumerated monthly. Algae numbers were relatively low as is normal during the time of year. Diversity was low with 6 species of algae recorded in appreciable numbers. Two genera had significant blooms, the cyanobacteria (blue-green algae) *Microcystis* and *Coelosphaerium*, both of which can cause problems with taste and odor.

Treatment Performance: Stafford Treatment Plant

Total organic carbon (TOC) removal was excellent, well above the 35% requirement of the Enhanced Surface Water Treatment Rule. Operators were able to achieve 74.3% TOC removal with a finished water TOC concentration of 2.2 mg/L, just above the district's goal of 2.0 mg/L.

Distribution System: Novato

Of 308 samples collected for compliance with the Total Coliform Rule none were positive for coliform bacteria. Disinfection byproducts were low during the quarter and well within standards of the Stage 2 Disinfection By-Product Rule at most locations. The location which represents the entry

point of water from Stafford Lake Treatment Plant had a high concentration as the sample site becomes a dead end during winter operation and experiences extremely high water age. This condition does not accurately represent the water served to nearby residents.

There were no complaints of taste and odor attributable to algae compounds during the quarter.

POINT REYES SYSTEM

Source Water: Coast Guard Wells

Raw water quality, by most measures, was good throughout the quarter, however water quality parameters affected by salt water increased. This now-constant state of high salinity has begun to have some serious impacts on how the system is operated in order to continue to comply with drinking water regulations. The sodium concentration ranged from 76-150 mg/L, chloride ranged from 160 -470 mg/L, and bromide ranged from 0.56-1.61 mg/L.

Source Water: Gallagher Well

Raw water quality was good throughout the quarter. Water quality parameters affected by saltwater are very low from this source and because the well is not prone to intrusion from seawater, concentrations of salts are very steady. Sodium was 10 mg/L, chloride was 11-14 mg/L, and the bromide concentration was 0.05-0.06 mg/L.

Treatment Performance: Point Reyes Treatment Plant

Treatment was optimal throughout the quarter and finished water quality was good. Iron and manganese removal was excellent; neither of the metals were detected in the treated water.

Water was primarily sourced from Gallagher Well which was supplemented with water from the Coast Guard wells during times of higher demand. Water from the two sources is blended prior to treatment.

Distribution System: Point Reyes

There were 23 samples collected for routine monitoring and compliance with the total coliform rule, none tested positive for coliform bacteria. Chlorine residual concentrations throughout our distribution system were good.

Disinfection byproducts were down from the last quarter but still above the Maximum Contaminant Limit (MCL) at the location representing the maximum water age in the system. The concentration of total trihalomethanes was 89.3 ug/L, yielding a location running annual average of 74.6 ug/L- just below the MCL of 80 ug/L. The high disinfection byproducts are a direct result of high bromide in water sourced from the two wells located within the former coast Guard housing property. A separate memorandum addresses this problem and provides additional information.

NOVATO RECYCLED WATER

Deer Island Recycled Water Facility

The Deer Island facility was off during the quarter.



North Marin Water District- 2nd Quarter FY2018 / 2019

Bacteriological Quality Monitoring

Novato: 308 Samples Analyzed. No samples positive for coliform bacteria
 Point Reyes: 23 Samples analyzed. No samples positive for coliform bacteria.

Chemical Quality Monitoring

Constituent	Units	Maximum Contaminant level	SCWA North Marin Aqueduct	Stafford Treatment Plant	Point Reyes Treatment Plant
Conductivity	umhos/cm	900 *	265	412	256
TDS	mg/L	500 *	164	256	179
Hardness	mg/L	-	106	120	112
Alkalinity	mg/L	-	121	90.2	110
Calcium	mg/L	-	20.9	22.6	19.1
Magnesium	mg/L	-	12.5	15.2	16.0
Copper	mg/L	1.0*	ND	ND	ND
Iron	mg/L	0.3*	ND	ND	ND
Manganese	mg/L	0.05 *	ND	ND	ND
Zinc	mg/L	5.0 *	ND	ND	ND
Sodium	mg/L	-	17.7	39.6	12.6
Chloride	mg/L	250 *	6.79	77.8	15.0
Sulfate	mg/L	250 *	11.2	9.93	6.51
Fluoride	mg/L	2.0 (1.4-2.4)	0.092	0.111	0.0999
Nitrite as N	mg/L	1.0	ND	ND	NA
Nitrate as N	mg/L	10	0.109	0.0766	NA
pH	pH units	8.5 *	8.35	8.01	7.11
Turbidity	NTU	5	0.06	0.06	0.06
Color	PCU	15	<2.5	<2.5	<2.5
Free Chlorine	mg/L	4.0	0.98	1.29	0.91
Total Chlorine	mg/L	4.0	1.01	1.55	1.15
Temperature	° C	-	18.4	17.2	13.7
Odor	TON	3	<1	<1	<1

*Indicates secondary drinking water standard

ND = Not Detected
 NA = Not Analyzed

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*DRAFT Minutes of Technical Advisory Committee
35 Stony Point Road, Santa Rosa, California
January 7, 2019

Attendees: Craig Scott, City of Cotati
Jennifer Burke, City of Santa Rosa
Colin Close, City of Santa Rosa
Easter Ledesma, City of Santa Rosa
Toni Bertolero, Town of Windsor
Mary Grace Pawson, City of Rohnert Park
Colleen Ferguson, City of Sonoma
Kent Carothers, City of Petaluma
Drew McIntyre, North Marin Water District
Rocky Vogler, North Marin Water District
Mike Ban, Marin Municipal Water District
Chris Petlock, Valley of the Moon Water District
Matt Fullner, Valley of The Moon Water District
Pam Jeane, SCWA
Jay Jasperse, SCWA
Mike Thompson, SCWA
Carrie Pollard, SCWA
Lynne Rosselli, SCWA
Kimberly Zunino, City of Santa Rosa
Mike Ielmorini, City of Petaluma
Emma Walton, City of Santa Rosa

Public Attendees: David Keller, FOER
Bob Anderson, United Wine Growers
Margaret DiGoneva, California American Water

1. Check-in
Drew McIntyre, TAC Chair, called the meeting to order at 9:05 a.m.
2. Public Comments
No public comments
3. Recap of December 3, 2018 TAC Meeting and Approval of Minutes
Moved by Toni Bertolero, Town of Windsor, seconded by Craig Scott, City of Cotati to approve the minutes of the December 3, 2018 TAC meeting; unanimously approved.
4. Elect TAC Vice Chair
Moved by Colleen Ferguson, City of Sonoma, seconded by Mary Grace Pawson, City of Rohnert Park; unanimously approved appointing Jennifer Burke, City of Santa Rosa the TAC Vice Chair.
5. TAC Budget Subcommittee Update
Drew McIntyre, North Marin Water District- The Budget Subcommittee Chair is Ms. Zunino and the committee includes representation from the cities of Santa Rosa and Cotati, Town of Windsor and VOM, North Marin and Marin Municipal water agencies.

The subcommittee will work with Agency to finalize the budget prior to TAC consideration at the March 4, 2019 meeting, WAC consideration will be in a Special meeting in April. Budget presentations by the Agency will be held in March at the request of individual Water Contractors

6. Sonoma Marin Saving Water Partnership-

a. Approve New Member-California American Water

Drew McIntyre, North Marin Water District - See memo for more information. Recommendation is to approve California American Water joining SMSWP. Moved by Toni Bertolero, Town of Windsor, seconded by Jennifer Burke, City of Santa Rosa; unanimously approved.

b. Water Production Relative to 2013 Benchmark

Drew McIntyre, Partnership water use year-to-date through November 2018 was 15% below the 2013 State Benchmark, same as this time last year. Please see handout

c. State's Water Efficiency Legislation Update- Water Loss Standards Comment Letter

Drew McIntyre, discussed the Partnerships support of the comment letter. Water Loss Standards stakeholder meetings are well underway. Refer to letter the Partnership signed. Additional focus areas are: Indoor Residential Water Use and Outdoor Residential Irrigation. Jennifer Burke, City of Santa Rosa, stated that there are discussions to reinstitute the Urban Advisory group to provide stakeholder recommendations and input during development of the Water Efficiency Legislation.

7. Water Supply Conditions-

Pam Jeane, SCWA - Lake Mendocino is currently at 62,500 acre feet (AF) and water releases are decreasing due to rainfall. Water storage has gained about 2,500 AF in the reservoir and is at 90% of target pool elevation. Lake Sonoma is at 196,000 AF with minimum releases from the reservoir. Storage has gained about 6,000 AF and is currently at 80% of the water supply pool elevation. It is a Normal Water Supply Year as of January 1, 2019 and will continue to be monitored each month.

Jay Jasperse, SCWA - The ACOE has approved a Major Deviation for Lake Mendocino. Allows additional water storage of ~12,000 AF in flood control pool using Forecast Informed Reservoir Operations (FIRO). The plan is to evaluate operation with the deviation in place this year, apply for something similar next year and move forward with a formal modification to the ACOE Water Control Manual in the future.

Jay Jasperse, SCWA - DWR has made a final determination on two groundwater basins in Sonoma County. As a result, Alexander Valley and Dry Creek will remain Low Priority basins. Still to be determined: Wilson Grove Basin- Won't know until a draft recommendation comes out tentatively March with final determination in May.

8. Biological Opinion Update

Pam Jeane, SCWA refer to handout

Dry Creek Habitat Enhancement Project- third piece of the project this Summer, expect to start work in June 2019. ACOE and Agency are moving forward with the next three miles of project, working on designs and gaining access to right of ways. They expect to

have 60% design submittal by May this year and ACOE will fund 65%. Phase VI is in 2021, Phase V in 2022 and Phase IV in 2023.

Fish Monitoring-completed fish surveys for 2018 on Dry Creek. Observed Juvenile Coho in 8 of 9 sections sampled. Seeing success in the surveys and project. They have started sampling for adults and nests. As of December 13, they had seen 1100 adult Chinook ascending the fish ladder

Russian River Estuary Management- Mid December- the river mouth closed on December 14, reached almost 11ft and then self-breached the next day. The mouth of the estuary has been open since then.

9. Potter Valley Project Relicensing Update

Pam Jeane, Not a whole lot of change for the actual licensing itself, PGE is continuing to move forward with studies. Draft application will be done by November 2019 and application is due April 2020. Huffman Ad Hoc process continues to move forward. Two working groups; (1) Water Supply and (2) Fish Passage continue working on findings that will be brought to the larger Ad Hoc group in early February.

10. Items for next agenda (WAC/TAC Meeting February 4, 2019)

New WAC Leadership

Budget Update

WAC Member Orientation materials for new leadership

11. Check out

Meeting adjourned at 9:56am.

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MEMORANDUM

To: Board of Directors February 1, 2019

From: Drew McIntyre, General Manager

Subject: Potter Valley Project Relicensing Update – PG&E License Application Withdrawal and Bankruptcy Filing
t:\gmiscwa\potter valley\bod memo pvp relicensing update- pge bankruptcy 02-01-19 final.doc

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None at this time.

