NORTH MARIN WATER DISTRICT
AGENDA - REGULAR MEETING
October 20, 2020– 6:00 p.m.
Location: Virtual Meeting
Novato, California

Information about and copies of supporting materials on agenda items are available for public review at 999 Rush Creek Place, Novato, at the Reception Desk, or by calling the District Secretary at (415) 897-4133. A fee may be charged for copies. District facilities and meetings comply with the Americans with Disabilities Act. If special accommodations are needed, please contact the District Secretary as soon as possible, but at least two days prior to the meeting.

ATTENTION: This will be a virtual meeting of the Board of Directors pursuant to Executive Order N-29-20 issued by the Governor of the State of California.

There will not be a public location for participating in this meeting, but any interested member of the public can participate telephonically by utilizing the dial-in information printed on this agenda.

Video Zoom Method

CLICK ON LINK BELOW:

Go to: https://us02web.zoom.us/j/8349174264

Password: 466521

OR

SIGN IN TO ZOOM:

Meeting ID: 8349174264

Password: 466521

Call in Method:

Dial:
+1 669 900 9128
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Meeting ID: 834 917 4264#

Participant ID: #

Password: 466521#

For clarity of discussion, the Public is requested to MUTE except:
1. During Open Time for public expression item.
2. Public comment period on agenda items.

Please note: In the event of technical difficulties during the meeting, the District Secretary will adjourn the meeting and the remainder of the agenda will be rescheduled for a future special meeting which shall be open to the public and noticed pursuant to the Brown Act.

Est. Time	Item	Subject
6:00 p.m.		***CALL TO ORDER***
	1.	***APPROVE MINUTES FROM REGULAR MEETING***, October 6, 2020
	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. ***MONTHLY PROGRESS REPORT w/ Customer Service Questionnaire***

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:*** Renewal of Horizon CATV License Agreement

ACTION CALENDAR

7. ***Approve:*** Old Ranch Road Tank No. 2 Project – Consider Adoption of Mitigated Negative Declaration

8. ***Approve:*** Renew Declaration of Local Emergency Related to COVID-19 Pandemic

INFORMATION ITEMS

9. Strategic Plan Progress Report – Year 2 Review (FY 2019-20)

10. Accounts Receivable Analysis

11. ***MISCELLANEOUS***

Disbursements – Dated October 8, 2020
Disbursements – Dated October 15, 2020
Salinity Notice – Point Reyes Light - October 1, 2020
Salinity Notice – Point Reyes Light - October 8, 2020

News Articles:
Marin IJ - MMWD board candidates see funding, climate as top issues
Marin IJ - Housing mandate estimate balloons
Marin IJ – Marin Voice – Water District ready to deliver amid threats of fire, drought
Point Reyes Light – Relief on the horizon for dramatically salty Point Reyes water
Marin IJ – Fire fully contained in national seashore – West Marin
Marin IJ – Editorial - Lubamersky a good pick for water board
Marin IJ – Below-normal rain forecast increases fire fears in Marin – Winter Months
Point Reyes Light -Lawson's Landing gets state approval for major upgrades
Point Reyes Light – Inverness and Bolinas step up water restrictions, warn of rationing

7:30 p.m. 12. ***ADJOURNMENT***

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DRAFT
NORTH MARIN WATER DISTRICT
MINUTES OF REGULAR MEETING
OF THE BOARD OF DIRECTORS
October 6, 2020

CALL TO ORDER

President Joly announced that due to the Coronavirus outbreak and pursuant to Executive Order N-29-20 issued by the Governor of the State of California this was a virtual meeting. President Joly called the regular meeting of the Board of Directors of North Marin Water District to order at 6:02 p.m. and the agenda was accepted as presented. President Joly added that there was not a public location for participating in this meeting, but any interested members of the public could participate remotely by utilizing the video or phone conference dial-in method using information printed on the agenda.

President Joly welcomed the public to participate in the remote meeting and asked that they mute themselves, except during open time and while making comments on the agenda items. President Joly noted that due to the virtual nature of the meeting he will conduct a roll call from the Directors. A roll call was done, all were in remote attendance therefore establishing a quorum. Participating remotely were Directors Jack Baker, Rick Fraites, James Grossi, Michael Joly and Stephen Petterle.