Background

The last written update to the Board regarding PG&E's Potter Valley Hydroelectric Project was at the June 19, 2018 meeting. At that time, the Board was notified that PG&E looked at five different options (e.g., decommissioning, continued operation, auction, etc.) and decided that auction was the most viable course of action. PG&E's position was that this project is a regional project and any solution must address all the regional issues related to continued PVP operation. The current Federal Energy Regulatory Commission (FERC) license for the Project expires in April 2022, and PG&E representatives noted that the auction process could take 1.5-2 years and that PG&E would file the re-license application before the April 14, 2020 FERC deadline. Furthermore, PG&E representatives confirmed that all studies would continue with PG&E in the lead until the owner and license transfer process was fully completed.

PG&E Notice of Withdrawal to File PVP License Application

On Friday, January 25, 2019, PG&E submitted a letter to the FERC providing their "Notice of Withdrawal of Notice of Intent to File License Application and Pre-Application Document" for the Potter Valley Project (Attachment 1). As a result of this action, PG&E is halting all activities related to the relicensing of the Project, including stoppage of their efforts to sell the Project via the Request for Offers (RFO) auction process. PG&E representatives have stated that this action is being taken to ensure that limited available funds are deployed to the highest priority activities.

Although the timing is unclear at this point, PG&E anticipates that their action will result in FERC initiating its "Orphan Project" process, which is expected to happen in the next few weeks. In accordance with the Orphan process, FERC will provide interested parties the opportunity to submit an application for a new Project license. PG&E believes this path will allow interested parties more time to prepare for the acquisition of the Project and the ability to submit a License Application on their own terms rather than assuming PG&E's current application. If the Orphan process does not result in the issuance of a new Project License, it is expected

FERC will order PG&E to prepare and submit a Surrender Application and Decommissioning Plan.

PG&E states that they will continue to own and operate the Project in accordance with the terms and conditions of the current Project license and all laws, rules, and regulations governing the operation of the Project until a new license is issued or the Project is decommissioned. PG&E also reports that they intend to support the Orphan process through provision of work products and information developed to date in the relicensing process to those who apply to FERC for a new Project license.

PG&E Bankruptcy

On Tuesday, January 29th, PG&E filed for bankruptcy, seeking Court protection from its creditors and permission to reorganize under Chapter 11 of the U.S. Bankruptcy Code. PG&E posted a notice on their website stating that "The power and gas will stay on" and there will be no disruption in service. A previous PG&E bankruptcy proceeding took almost 3 years, but this one is generally expected to be longer and more complex.

Path Forward

Obviously, the "Notice of Withdrawal" and bankruptcy filing is a new "curve ball" in an already complex PVP relicensing project. Staff is working with our legal counsel, Robert Maddow, to assess these recent events. Mr. Maddow is also legal counsel for Valley of the Moon Water District, one of the other eight Water Agency Contractors.

In addition, as reported earlier, the WAC has approved the formation of a WAC Ad Hoc Subcommittee and the development of a Common Interest Agreement. By taking these two actions, NMWD and the other seven Water Agency Contractors are better positioned to track developing PVP in a timely manner. Mr. Maddow has already signed the Common Interest Agreement, as have a majority of the other WAC member legal counsel.

open market). Regrettably, continued declining energy markets, potential increased costs associated with anticipated new license conditions, and challenging financial circumstances have caused PG&E to conclude that it cannot justify further expenditures to its ratepayers associated with the Project.

PG&E anticipates the Commission will institute its "orphan project" process codified as 18 C.F.R. § 16.25 to solicit license applications for Potter Valley from other entities. PG&E supports such action and understands that it would be responsible for surrendering the existing Potter Valley license if no other entity seeks and obtains a new license for the Project.

PG&E recognizes the value of Potter Valley to local communities because it provides for protection of important environmental resources, consumptive water uses, public recreation, and other economic values. Accordingly, PG&E is committed to working with stakeholders to ensure these values are appropriately considered if PG&E is required to file a surrender application.

DATED: January 25, 2019

Respectfully submitted,

PACIFIC GAS AND ELECTRIC COMPANY

By: 
ANNETTE FARAGLIA

Chief Counsel, Hydro Generation
Pacific Gas and Electric Company
Law Department
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San Francisco, CA 94105
Telephone: (415) 973-7145
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E-Mail: annette.faraglia@pge.com

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Pacific Gas and Electric Company)
)

Project No. 77
(Potter Valley)

**NOTICE OF WITHDRAWAL OF NOTICE OF INTENT TO FILE
LICENSE APPLICATION AND PRE-APPLICATION DOCUMENT**

On April 6, 2017, pursuant to 18 C.F.R. §§ 5.5 and 5.6, Pacific Gas and Electric Company (“PG&E”), filed with the Federal Energy Regulatory Commission (“Commission”) notice of its intent to file an application for a new license (“NOI”) for the Potter Valley Hydroelectric Project No. 77 (“Project” or “Potter Valley”) and a Pre-Application Document (“PAD”). The Project license expires on April 14, 2022, requiring PG&E to submit its Final License Application (“Application”) on or before April 14, 2020. PG&E is hereby withdrawing its NOI and PAD, and discontinuing the Integrated Licensing Process initiated to prepare a license application. PG&E is also terminating its efforts to transfer and sell the Project.

PG&E would like to thank the Commission Staff and all participating stakeholders for their time and efforts on the relicensing process and those who have participated in PG&E's Request for Offers to acquire the Project. After extensive deliberation, PG&E has determined that it would be contrary to the interests of its electric ratepayers to continue relicensing the Potter Valley project. Hence, PG&E is discontinuing its efforts to seek a new Project license.

Potter Valley has long been recognized by PG&E as uneconomic for PG&E's ratepayers (i.e., the cost of production exceeding the cost of alternative sources of renewable power on the

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MEMORANDUM

TO: Board of Directors
 FROM: Rocky Vogler, Chief Engineer *RV*
 SUBJ: Project Update – PRE Tank 4A Replacement
R:\Folders by Job No\6000 jobs\6263.20 PRE Tank 4A\BOD Memos\2-5-19 Project Update.doc

February 1, 2019

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None

The window for appeals to be accepted by the California Coastal Commission (CCC) for the PRE Tank 4A project officially closed on January 29, 2018. Later that same day, District staff was contacted by a CCC staff member indicating that the Young family had submitted an appeal on January 28, 2019.

Typically, the CCC will hold an appeal hearing within 49 business days from the date of the appeal filing. In some instances, CCC may request a waiver from the defending party to grant additional time for necessary research before conducting the hearing. Currently, the 49-day window will elapse on April 8, 2019. Granting an extension to the CCC would result in a proposed hearing date either April 10-12 or in early May 2019. Regardless of the actual date, the CCC appeal process will compromise the construction schedule as currently planned, making it impossible to complete construction by December 2019.

The Chief Engineer and General Manager have discussed potential alternatives in light of the current appeal, which are:

- Option 1: Follow through with the appeal process and delay construction until 2020.
- Option 2: Submit to the Young's demands and lower the tank height. This assumes the Young's would be placated and willing to withdraw their appeal with the CCC. If accomplished, this could afford the opportunity to construct the project in 2019.

District staff believes that the tank as currently designed represents the most valuable option for the majority of customers in Paradise Ranch Estates, and as such, it's important for the District to see the appeal process through to completion (Option 1). Although the project was advertised for bid on January 18, 2019 and a pre-bid meeting is scheduled for February 5, 2019, staff is issuing an addendum to perspective bidders which will delay the pre-bid meeting and bid due date (currently scheduled for February 19, 2019) by a month. This will provide additional time for the District to pull the current bid solicitation and plan to re-bid the project in October 2019, with anticipated construction commencing in later winter/early spring 2020.

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North Bay Watershed Association

Board Meeting Notice

February 1, 2019

9:30 am – 11:30 pm
Petaluma Community
Center, 320 N.
McDowell, Petaluma
and Casa Grande HS,
Petaluma

Next Meeting

March 1st, 2019
9:30 am – 11:30 pm
Napa Sanitary District
Napa CA 94954

Board Meeting Agenda

1. Call to Order 9:30 am

Jack Gibson, Chair

2. Public Comment

3. Approval of Agenda 1 min.

Action: Approve

4. Approval of Minutes 1 min.

Action: Approve

5. Treasure's Report 1 min.

Action: Approve

6. The Future of Regional Funding 9:45 am

Presenter will review the current
IRWMP funding and future expectations
*Steven R. Ritchie, Assistant General Manager,
Water Enterprise, San Francisco PUC*

7. Announcements, Next Month Items 10:25 am

We will adjourn and meet at the
Casa Grande Fish Hatchery for
an overview and tour.

8. Restoration in action 10:45 am

A tour of the Casa Grande HS Fish Hatchery

Items for next meeting

Getting to know our neighbor and newest member agency; an
overview of the Solano County Water Agency, Roland Sanford,
General Manager, SCWA

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DISBURSEMENTS - DATED JANUARY 17, 2019

Date Prepared 1/15/19

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 12/31/18	\$141,771.99
EFT*	US Bank	Federal & FICA Taxes PPE 12/31/18	56,040.76
EFT*	State of California	State Taxes & SDI PPE 12/31/18	11,217.48
EFT*	CalPERS	Pension Contribution PPE 12/31/18	34,042.23
55688*	Volpert, Robert	Credit for Bill Adjustment	967.15
1	Alpha Analytical Labs	Lab Testing (Novato)	50.00
2	Alphagraphics Marin	Notification Letters for AMI Installation (1,439)	1,179.36
3	Arrow Benefits Group	December Dental Expense	821.14
4	Athens Administrators	November Bill Review Fees	62.99
5	AT&T	Telephone (\$61), Fax (\$74), Data (\$270) & Leased Lines (\$149)	546.16
6	AWWA	Water Quality Grade 3 Renewal (Baccei) (6/19-6/22) (Budget \$60)	55.00
7	Bakalar, Michael	Retiree Exp Reimb (2019 Health Ins)	547.80
8	Bearings & Hydraulics	Centrysis Auger Seal	8.68
9	Brelje & Race	Prog Pymt #1: NMWD Clearwell Coating Inspection (Balance Remaining on Contract \$24,014)	986.25
10	California Water Service	Water Service (0Ccf) (O.M.) (10/30/18-12/31/18)	51.21
11	Campways	New Camper Shell for 1/2 ton 4X4 Truck	2,156.95
12	Charles Custom Welding	Welding Services (18" Steel Main Damage)	520.00
13	Cilia, Joseph	Retiree Exp Reimb (January Health Ins)	333.79
14	Cole-Parmer Instrument	IC Tubing (24) (Lab)	117.37