President Joly announced in the event of technical difficulties during the meeting, the District Secretary will adjourn the meeting and the remainder of the agenda will be rescheduled for a future special meeting which shall be open to the public and noticed pursuant to the Brown Act.

Mr. McIntyre performed a roll call of staff, participating remotely were Drew McIntyre (General Manager), Terrie Kehoe (District Secretary), Julie Blue (Auditor-Controller), Tony Arendell (Construction/Maintenance Superintendent), Robert Clark (Operations/Maintenance Superintendent), and Monica Juarez (Cashier/Receptionist).

President Joly announced for those joining the virtual meeting from the public to identify themselves, and there was no response. Braden Cartwright from the Point Reyes Light joined the meeting remotely at 6:20 p.m.

MINUTES

On motion of Director Fraites, seconded by Director Baker the Board approved the minutes from the September 15, 2020 regular meeting by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

GENERAL MANAGER'S REPORT

PRE Tank 4A Update

Mr. McIntyre announced the third and final wall concrete placement will occur on October 8th. He asked if anyone is interested in seeing this operation it is best to visit the site between 11 a.m. and noon. He added, prior to doing so, to contact him directly so he could give a heads up to the project manager, David Jackson.

Former Point Reyes Coast Guard Housing Update

Mr. McIntyre reported that there is some activity underway between Marin County and Community Land Trust Association of West Marin (CLAM) regarding initiating work on redevelopment of the former Point Reyes Coast Guard housing property. He stated he has been in contact with CLAM's engineer to discuss initial review of a draft work plan in reference to water quality monitoring in the area and preparation for additional work on a proposed wastewater treatment and disposal system. Mr. McIntyre noted staff will be using PES to support the District as part of this review. Additionally, he stated that currently the District has a postage stamp size site and will require more property for the future renovation of the Point Reyes Treatment Plant.

West Marin Dry Year Conditions/ Salinity Update

Mr. McIntyre apprised the Board that it is too early to report West Marin consumption savings in August and September as the meters are just being read. He stated when looking at production data, staff believes August conservation data was influenced by firefighting water use for the Woodward fire. Mr. McIntyre also reported salinity issues continue to be a concern to our customers. He announced Mr. Ramudo participated in a KWMR radio spot on September 22nd and further discussed the salinity impacts on our West Marin customers. Additionally, Mr. McIntyre gave a tour of the Coast Guard Wells and treatment plant to members of the Point Reyes Village Association on October 1st. He also reported the Point Reyes Light will have another story in this week's edition regarding this issue.

New Assistant GM/Chief Engineer

Mr. McIntyre announced he is pleased to inform the Board that our new Assistant General Manager/Chief Engineer, Tony Williams will start work next Monday, October 12th. He expressed that he is very happy to have him join the NMWD team.

Director Joly asked that we have an item on a future agenda to review the 2020 fire season, what we learned in regards to the watershed, supply and water quality. Mr. McIntyre responded that we do not yet know the full effects of the Woodward fire but staff will continue to work on this analysis and report back to the Board at a future meeting.

OPEN TIME

President Joly asked if anyone from the public wished to bring up an item not on the agenda and there was no response.

STAFF/DIRECTORS REPORTS

Director Petterle noted the first meeting in November will also be the day of the general election. He asked Mr. McIntyre if that agenda could be at a minimum so the Board of Directors can see what is going on with the election. Mr. McIntyre responded that it is duly noted. Director Fraites seconded Director Petterle's suggestion and Director Joly commented that it is a good point since there will be much interest.

Mr. Clark reported an incident at the Point Reyes Treatment Plant where staff found a leak in the main treatment plant filter header that was spraying water. He added that staff was able to isolate the leak, dry out all equipment and controls and had to replace 25% of the modules. Director Baker asked, aside from the electrical concern what was the underlying problem causing the leak. Mr. Clark replied the root cause was a rusted pipe plug in the header. Director Joly asked if there were any interruptions to customers. Mr. Clark replied there was plenty of storage in the tanks so there were no issues, however the following day staff had to run the Coast Guard wells for a longer period of time in order to catch up.

Mr. Arendell announced that the PG&E pipeline work on Diablo Avenue near Novato Blvd. was completed on October 2nd and it is now being backfilled. He noted on October 7th we will be taking samples and flushing the lines and our line will be back in service by the end of the week. Mr. Arendell commended the contractor for being extremely competent.

Director Joly asked Ms. Blue how things are going with the current rate increase. Ms. Blue replied in order to set the new rates our Billing Department had to send out approximately 16,000 bills in two days. She added the bills were for a shorter billing cycle. Director Joly stated he received his and saw that it was much lower, and read the message on the bill and then understood why. Ms. Blue stated since the bills have gone out the Consumer Services Department has received 560 phone calls. She added it was explained to those customers that it was a one-time, partial bill and moving forward they will be back to their regular billing cycle. Director Joly asked if a note was added to the website. Ms. Blue replied that this is a good suggestion and she will look into it; however, she would expect the phone volume to go down.

Director Joly asked how the recent audit was going and when the Board may expect to see it. Ms. Blue replied that it will be presented at a future meeting once the report is finalized and the auditors will be doing the presentation. Director Joly stated he noticed three or so refunds on engineering charges on the disbursements. Mr. McIntyre responded on developer jobs the applicant must pay the estimated full engineering and construction costs in advance of the work. He added that these funds are kept until the project is completed and it is typical that excess funds are then returned to the developer.

Mr. McIntyre reminded the Board that on October 1st the 4.5% West Marin rate increase went into effect.

Director Joly asked if we were all settled with the Gallagher Streambank Stabilization grant. Mr. McIntyre replied that staff submitted the payment request to NRCS recently and we should receive payment in the next month or so.

CONSENT CALENDAR

Item 5 – Amendment No. 1 of Water Service Agreement – Springbrook Green Homes, APN 141-221-74 and 75 was removed from the consent calendar for additional discussion. On the motion of Director Baker, and seconded by Director Petterle the Board approved Items 6, 7, 8 and 9 on the consent calendar by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

(ITEM 6) AUDITOR-CONTROLLER'S STATEMENT OF INVESTMENT POLICY

The Board approved the Auditor-Controller's Statement of Investment Policy. This is presented to the Board annually for review and there were no changes proposed.

(ITEM 7) QUITCLAIM PORTION OF EXISTING EASEMENT – 802 STATE ACCESS ROAD, APN: 157-970-03

The Board approved the quitclaim portion of existing easement for 802 State Access Road. The New Hamilton Village developer, City Ventures Home Building is requesting a 5" x 23.82" easement at State Access Road to be quitclaimed to construct a retaining wall. The District will however, still retain a 15' wide easement for the 16" transmission main.

(ITEM 8) DISPOSAL OF SURPLUS EQUIPMENT

The Board approved the disposal of surplus equipment. Staff recommended the disposal of vehicles and equipment, all of which were old and worn, which maintenance and repair costs that are no longer effective when compared to replacements.

(ITEM 9) BASE SALARY SCHEDULE REVISION

The Board approved the updated District Salary Schedule to be effective October 1, 2020. In accordance with the Memorandum of Understanding (MOU) with the North Marin Water District Employee Association, effective each October 1 through 2022 employees will receive a cost of living adjustment equal to the current San Francisco Bay Area All Urban Consumers Price Index (CPI-U), which this year is 2%.

(ITEM 5) AMENDMENT NO. 1 OF WATER SERVICE AGREEMENT – SPRINGBROOK GREEN HOMES, APN 141-221-74 AND 75

This amendment changes the deadline to complete financial arrangements of the agreement from six (6) months to twelve (12) months from the date of the agreement which was executed on May 14, 2020. This amendment also changes the deadline to start construction from twelve (12) months to eighteen (18) months from the date of the agreement.