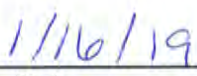


Seq	Payable To	For	Amount
15	DataTree	December Subscription to Parcel Data Information	100.00
16	Derby, Richard	Retiree Exp Reimb (2019 Health Ins)	1,088.28
17	Diggs, James	Retiree Exp Reimb (January Health Ins)	311.19
18	Direct Line	December Telephone Answering Service	187.92
19	Environmental Resource Assoc	Reference Sample (Lab)	150.54
20	Eyler, John	Retiree Exp Reimb (2019 Health Ins)	1,088.28
21	Fedak & Brown	Final Billing for Audit Work for NMWD for Year Ended 6/30/18	392.00
22	Fritz, James	Retiree Exp Reimb (2019 Health Ins)	1,088.28
23	GHD	Prog Pymt #14: PRE Tank 4A Project (Balance Remaining on Contract \$35,190)	848.00
24		Cafeteria Plan: Uninsured Medical Reimbursement	112.23
25	Grainger	Painter & Pruner Tools, Safety Gloves (50) (STP) (\$73), Headlamp, Couplings (4) (\$108), Kneeling Mats (4) (\$105) & All-Weather Notebook	327.58
26	Hale, Larry	Retiree Exp Reimb (2019 Health Ins)	547.80
27	Home Depot	Gauge Adaptors (20)	145.39
28	ITRON Service Center	Software Upgrade to Allow Reading of WM Radio Read Meters (\$909) & Annual Hardware Maintenance (\$1,725)	2,634.23
29	Jackson, David	Retiree Exp Reimb (January Health Ins)	986.81
30	Johnstone, Daniel	Retiree Exp Reimb (2019 Health Ins)	1,088.28
31	Lacombe, Frank	Retiree Exp Reimb (2019 Health Ins)	54.24
32	Latanyshyn, Roman	Retiree Exp Reimb (January Health Ins)	333.79
33	Lemos, Kerry	Retiree Exp Reimb (January Health Ins)	986.81
34	Maltby Electric	Materials for STP Clearwell Recoat	366.45
35	Marin Landscape Materials	Crushed Rock (3 yds) & Concrete (42 sacks)	444.37

Seq	Payable To	For	Amount
36	Marin County Ford	Washer Pump & Seat Belts ('08 F250) (\$501) & Service Parts ('17 Ford Escape, '08 F250, '12 F250 & '15 F250)	698.15
37	Marin County	Renew Annual Encroachment Permit with the County of Marin	490.00
38	McIntyre, Drew	Expense & June-December Mileage Reimbursement	557.48
39	Moore, Doug	Retiree Exp Reimb (January Health Ins)	986.81
40	Nelson, John O.	Retiree Exp Reimb (2019 Health Ins)	1,088.28
41	New Pig	Large All-Purpose Wipers (3,000) (STP)	448.27
42		Vision & Cafeteria Plan: Uninsured Medical Reimbursement	274.00
43	North Marin Auto Parts	Belts for Sand Pumps @ STP (\$394), Coolant (1 gal), Wipers for Multiple Vehicles (10) (\$146) & Service Parts ('07 Chevy Colorado & '08 Chevy Colorado)	1,756.82
44	North Bay Gas	Gas for Welding Shop (\$175), Wrap-a-Round Tape Measure (3) (\$114) & December Cylinder Rental (\$113)	401.58
45	Novato Builders Supply	Hole Saw Set (\$71), Parts for Maintenance Bathroom & Material for Clearwell Coating Project (\$284)	382.46
46	Office Depot	Accounting Calculator	64.93
47	O'Reilly Auto Parts	Diesel Fuel Additive, Brake Cleaner (24) & WD 40 (24) (\$247)	507.04
48	Pace Supply	Couplings (10), Air Release Valves (3) (\$1,310), Clamps (5) (\$372), Tube Nuts (3), Emergency Repair Clamp for Broken Main @ San Marin H.S. (\$1,451) & Flanges (2)	3,724.48
49	Pini Hardware	Painting Supplies, Tools for B/G Shop, Misc Maintenance Supplies, Materials for Clearwell Project (\$459) & Materials for Maintenance Bathroom (\$216)	1,040.81

Seq	Payable To	For	Amount
50	Poiani, Isabel	Retiree Exp Reimb (2019 Health Ins)	54.24
51	Randall Bros. Automotive	Smog Inspection ('03 Dodge Dakota)	60.00
52	Schwaab	Date Stamps (6)	485.18
53	Smalley, Gayle	Retiree Exp Reimb (2019 Health Ins)	547.80
54	Soiland	Asphalt Recycling (26 tons)	129.20
55	Sonosky, Norma	Retiree Exp Reimb (2019 Health Ins)	907.32
56	Sonoma Boot	Safety Boots (Durbin)	183.80
57	South Bay Foundry	6" Valve Caps (60)	1,256.99
58	Stafford, Vernon	Retiree Exp Reimb (January Health Ins)	333.79
59	Staples Business Credit	Office Supplies & Annual Calendar Order	3,208.34
60	Starrett, John & Paula	Refund of Deposit/New Development/WC Restriction-Novato	1,000.00
61	Streakwave Wireless	Radios for Wildwood Tank & Woodland P/S (2)	233.02
62	TPx Communications	December Telephone Charges	512.57
63	Van Bebber Bros	36" Plate (18" Steel Main Damage)	414.31
64	Vasconcellos, Joan	Retiree Exp Reimb (2019 Health Ins)	547.80
65	Velloza, May	Retiree Exp Reimb (2019 Health Ins)	494.28
66	Verizon Wireless	Cellular Charges: Data (\$645) & Airtime (\$118)	763.28
67	Verizon Wireless	AMI Gateways, SCADA & Novato (\$643) & CIMIS Station	658.22
68	VWR International	Sulfate Standard & Safety Gloves (2,000) (Lab)	151.34
69	White Cap Construction	Materials for STP Clearwell Project	768.62
70	White, Sonia	Retiree Exp Reimb (2019 Health Ins)	54.24
71	Wilson, Roena	Retiree Exp Reimb (2019 Health Ins)	494.28
72	Wyndover LP	Novato "Toilet Rebate" Program	3,700.00

Seq	Payable To	For	Amount
73	Yee, Ramona T.	Novato "Toilet Rebate" Program	400.00
			294,538.51
		TOTAL DISBURSEMENTS	<u>\$294,538.51</u>

The foregoing payroll and accounts payable vouchers totaling \$294,538.51 are hereby approved and authorized for payment.

	
Auditor-Controller	Date
	
General Manager	Date

DISBURSEMENTS - DATED JANUARY 24, 2019

Date Prepared 1/22/19

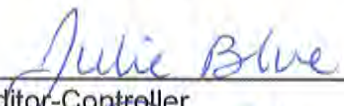

The following demands made against the District are listed for approval and authorization for payment in accordance with Section 31302 of the California Water Code, being a part of the California Water District Law:

<u>Seq</u>	<u>Payable To</u>	<u>For</u>	<u>Amount</u>
P/R*	Employees	Net Payroll PPE 1/15/19	\$140,390.35
EFT*	Internal Revenue Service	Federal & FICA Taxes PPE 1/15/19	57,222.18
EFT*	State of California	State Taxes & SDI PPE 1/15/19	11,668.48
EFT*	CalPERS	Pension Contribution PPE 1/15/19	35,352.44
EFT*	US Bank	December Bank Analysis Charge (Lockbox \$912 & Other \$426, Less Interest of \$196)	\$1,141.80
1	Alpha Analytical Labs	Lab Testing (Novato & W.M.)	2,468.00
2	Atco Pest Control	Front Office Insect Control	95.00
3	Backflow Distributors	Parts for Backflow Repairs	3,383.75
4	Bank of Marin	Bank of Marin Loan Principal & Interest (Pymt 87 of 240)	46,066.67
5	Blue, Julie	Exp Reimb: Airport Shuttle	38.00
6	Bold & Polisner	December Legal Fees	3,717.00
7	Buck's Saw Service	Chains for Pole Saw (2)	58.57
8	California Dept of Tax and Fee Administration	State Sales & Use Tax 1/18-12/18	8,050.00
9	Caltest Analytical Laboratory	Lab Testing (OM)	70.30
10	Charles Custom Welding	Welding Services (18" Steel Main Damage)	520.00
11	Charles Melin General Contractor	Refund Security Deposit on Hydrant Meter Less Final Bill	705.04
12	Clipper Direct	Commuter Benefit Program (3)	464.00
13	Comcast	January Internet Connection	140.71
14	Core Utilities	Consulting Services: December IT Support (\$6,000), Troubleshoot Communication Problem w/ Pump Stations (\$275), SCADA (\$725), Website (\$275) & AMI Software Maint.(\$325)	7,600.00

Seq	Payable To	For	Amount
15		Vision Reimbursement	304.00
16	Evoqua Water Technologies	Service on Lab Deionization System (Lab)	263.85
17	Fishman Supply	Ear Plugs (800) (\$138) & Urine Relief Bags (100)	140.11
18	Fisher Scientific	Sodium Atomic Absorption (\$116) & Filter Forceps for Membrane Analysis (Lab)	184.47
19	Frontier Communications	Leased Lines	1,431.36
20	Grainger	Tie Down Ratchet, Couplings (20), Knit Gloves (3), Repair Kit for 2" Air Pump (\$271), Socket Set (\$398), Cup Brush Wire (6), Crimped Cup Brush, Flap Disc (20), Cut-Off Wheel (100) (\$315), Connectors (50) & Heat Shrink Tubing (25) for Various Pump Stations	1,374.10
21	Lincoln Life	Deferred Compensation 1/15/19 PPE	8,884.86
22	Marin IJ Processing Center	Subscription Renewal (McIntyre) (1/19-12/19) (Budget \$525)	505.04
23	McLellan, WK	Misc Paving	10,755.22
24	McMaster-Carr Supply	Bolts for STP Centrysis (51), Filter for STP VFD's (4) (\$170) & Internal Switches (2) (\$281)	493.00
25	McPhail Fuel	Propane for Crest Tank Generator (174 gal)	613.22
26	MSI Litho	Business Cards (250) (Durbin)	85.72
27	Nationwide Retirement Solution	Deferred Compensation PPE 1/15/19	1,750.00
28	NMWD Employee Association	NMWD Association Dues (11/15/18-1/15/19)	1,175.00
29	Novato Lock	Employee Gate Replacement Latch	488.70
30	Novato Horse & Pet Supply	Straw for Erosion Control	11.92
31	NSI Solutions	QC Samples (Lab)	190.00
32	Pace Supply	Nipples (22) (\$128), Flanges (4) (\$149), Rubber Gaskets (4) & Meter Gaskets (20)	326.73
33	PG&E	Power: Bldgs/Yard (\$2,996), Rect/Controls (\$419), Pumping (\$18,390), Treatment (\$241) & Other (\$174)	22,221.02

Seq	Payable To	For	Amount
34	Point Reyes Light	Subscription Renewal (1/19-1/21) (Budget \$120)	119.00
35	Point Reyes Prop Mgmt Assn	January HOA Dues (25 Giacomini Rd)	75.05
36	Sonoma County Water Agency	December Contract Water	432,968.14
37	SPG Solar Facility	December Energy Delivered Under Solar Services Agreement	6,102.59
38	Stericycle Transportation Svcs	Hazardous Waste Disposal for WQ Lab	270.00
39	Township Building Services	December Janitorial Services	1,877.53
40	United Parcel Service	Delivery Service: Returned Erroneous Gate Parts, Gas Monitor for Repairs, Prepaid Shipping & Sample for Analysis (Lab)	159.87
41	USA BlueBook	Repair Kits for STP Chemical Pumps (\$450) & Sample Tests (10) (STP) (\$259)	708.82
42	US Bank	December Safekeeping Treasury Securities	131.75
43	Van Bebbler Bros	Formed Metal Bracket & Metal Plates (10) (\$224)	414.20
44	Victory Auto Plaza	Door Handle, Axle, Seals & Nuts ('07 & '08 Chevy Colorados)	42.41
45	VWR International	Deodorant Pads (100), Protective Eye Lens, Plastic Aprons (2), pH Test Strips (600) (\$70) & Respirator Masks (5) (Lab)	200.04
46	White Cap Construction	Burlap Bags (100) & Quick Setting Mortar Repair (3 5gal Pails)	394.63
TOTAL DISBURSEMENTS			<u>\$813,814.64</u>

The foregoing payroll and accounts payable vouchers totaling \$813,814.64 are hereby approved and authorized for payment.