Director Baker stated the letter from the applicant, Stonehenge Properties LLC, was very brief. He added asking for a 180-day extension due to the pandemic was a bit of a reach and there was nothing noted in the letter that persuaded him or compelled him to grant the extension. Director Baker cautioned that he does not want to encourage others to capitalize on the pandemic. Director Joly asked who spoke with the developer on this issue. Mr. McIntyre replied, Mr. Pearlman, the NMWD project engineer. He noted that similar requests, while rare, have been granted in the past, but if not approved and the financial arrangements deadline expires, a new agreement will need to be brought back to the Board at a later date. Director Baker stated it is not good practice to do this when the developer does not have a lot of merit. Director Petterle stated we have done this in the past. Mr. McIntyre confirmed, but said rarely. Director Grossi asked if it has to do with the developer not being able to move ahead. Mr. McIntyre responded the developer is trying to sell the project, however due to COVID the developer has stated that there is not the activity there was before the pandemic.

On the motion of Director Petterle, and seconded by Director Fraites the Board approved Items 5, Amendment No. 1 of Water Service Agreement – Springbrook Green Homes by the following vote:

AYES: Director Fraites, Grossi, Joly and Petterle

NOES: Director Baker

ABSTAIN: None

ABSENT: None

ACTION ITEMS

RENEW DECLARATION OF LOCAL EMERGENCY RELATED TO COVID-19 PANDEMIC

Mr. McIntyre requested the Board find that there still exists a need to continue the State of Emergency due to the COVID-19 pandemic as reflected by Resolution No. 20-07.

Mr. McIntyre reminded the Board that staff has been operating under partial Emergency Operations Center (EOC) activation since March 18th and summarized various key measures implemented by the District's emergency management team since that time. He stated maximum workplace spacing continues and walk in services remain suspended, adding we will do what is necessary for the safety of our employees and the public. He apprised the Board that no staff are currently impacted by the virus.

Mr. McIntyre updated the Board on current coronavirus conditions in Marin County. Mr. McIntyre reported Marin County's COVID case rate trends continue to look promising but there is still a long way to go.

Mr. McIntyre provided a cost summary for COVID expenses noting related costs are estimated at approximately $79,000 which is about $12,000 more than last month and the current water bill delinquency percentage has increased to around 2.1% when compared to the 1.6% delinquency rate in spring of this year.

Director Joly commented that it is great news that none of the staff have been affected.

On the motion of Director Petterle, and seconded by Director Fraites the Board approved renewal of the Declaration of Local Emergency Related to COVID-19 Pandemic by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

ESA CONSULTING SERVICES AGREEMENT – ENVIRONMENTAL SUPPORT SERVICES

Mr. McIntyre presented the ESA Consulting Services Agreement for environmental support services for the new Gallagher Well No. 2 project. He explained the Agreement will allow ESA to perform CEQA work required to construct Gallagher Well No. 2 for a contract amount of $59,998. The Scope of Work is based on many assumptions given the inherent variability associated with permitting projects along Lagunitas Creek which is an environmentally sensitive creek. Mr. McIntyre added the scope assumes that ESA will prepare an addendum to the Mitigated Negative Declaration prepared by Leonard Charles and Associates for the Gallagher Wells and Pipeline project in 2009 and the cost could increase if permitting agencies require us to perform a new Mitigated Negative Declaration. Mr. McIntyre also noted that this agreement is for permitting services only and staff will return to the Board at a future meeting to request

approval to hire a consultant to prepare plans and specifications suitable for constructing the project. He added on a parallel path, staff is in communication with the ranch owners regarding easement acquisition.

Mr. McIntyre updated the Board on the recent test well pump results noting the results were good and water production values were equal to Gallagher Well No. 1. He added that these results were obtained during dry year conditions along Lagunitas Creek which should represent a worst-case scenario yet the results still showed good production. Director Joly asked if PES feels this is an optimal location. Mr. McIntyre confirmed. Director Grossi asked if they looked at how the new well might impact Gallagher Well No. 1. Mr. McIntyre responded, no significant impact was noted during the seven-day test. Director Grossi noted that $60,000 is a lot of money to spend just to find out the environmental impact, but there is nothing we can do about it because the permitting process is very complicated.