	<u>1/22/19</u>
Auditor-Controller	Date
	<u>1/22/19</u>
General Manager	Date



NORTH MARIN WATER DISTRICT

Director's Compensation Request for Attendance at Meetings Other than District Board Meetings

BOARD MEMBER: RICK FRAITES

50 Forrest Road

Novato, CA 94947

DATE 12/18/18
(TODAY'S DATE)

I attended the North Bay Watershed Assoc on 12/07/18
(NAME OF MEETING OR WORKSHOP) (DATE OF MEETING)

and wish to be compensated as provided under the Board Compensation Policy.

DIRECTOR SIGNATURE

FOR ACCOUNTING USE ONLY

Julie Blue
APPROVED TO PAY BY

12/19/18
DATE

CHARGE TO: 56001-01-11

AMOUNT:\$ _____
(filled in by Accounting)

PAID PAY PERIOD ENDING ____/____/____

DISBURSEMENTS - DATED JANUARY 31, 2019

Date Prepared 1/29/19

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 1/24/19 - Retro Pay	\$33,035.28
EFT*	US Bank	Federal & FICA Taxes PPE 1/24/19 - Retro Pay	7,598.92
EFT*	State of California	State Taxes & SDI PPE 1/24/19 - Retro Pay	640.64
EFT*	CalPERS	Pension Contribution PPE 1/24/19 - Retro Pay	6,579.73
1	Alphagraphics Marin	Notification Letters for AMI Installation (593) & Mailing Services (\$339)	736.01
2	Athens Administrators	December Bill Review & February Monthly Fees	1,011.48
3	AT&T	January Internet Connection	85.00
4	AT&T	Leased Lines	66.06
5	Automation Direct	Communication Cards for Palmer Tank/Old Ranch P/S PLC	440.00
6	AWWA CA-NV SEC	G1-WQ Analyst (5/19-5/22) (Nommsen) (Budget \$60)	55.00
7	Bay Area Barricade Service	Marking & Striping Paint (\$443) (108 cans) & 36" X 24" Sign: Customer Entrance (Front Office)	536.90
8	Bender, Matthew	Water Codes Volume 10 & 19	1,177.48
9	Borges & Mahoney	Preventative Maintenance Kits for STP (8)	2,715.37
10	Calpico	Anodes (12) (\$1,966) & Clamps (20)	2,107.07
11	Cummings Trucking	Rock (99 yds) (\$4,559) & Sand (49 yds) (\$2,779)	7,337.50
12	Diesel Direct West	Diesel (2.23/gal) (516 gal) Gas (\$2.40/gal) (500 gal)	2,852.28
13	Ferguson	AMI Meter Installations (3,437) (\$75,748) & Fiberlyte Lids w/Probe Holes (1,320) (\$51,863) (Balance Remaining on Contract \$67,465)	127,611.14

Seq	Payable To	For	Amount
14	Grainger	Two Way Portable Radios (2), Sump Pump & Parts for Trumbull Pump Station (\$284), Steel Wool, Tool Box, Hole Saws (20) (\$339), Pipe Cutter, Pilot Drill Bits (20), Hand Soap for Locker Room, 30' Tape Measures (20) (\$338), Sandpaper (300'), Intrusion Switches (2), Propane Torch Heads (2), Disposable Gloves (200) (\$322), Connectors (2) & Tubing Connectors for Pressure Regulator Controls (4)	2,029.21
15	InfoSend	December Processing Fee for Water Bills (\$1,252), Postage (\$3,523) & December Monthly Support Fee (\$756)	5,531.73
16	JW Mobile	Smoke Tests (6) ('02 Int'l, '99 F550, '07 Int'l, '08 Peterbilt 335, '12 Int'l 4400 & '15 Int'l 4400)	900.00
17	Maltby Electric	Copper Wire (500')	418.72
18	McLellan, WK	Misc Paving	3,294.79
19	Micro Motion	Raw Water Flow Meter for Pt Reyes TP (\$2,419) & Replacement Flow Meter for Winged Foot P/S (\$3,928)	6,346.40
20	Miller Pipeline	Refund Overpayment on Closed Account	273.06
21	Mutual of Omaha	February Group Life Insurance Premium	900.72
22	Neopost USA	February Postal Meter Rental	124.43
23	Pace Supply	Meter Pumps (2), Bushings (20), Couplings (7) (\$2,603), Hydrants (4) (\$7,298), Gaskets (2), Elbows (20) (\$308), Service Saddles (2), Hydrant Extensions (4) (\$302), Nipples (26), Meter Spuds (40) & Corp Stop Adaptors (61) (\$1,103)	13,052.81
24	Parkinson Accounting Systems	December Accounting Software Support	585.00
25	NMWD Petty Cash	Petty Cash Reimbursement: Safety Snacks & Office Calendar	83.12
26	Pollard Water	Wood Plugs (9)	77.86
27	R & B	Nipples (14), Ells (20) & 6" Silent Check Valve Hydrant Extension (6" x 18") (\$748)	778.93
28	Red Wing Shoe Store	Safety Boots (Rupp)	195.51

Seq	Payable To	For	Amount
29		Vision Reimbursement	294.00
30	SWRCB Accounting Office	FY19 Large Water System (\$46,792) & Small Water System Fee (Pt Reyes)	51,381.85
31	Tamagno Green Products	Sludge Removal from STP (14 yds)	420.00
32	Thomas Scientific	Flip Top Sample Bottles (132) (Lab)	78.28
33	Univar	Sodium Hypochloride (8 Drums) (STP)	825.37
34	USA BlueBook	Check Valves for North Street Lift Station (2) & Meter Wrenches (3) (\$280)	468.00
35	US Postal Service	Meter Postage	1,000.00
36	Van Bebber Bros	2" Barrel Hinges	18.40
37	VWR International	pH Buffer for Meter Calibration & Clear Lens (2) (Lab)	48.55
38	Walker, Danielle & Nicholas	Refund of Deposit/New Development/WC Restriction-Novato	1,000.00
39	White & Prescott	Prog Pymt#8: Crest Pump Station Site Plan & Prog Pymt#9: AEEP Support -B2 Reach A (Balance Remaining on Contract \$22,400)	1,000.00
40	Wildcat Engineering	Final Pymt - Release of Retention: Onsite Retrofit for RW Central Area (Total Project Cost \$575,752)	28,787.58
41	Wiley Price & Radulovich	December Legal Fees	9,562.50
42	Wine Country Balance	Clean & Calibrate Lab Balances	499.00
43	Winzer	Oil Absorb (24) (Auto Shop)	231.45
		TOTAL DISBURSEMENTS	<u>\$324,793.13</u>

The foregoing payroll and accounts payable vouchers totaling \$324,793.13 are hereby approved and authorized for payment.



Auditor-Controller

1/29/19
Date


General Manager

1/29/19
Date

MEMORANDUM

To: Board of Directors
From: Nancy Williamson, Senior Accountant 
Subj: Information – FY19 2nd Quarter Labor Cost Report
L:\aclword\memo\19\2nd qtr labor cost rpt.doc

February 1, 2019

RECOMMENDED ACTION: Information Only

FINANCIAL IMPACT: None

Total labor cost decreased \$57,701 (1.5%) from the prior fiscal year. 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 each fiscal year. Also attached is a summary of total labor cost vs. budget (Attachment D), which shows that labor was 7.7% under budget through the end of the fiscal year.

Department	Increase / (Decrease) in Labor Cost vs prior FY	% Change
Administration	(\$70,623)	(6.7%)
Engineering	(\$30,779)	(4.7%)
Operations/Maint	\$2,417	0.2%
Construction/Maint	\$41,284	5.5%
Net Increase/(Decrease)	(\$57,701)	(1.5%)

Comment on Change from Prior Year

Administration: Labor Cost decreased \$70,623, or 6.7%. The decrease is primarily due to the resignation of the Accounting/Human Resource Supervisor on July 24th, 2018 and that position remaining vacant and to the Auditor Controller and District Secretary positions being filled with lower salaries than their predecessors. The decrease was offset by the two Senior Accountants working extra hours and also to hours worked from retirees for special projects and general support to the Accounting staff. The Consumer Services Supervisor worked extra hours due to the implementation of the AMI Project. There were also four 5% step increases, and the 3.8% labor cost increase effective October 1 of 2018.

Engineering: Labor Cost decreased \$30,779, or 4.7%. The decrease is primarily due to overlapping salaries in FY18 arising from the addition of an Engineering Tech IV on August 16, 2017 to replace an employee who retired on September 30, 2017 and to the retirement of an Associate Civil Engineer on October 31, 2018 and that position not being filled until December 3, 2018. The decrease was offset by four 5% step increases and the aforesaid 3.8% labor cost increase.

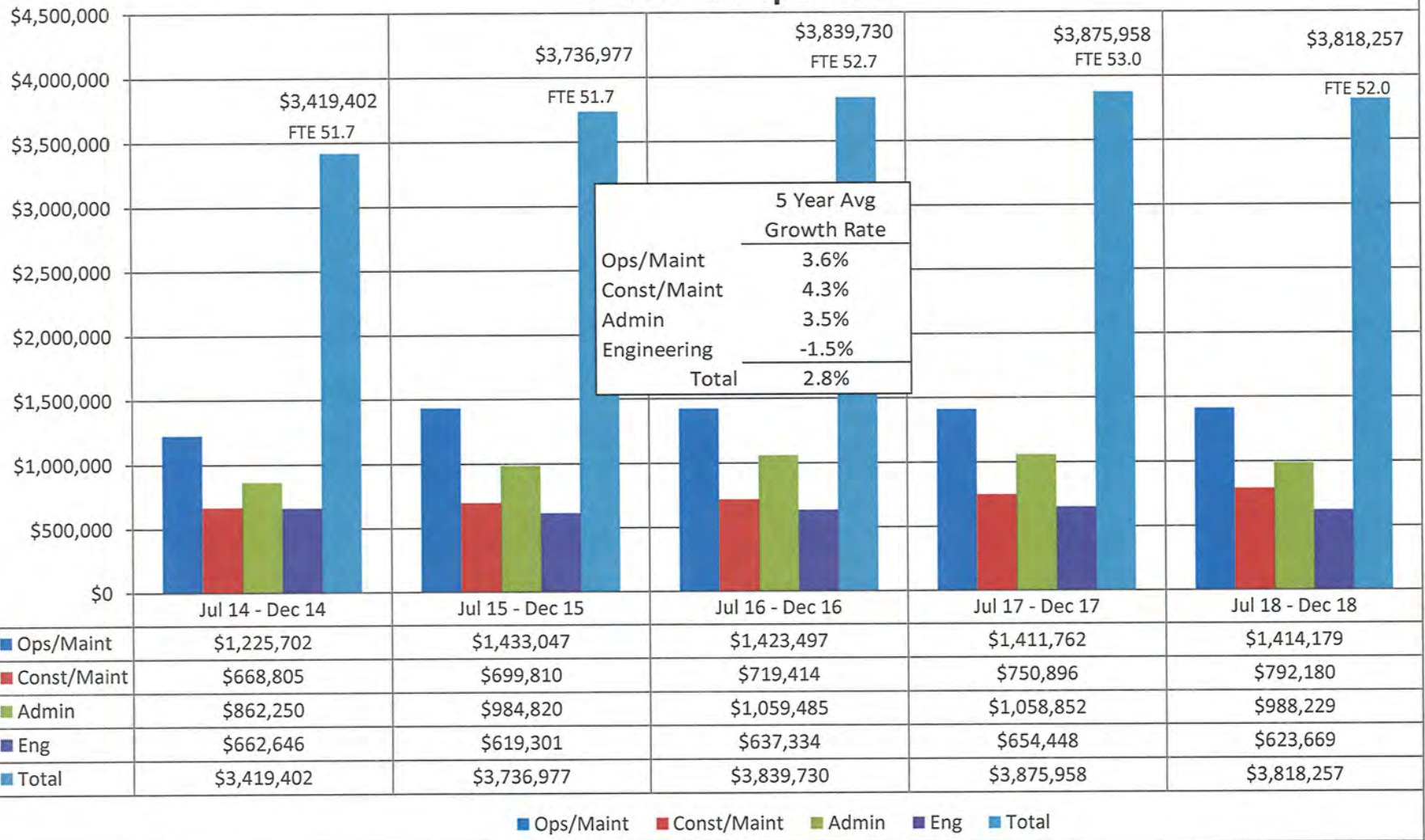
Operations/Maintenance: Labor Cost increased \$2,417, or 0.2%. The increase was primarily due to 125 more hours worked, fifteen 5% step increases, and the 3.8% labor cost increase. The increase was offset by the retirements of the Sr. Elec/Mech tech on December 30, 2017 and the Maintenance Supervisor on May 31, 2018 and those positions being filled with lower salaries.

Construction/Maintenance: Labor Cost increased \$41,284, or 5.5%. The increase was due to 210 more temporary and overtime hours worked, six 5% step-increases and the 3.8% labor cost increase.

2/1/19

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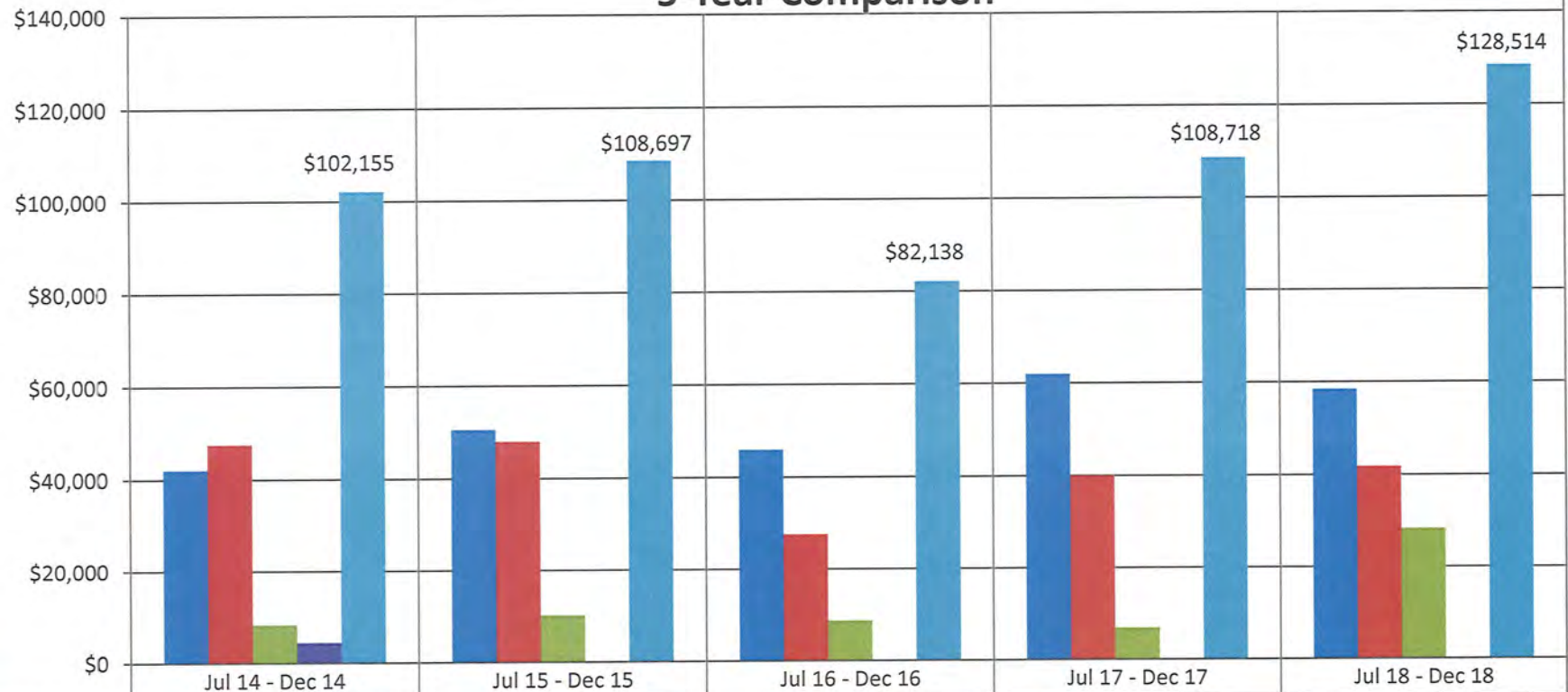
Total Labor Cost NMWD Fiscal Year through December 5-Year Comparison



2/1/19

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Overtime Cost NMWD Fiscal Year through December 5-Year Comparison



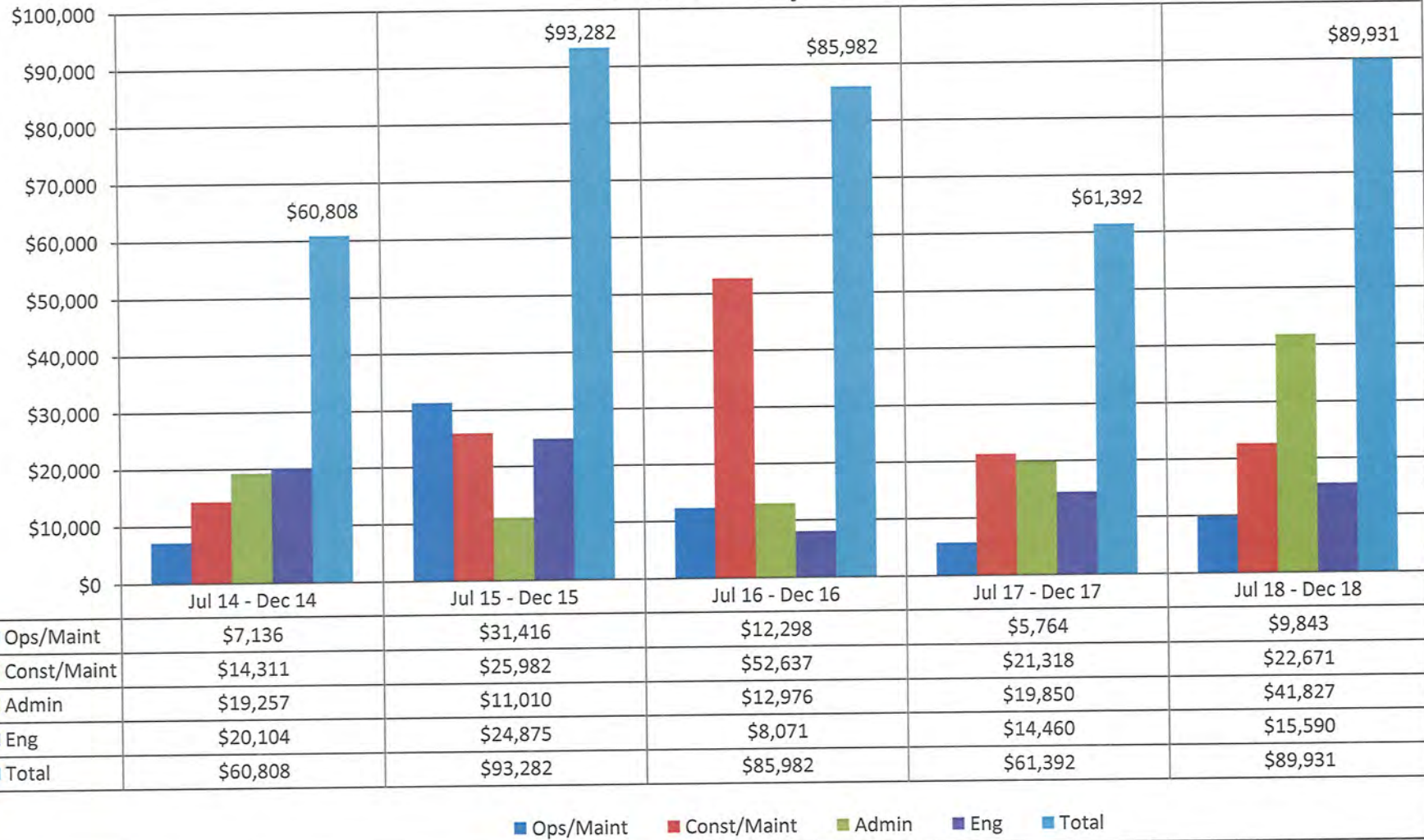
Ops/Maint	\$41,993	\$50,560	\$45,958	\$61,933	\$58,404
Const/Maint	\$47,541	\$47,979	\$27,547	\$39,984	\$41,754
Admin	\$8,268	\$10,074	\$8,633	\$6,801	\$28,356
Eng	\$4,353	\$84			
Total	\$102,155	\$108,697	\$82,138	\$108,718	\$128,514

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

2/1/19

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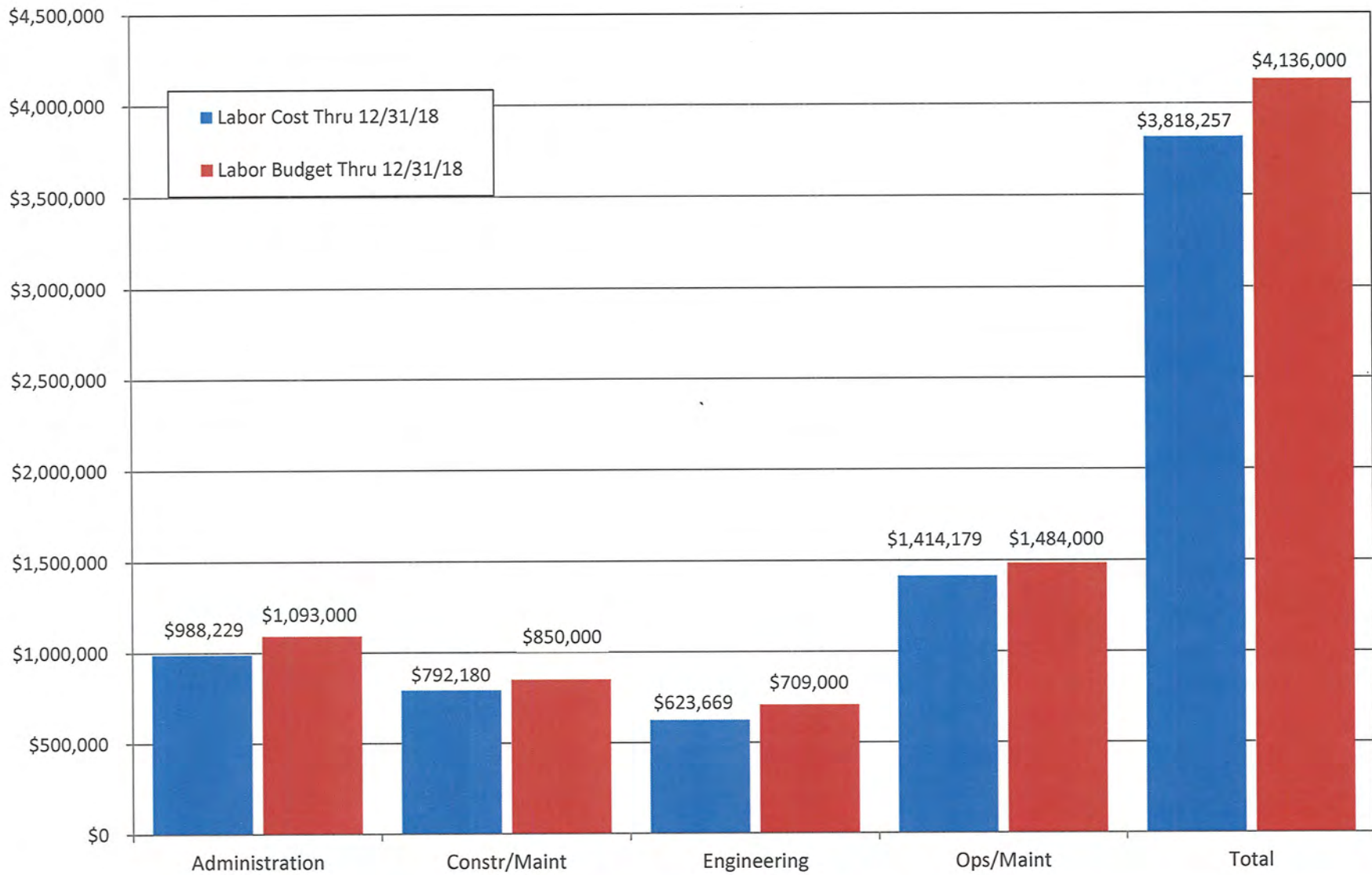
Temporary Employee Cost NMWD Fiscal Year through December 5-Year Comparison



2/1/19

t:\finance\hrs rpt\labor cost compared to budget fy18\salary chart.xls

Total Labor Cost vs. Budget NMWD Fiscal Year through September



MEMORANDUM

To: Board of Directors

February 1, 2019

From: Julie Blue, Auditor-Controller *JB*

Subj: Increase in Directors' Compensation

t:\aclword\directors\comp incr 2019.docx

RECOMMENDED ACTION: None - Information Only

FINANCIAL IMPACT: \$1,750 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 2018 was 4.5%. Therefore, effective January 1, 2019, each director shall receive compensation of two hundred and thirty five dollars (\$235) per day ⁽¹⁾ 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 \$39,000 annually, which amount includes payroll overheads. A 4.5% increase will add approximately \$1,750 in cost to the District annually.

(1) Note: This is a maximum daily limit. If a director attends two meetings in one day the compensation is capped at reimbursement for only one meeting.

MEMORANDUM

To: Board of Directors
 From: Nancy Williamson, Sr. Accountant *NW*
 Subj: Self-Insured Workers' Comp – 2nd Quarter Status Report
 t:\acl\word\personnel\wc\self ins status 1218.docx

February 1, 2019

RECOMMENDED ACTION: None

FINANCIAL IMPACT: Cumulative Savings of \$546,277

The District returned to self-insuring its workers compensation liability effective July 1, 2011, after the low-cost proposal for first-dollar workers' compensation coverage increased 20% over the prior year, to \$159,331. The avoided-cost since returning to self-insurance is calculated at \$417,768. When the Reserve for Future Medical (which is the estimated cost to fully resolve open claims) is added, the total cash outlay avoided to date, including interest earned on the cost avoided, is \$546,277. This cash is set-aside in a reserve for future claims.

Through the 2nd quarter of FY19, the District incurred three claims. Due to the reduction in cost of policy premiums and decreased savings margin the benefits of self-insuring will be evaluated and reconsidered for FY20. Attached are charts showing a 10-year history of annual claims cost (average \$60,000 per year) and 10-year history of claims frequency (average 5 claims per year).

	FY12 through FY16	FY17	FY18	FY19	Cumulative
Premium Avoided	\$1,057,526 ¹	\$191,000 ²	\$109,260 ³	\$51,376 ⁴	\$1,409,162
<u>Self-Insurance Cost</u>					
Medical/Indemnity	(182,867)	(272,416)	(15,533)	(1,722)	(472,539)
Third-Party Administration	(60,000)	(12,000)	(12,000)	(6,000)	(90,000)
Excess Insurance Premium ⁵	(247,754)	(58,638)	(62,358)	(25,027)	(393,777)
Legal/Miscellaneous	(24,592)	(1,102)	(6,777)	(2,607)	(35,078)
Net Cost Avoided	\$542,314	(\$153,156)	\$12,591	\$16,019	\$417,768
Reserve for Future Medical	0	74,989	11,389	2,800	89,178
Total Cash Outlay Avoided	\$542,314	(\$78,167)	\$23,980	\$18,819	\$506,946
Interest Earned on Cash Outlay Avoided	11,453	9,124	9,710	9,044	39,331
Cash Savings	\$553,767	(\$69,043)	\$33,690	\$27,863	\$546,277

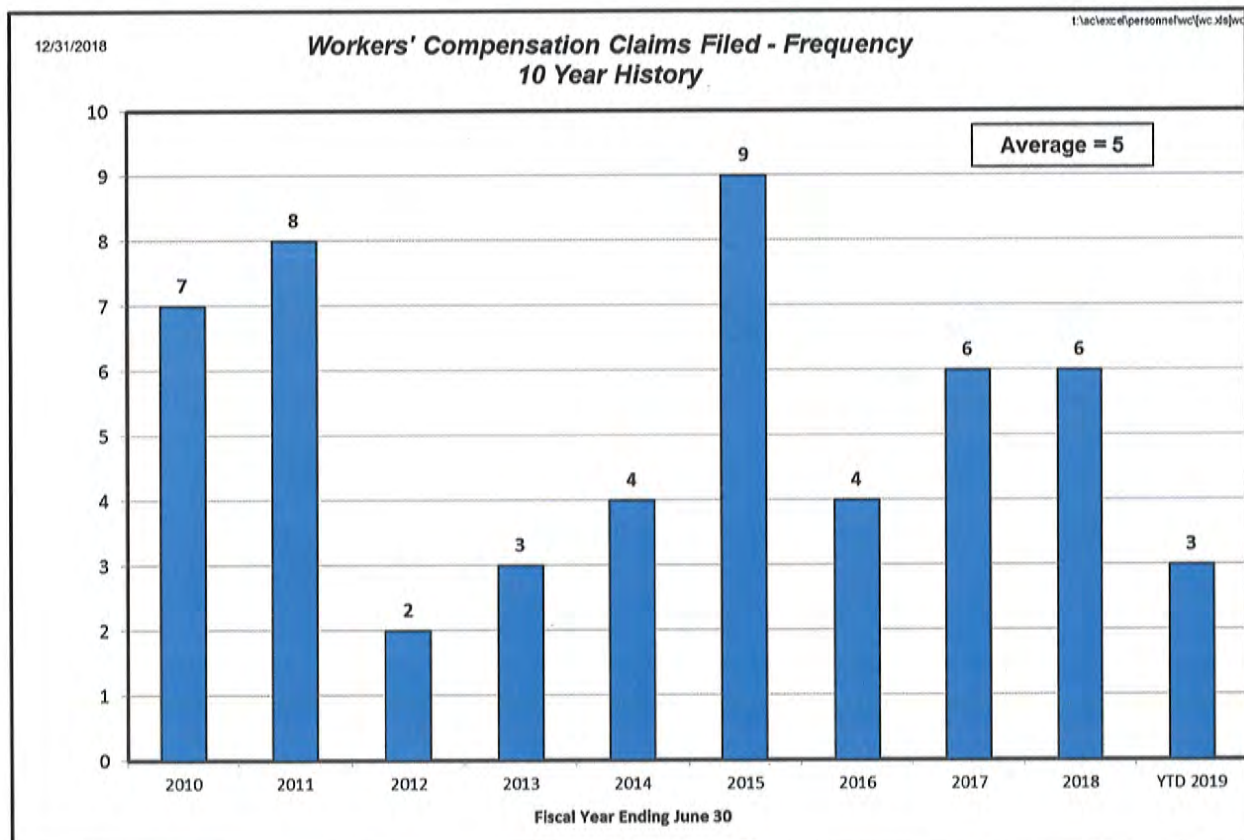
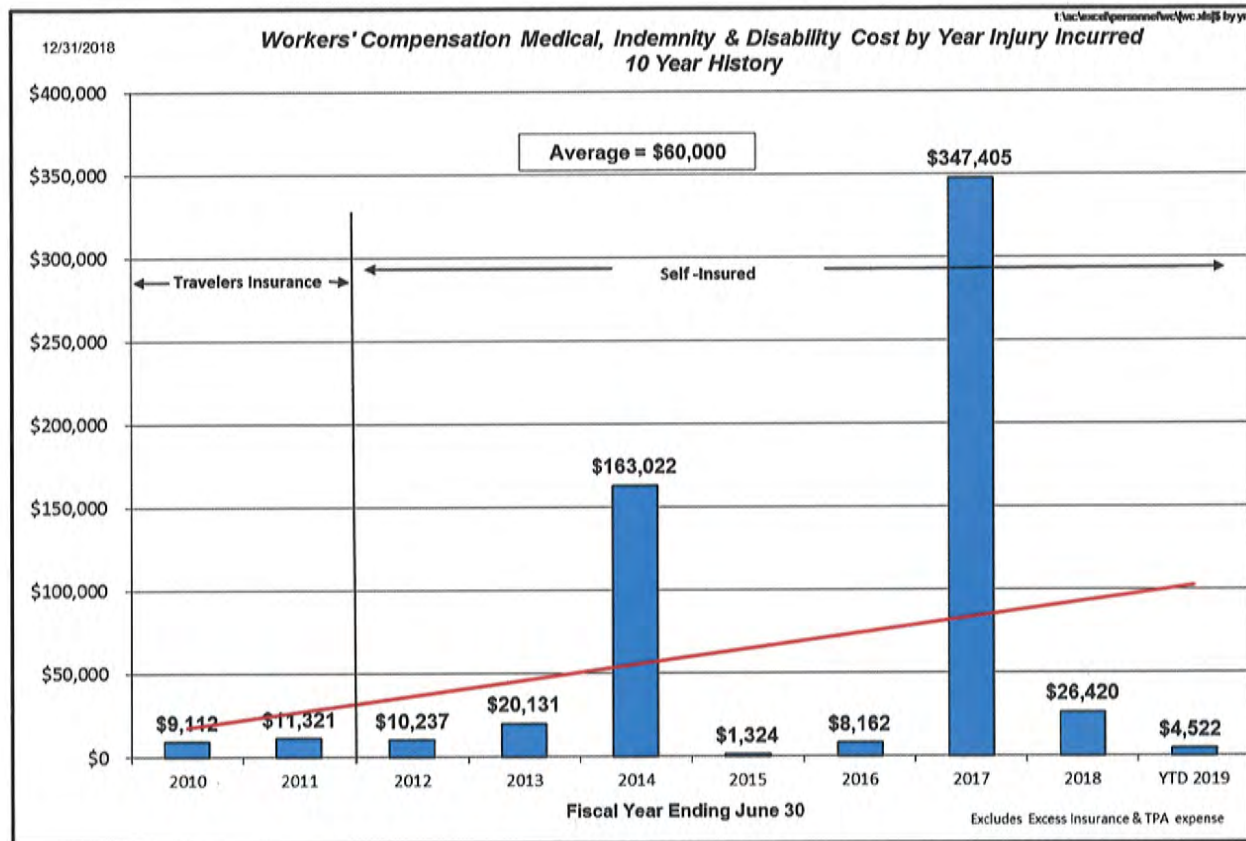
¹ Proposed annual premium of \$159,331 (FY12), \$170,574 (FY13), \$311,764 (FY14), \$203,722 (FY15) and \$212,135 (FY16)

² Allied World Assurance was the low cost proposal with an annual premium of \$191,000.

³ Zenith Insurance Company was the low cost proposal with an annual premium of \$109,260.

⁴ Zenith Insurance Company was the low cost proposal with an annual premium of \$102,752.

⁵ Excess Insurance Protects the District against Catastrophic Loss Exceeding \$1,000,000 per claim.



January 9, 2019

Drew McIntyre, Executive Director &
The Board of Directors
North Marin Water District
PO Box 146
Novato, CA 94948-0146

SENT BY EMAIL AND MAIL

On or about December 11 a notice was placed on our door indicating that our water use had been high and that there was a possible leak. Shortly thereafter we received a notice that \$1474.37 was to be automatically withdrawn from our checking account to pay the amount due.

By way of this letter, I am providing current contact information for our account and I am withdrawing permission for you to make automatic payments from our checking account to pay amounts due. Future invoices should be mailed to us. We will pay by check.

Account Number:	2022204
Name:	Robert Volpert
House Address:	22 Portola, Point Reyes Station
NEW Mailing Address:	Box 1124, Point Reyes Station, CA 94956
eMail Address:	bobvolpert@gmail.com
Telephone numbers:	1-415-663-8300 1-415-1-208-756-8116 (Office) 1-415-728-5837 (Cell)

I am appalled that a public agency would make an automatic withdrawal of this magnitude without calling the account holder. The impact on a family with a mortgage, tuition costs, medical expenses and other obligations could be devastating. I understand that all the Board Members are probably wealthy but not everyone in Marin enjoys that status. How dare an agency endanger a family because of a water leak?

As a follow-up, we replaced a water heater that MAY have had a minor leak. We also checked and replaced interior toilet components. We can find no leaks. A Chris Rodriquez inspected our property and meter on Friday, January 4. He initially found nothing wrong but then informed me that our PRV valve needed replacing. We are attempting to verify this and find a plumber to do the work. If the need for a replacement valve is confirmed, we will take care of it but that work can not be done until early February.

Your lack of care and concern for your long-time customers is disgraceful.

Regards,

Bob Volpert

cc: Marin County Board of Supervisors

RECEIVED

JAN 14 2019

North Marin Water District

County honing Stafford Lake plan

NOVATO

By Adrian Rodriguez

arodriguez@marinij.com @adrianrrodri on Twitter

Marin County has made piecemeal improvements to Stafford Lake Park over the years, and now officials are ramping up efforts to complete a master plan guiding future development of the park.

“We want to create a vision for our parks that really serves the need of the communities that love them,” said Max Korten, director of Marin County Parks.

The park, situated at the western edge of rural Novato, boasts 139 acres open space with offerings like fishing, picnicking, room for special events for up to 500 people, hiking, disc golf, a bike park and a recently added adventure playground.

Parks officials launched the master plan process for Stafford Lake in 2014, hiring RHAA, a Mill Valley-based landscape architect and planning firm, to produce the document and perform the staterequired environmental report. To date, the county has paid the firm about \$250,000 for work.

The draft initial study was open for public comment through Nov. 13, and now parks staff is wading through those comments in order to complete the report.

“Part of the master plan process is hearing from the neighbors and understanding what people are interested in,” Korten said.

To that end, the master plan focuses on nature-based recreation as well as traditional picnic and play. There are five categories for improvements: general park improvements; the Event Meadow;

to achieve because the lake is a drinking water reservoir.



Stafford Lake Park in Novato includes 139 acres of open space with amenities such as disc golf, a bike park and a new adventure playground.

DOUGLAS ZIMMERMAN — SPECIAL TO MARIN INDEPENDENT JOURNAL

the picnic playground; the Back Meadow; and miscellaneous amenities.

One of the popular wishlist items is a swimming lagoon in the Back Meadow at the center of the park, south of the bike park, said Korten. He said it is a big-ticket project that might be difficult

Other proposed projects include new bike and pedestrian paths; a new gatehouse and events center for the Event Meadow; a new picnic area playground; and updated individual and group picnic areas. There is also a vision for a bouldering course, nature play pods and a BMX track with a loop trail to be added to the Back Meadow.

Tara McIntire, a parks department senior landscape architect, said that so far improvements have created a new draw, especially the popular bike park, which cost just over \$1 million and opened in 2015.

“The bike park has really opened up the park as a whole to different types of users,” she said. “Families are now coming there, bringing their kids to ride the track — we didn’t know how popular the pump track was for adults and teens, so it’s really changed Stafford in a positive way.”

The bike park has seen a few additions, including new trails and wood features in 2017. This past summer a new bridge was added linking trails, McIntire said.

Other recently completed projects include the \$245,500 upgraded picnic area mow bands, pathways and curbing. The county has also spent \$16,500 on drinking fountains and

infrastructure improvements; \$17,200 for hammocks; \$8,250 on Adirondack chairs and \$55,500 to replace the playground, among other projects.

Projects are paid for with Measure A funds. Approved by countywide voters in 2012, Measure A is a quarter-cent sales tax funds projects and programs that benefit parks, open space and agricultural lands across Marin. Fifty-two percent goes to Marin County Parks and Open Space.

Information is available at bit.ly/2FrXaRt.



Tuesday, 01/15/2019 Pag.A03

Recent community proposals for Stafford Lake Park in Novato include a swimming lagoon and a bouldering course.

FRANKIE FROST — MARIN INDEPENDENT JOURNAL

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Reservoirs in 'good shape'

THE COUNTY

with heavy rain on horizon

Marin water supply improving as wet season replenishes basins

By Will Houston

whouston@marinij.com @Will_S_Houston on Twitter

An approaching storm this week is expected to pick up the slack for Bay Area rainfall. Meanwhile, local reservoirs are also showing signs of improvement following the meager rainfall from the last water year.

While Tuesday is only expected to bring light rain to the North Bay, meteorologists have their attention focused on a Wednesday storm front that could bring as much as 6 inches of rain to Mount Tamalpais.

"Basically, we're going to get a lot of rain to fall in a short amount of time," National Weather Service Bay Area meteorologist Ryan Walbrun said.

The storm is expected to cause rapid rises in local waterways and will carry winds strong enough to potentially bring down trees, branches and cause power outages, Walbrun said.

While the storm might cause damage, it is also a benefit for wildlife like endangered coho salmon on Lagunitas Creek, which are spawning and use the strong flows to push farther upstream.



Water falls down a spillway as it overflows from Lake Lagunitas to Bon Tempe Lake near Fairfax on Monday. More than 21 inches of rain have fallen at the lake since Oct. 1.

PHOTOS BY ALAN DEP — MARIN INDEPENDENT JOURNAL



A crew from the Conservation Corps North Bay works on a trail Monday near the Lake Lagunitas spillway.

The rain is expected to provide a nice boost to the **Water year so far**
Marin Municipal Water District's seven

reservoirs. Water supply for all seven reservoirs is already at 80 percent of full capacity, with the district's smallest reservoirs at Lake Lagunitas and Phoenix Lake spilling over as of Monday morning.

The district's supply is nearly 104 percent of its historical average for this time in the water year, which begins on Oct. 1.

While last year at this time only 16.48 inches were recorded at Lake Lagunitas since the start of the water year, this year 21.24 inches have been recorded, according to district spokeswoman Emma Detwiler.

"While we are in good shape so far, we always want to keep in mind that our reservoirs hold only a two-year supply of water," Detwiler said. "The water we save today is the water that will help us through our next dry year. If you have an irrigation system, now is the time to turn it off for the season."

The North Marin Water District's reservoir at Stafford Lake, which makes up a quarter of its water supply, was at 41 percent of its 4,400 acre-foot capacity.

Drew McIntyre, the district's general manager, said it typically takes about 7 inches of rain to saturate the ground and provide runoff it can capture and store. About 11.9 inches of rain were recorded from Oct. 1 through Jan. 13.

"We're well-positioned now to capture as much of the rainfall that we get in runoff to help fill the reservoir," McIntyre said.

Rainfall at Stafford Lake is also improved from last year. About 8.7 inches were recorded from October through December as opposed to 3.9 inches during the same time period last year, according to McIntyre. This year's rainfall is still below the average of about 10.3 inches, however.

Both local water districts also purchase varying amounts of their supply from the Sonoma County Water Agency. The agency's two main reservoirs at Lake Sonoma and Lake Mendocino were at 55

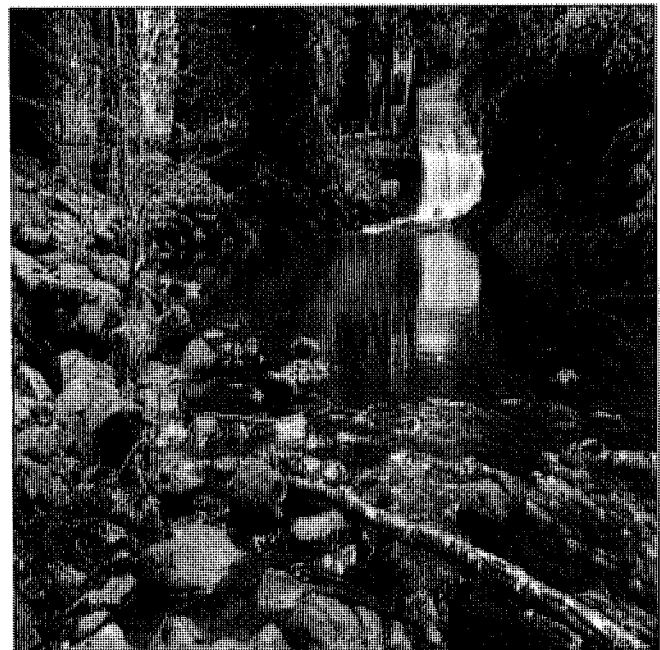
While the National Weather Service's gauge at the Marin County Civic Center in San Rafael is down due to ongoing construction, rainfall recordings in nearby communities show a promising start as the storm season rolls in.

Downtown San Francisco recorded about 72 percent of its normal rainfall since the start of the water year, or about 7.75 inches of the normal 10.75 inches. Santa Rosa has received about 81 percent of normal rainfall, having recorded 14.14 inches of its normal 17.5 inches, according to Walbrun.

"I would think by the end of the week a lot of the climate sites will be running about 100 percent of normal for year-to-date rainfall," Walbrun said.

San Rafael's average rainfall for the entire water year is about 34.35 inches.

The majority of Marin County and the state was in a moderate drought as of Jan. 8, which is the second to lowest drought classification on the U.S. Drought Monitor. Water supplies at many of the state's larger reservoirs were at or below their historical levels for this time in the water year, according to state data.



percent and 54 percent capacity respectively as of Monday morning, according to California Department of Water Resources data. Water overflows from Lake Lagunitas, one of the Marin Municipal Water District's seven reservoirs, on Monday.

ALAN DEP — MARIN INDEPENDENT
JOURNAL

City undergoing some changes in administration

NOVATO

By Will Houston

whouston@marinij.com @Will_S_Houston on Twitter

Novato City Hall will have some new faces in its administration following recent staff changes.

Vicki Parker will start as the city's new community development director on Jan. 28 following the retirement of Bob Brown last week. Parker, 58, most recently served in the same position for the city of Cotati and has previous work experience in other local governments in Southern California, according to a city news release. Parker also worked for a private, international consulting firm, Stantec Consulting, which is headquartered in Alberta, Canada.

Parker will be paid a salary of \$169,872 a year, according to the city.

"Community planning is multi-faceted and needs a diverse set of voices in order to develop public policy that achieves the goals of those voices," Parker said in a statement. "I look forward to assisting the Novato community achieve its ambitions both large and small."

Parker comes at a time when the city is working to craft commercial cannabis regulations, conduct a potential review of the city's permitting processes and focus on developing the downtown area.

Parker replaces five-year director Brown who retired from the position last week. A reception is planned for 5 p.m. Jan. 29 at City Hall, 901 Sherman Ave.

City Manager Regan Candelario said Parker's experience in public and private sectors as well as her knowledge of regional issues and her collaborative nature makes her a "perfect fit."

Mean while, Assistant City Manager Peggy Flynn is set to become city manager for the city of Petaluma where she is also a resident. The Petaluma City Council is set to vote on Jan. 28 on whether to appoint Flynn to the position.

Flynn would be paid \$210,000 a year if appointed, higher than her current salary of \$170,000. Having worked for Novato since 2012, Flynn said she is proud of the work that the city has accomplished with the community.

"As a Petaluma resident, I am excited and grateful for this opportunity to serve my community," Flynn said in a statement. "To work with our experienced, professional, and dedicated staff and council to serve



Parker



Flynn

our residents and businesses is a dream come true. I am deeply committed to ensuring a thriving Petaluma for generations to come.”

Flynn’s last day with Novato is set for Feb. 7 and will start her new position on Feb. 25 if appointed.

“Peggy has been an incredible asset to Novato,” Novato Mayor Eric Lucan said in a statement. “She is an exceptionally

experienced manager who has transformed the way we engage our community and our staff, which has ultimately improved our decision-making process. Her impact is far-reaching. We will greatly miss her.”

In addition to finding Flynn’s replacement, Novato is currently in the hiring process for its human resources director and finance director positions.

PG&E halts process to sell Potter Valley Project

MARIN WATER SUPPLIES

By Will Houston

whouston@marinij.com @Will_S_Houston on Twitter

Pacific Gas and Electric Co. announced Friday it will no longer relicense and sell its Potter Valley Project hydroelectric power plant.

This decision comes as various stakeholders were considering ways to address longstanding issues of water supply and impacts to the environment caused by the Mendocino County-based power complex's construction 110 years ago.

Marin County water officials have been tracking this relicensing process from afar due to potential impacts to their water supplies. Water diverted by the power facility feeds into the Russian River and affects water supplies across four counties, including Marin. The Russian River supplies about 75 percent of North Marin Water District's water supply and about 25 percent of the Marin Municipal Water District's.

PG& E stated in a news release Friday that it submitted a letter to the dam relicensing authority, the Federal Energy Regulatory Commission or FERC, notifying it of its withdrawal. The utility said it will also "expeditiously" cease its ongoing auction process for the power project, which began last year and was accepting initial proposals.

PG& E said it anticipates FERC will now "initiate its Orphan Project process," meaning that interested parties can submit an application for a new project license.

"We believe this path will allow interested parties more time to prepare for the acquisition of the project, and the ability to submit a License Application on their own terms rather than assuming PG& E's current application," PG& E stated. "If the Orphan process does not result in

in lawsuits and liabilities from wildfires caused by its equipment. It is not immediately clear how that process will affect the future steps for the Potter Valley Project, but stakeholders are eyeing the announcement as an opportunity.

Congressman Jared Huffman had convened a stakeholders working group in 2017 to plan for what he sees as a "two-basin solution" in which the environmental impacts on the Eel River and the water supply issues in the Potter Valley and Russian River watershed are addressed.

Environmental and fishing stakeholders have striven to remove one of the project's dams, Scott Dam, which has cut off hundreds of miles of historic fish spawning habitat for the rivers now threatened or endangered salmon species. The Friends of the Eel River environmental group states PG& E already faced significant costs to improve the structural integrity and address fish passage issues with the dam as part of the relicensing process. The group is advocating for the removal of Scott Dam at the very least.

"PG& E may be facing financial reality here, but they have yet to come clean either about the potentially disastrous safety situation at Scott Dam, or about the ecological impacts of the dam on Eel River salmon, steelhead, and lamprey," said David Keller, the group's Bay Area director. *Ukiah Daily Journal* reporter Justine Frederiksen contributed to this report.



Scott Dam in Potter Valley in 2014.

the issuance of a new Project License, it is expected FERC will order PG& E to prepare and submit a Surrender Application and Decommissioning Plan.”

NATHAN DEHART — UKIAH DAILY JOURNAL

Saturday, 01/26/2019 Pag.A04

In the meantime, PG& E states it will continue to operate the facility “until a new license is issued or the project is decommissioned.”

The announcement also comes after PG& E announced earlier this month its intention to file for bankruptcy as it faces billions of dollars

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Gavin Newsom budget calls for drinking water tax to help poor communities

BY DALE KASLER,
RYAN SABALOW, AND
ALEXEI KOSEFF



Tackling what promises to be a controversial issue, Gov. Gavin Newsom proposed a tax on drinking water Thursday to help disadvantaged communities clean up contaminated water systems.

Newsom's plan for a "safe and affordable drinking water fund," included in the new governor's first budget proposal, attempts to revive an idea that [died in the Legislature](#) last year.

A McClatchy investigation last year showed that at least 360,000 Californians rely on water that does not meet state standards for toxins. McClatchy also found that 6 million Californians have water providers that have violated state standards at some point since 2012.

"That is a disgrace," Newsom told reporters at a budget press conference, citing a figure of 1 million people without access to safe drinking water.

Newsom said he also wants to earmark \$25 million for safe drinking water, to jump-start the effort. His proposal was immediately hailed by safe drinking water advocates.

"These are our fellow Californians, and it's past time to get this crisis resolved," said Jonathan Nelson, policy director at a nonprofit advocacy group, the Community Water Center.

THE SACRAMENTO BEE

JANUARY 10, 2019 11:52 AM,

But Jon Coupal of the Howard Jarvis Taxpayer Association said he thinks improvements for water systems shouldn't be addressed with a new tax when the state is sitting on a \$14.8 billion budget surplus.

Coupal called Newsom's proposal an example "of California's knee-jerk reaction to default to a new tax whenever there's a new problem."

Details of Newsom's plan weren't immediately available, and state Sen. Bill Monning, D-Carmel, who spearheaded the tax proposal last year, said it could take several weeks to figure out the specifics.

Last year's proposal would have taxed residential customers 95 cents a month, to raise about \$110 million a year. Most of the Californians with unsafe drinking water resources live in the Southern San Joaquin Valley and the Mojave Desert, McClatchy found.

Dairy producers and feedlot operators would have contributed about \$30 million in fees, for a total annual fund of \$140 million. The dairy industry largely supported the bill, which provided some relief from disciplinary action as long as dairies followed "best practices" to limit toxins such as nitrate from cattle manure from leaching into drinking water.

"We're excited," said Anja Raudabaugh, CEO of Western United Dairymen. "We appreciate Gov. Newsom's commitment to providing long-term solutions to drinking water in our communities, and we're looking forward to providing a solution that includes certainty for our dairy producers."

The Legislature scrapped the idea after protests from some segments of the agricultural community and the Association of California Water Agencies, which

THE SACRAMENTO BEE

JANUARY 10, 2019 11:52 AM,

represents more than 400 water districts. It became clear that the proposal would have trouble it was proving increasingly difficult to secure the two-thirds super-majority needed to impose a new tax. Former Gov. Jerry Brown tried to resurrect the program last fall as a voluntary tax, but that died in the Legislature as well.

Cindy Tuck, a deputy executive director at the water agency association, said her group still has major concerns about the proposal.

“We think the problem can be solved without a tax,” she said.

Democrats’ success in the November elections means the tax could have a better chance of passing this year. Democrats now hold super-majorities in both houses of the Legislature, unlike last year.

But it’s no sure thing the proposed tax will make it through the Legislature even with Democrats firmly in charge. In November, California voters rejected the \$8.9 billion Proposition 3 water bond that promised \$500 million to clean up drinking water.

And within hours of Newsom’s announcement, some Democrats were expressing anxiety about a new tax.

Assemblyman Phil Ting, a San Francisco Democrat, said it would be a “very tough lift” in the Legislature to tax all Californians, most of whom have clean drinking water, to pay to fix pollution in a “very specific area.”

“It really comes down to how much time he and his staff are going to put toward it,” Ting said. “One of Gov. Brown’s strengths was really having a very narrow list of things to work on and get done, and because of that, he was able to get them done.”

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