On the motion of Director Grossi, and seconded by Director Baker the Board authorized the General Manager to execute an agreement with ESA for environmental support services related to the new Gallagher Well No. 2 Project for a not to exceed fee of $59,998 plus a 10% contingency of $6,000 by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

MARIN COUNTRY CLUB RECYCLED WATER PAYMENT PLAN

Ms. Blue introduced the Marin Country Club Recycled Water Payment Plan. This will be a four-year payment plan with the following terms: 1) initial payment for bills issued between 11/2019 through 7/2020 for a total of $89,990.87; and 2) payment of $2,000 per month beginning in January 2021 until the 99,412.02 balance is paid off resulting in a payoff date of March 2025. Ms. Blue added the memo and letter has been reviewed by our legal counsel.

Director Joly asked, assuming the golf course becomes in some kind of financial distress, what will happen to the $100,000 loan. Ms. Blue replied as stated in the agreement if they do not make their payments, we can shut off their recycled water service that they are relying heavily on right now to keep their course green. Director Joly asked if we felt they could insure payment. Mr. McIntyre reminded the Board that they have a much larger debt due which is collateralized by their property Deed of Trust. A general discussion about the terms of the payment plan proposal took place.

On the motion of Director Grossi, and seconded by Director Baker the Board approved

the four-year payment plan as proposed by Marin Country Club and authorized the General Manager to sign the letter formalizing the agreement by the following vote:

AYES: Director Baker and Grossi, and Joly

NOES: Director Petterle

ABSTAIN: Director Fraites

ABSENT: None

INFORMATION ITEMS

NBWA MEETING – OCTOBER 2, 2020

Director Fraites updated the Board on the NBWA meeting held on October 2, 2020. He stated they introduced the new Executive Director at the meeting, Andy Rodgers and stated he has a strong background and really knows what he is doing. Director Fraites reported on the North Bay Groundwater Sustainability Plans. He stated now Santa Rosa Valley, Sonoma Valley and Petaluma Valley water basins will have a monitoring plan. Director Fraites noted they will be studying sustainability problems, intrusion, and levels of streams and monitoring any reductions. Additionally, they have found as an option they can recharge groundwater successfully when there is a surplus.

MISCELLANEOUS

The Board received the following miscellaneous items: Disbursements - Dated September 17, 2020, Disbursements – Dated September 24, 2020, Disbursements – Dated October 1, 2020, Point Reyes Light – Salinity Notice and Three-Month Outlook Temperature and Precipitation Probability.

The Board received the following news articles: Marin IJ – Planners work to mitigate outages – WILDFIRE SEASON; Point Reyes Light – Woodward Fire boxed in and under control; Santa Cruz Sentinel – San Lorenzo Valley Water District rebuilds after 'most expensive disaster in history; Marin IJ – Next major wildfire could threaten our water supply – Marin Voice; Marin IJ – Novato water rates set to rise and Marin IJ – City seeks revenue in sale of city-owned properties.

Director Joly asked about the status of salinity intrusion in West Marin. Mr. McIntyre responded that we are still experiencing high levels of salinity. He noted last week's Point Reyes Light newspaper reported data for two different weeks and salinity was down to 70 on one week, however it went back up again the next. Mr. McIntyre stated until we see rain and the demand transitions with less outside irrigation, we will see elevated salinity levels at least through the end of October. Director Joly thanked Mr. Ramudo for speaking with the West Marin radio station to better inform our customers.

ADJOURNMENT

President Joly adjourned the meeting at 7:48 p.m.

Submitted by

Theresa Kehoe
District Secretary

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NORTH MARIN WATER DISTRICT
MONTHLY PROGRESS REPORT FOR ***September 2020***
October 20, 2020

1.

Novato Potable Water Prod* - RR & STP Combined - in Million Gallons - FYTD

Month	*FY20/21*	*FY19/20*	*FY18/19*	*FY17/18*	*FY16/17*	*21 vs 20 %*
July	341.7	317.7	341.1	331.0	310.3	8%
August	290.1	287.1	300.9	303.0	299.6	1%
September	225.6	280.5	255.0	292.4	302.3	-20%
FYTD Total	857.3	885.3	897.0	926.4	912.1	-3%

West Marin Potable Water Production - in Million Gallons - FY to Date

Month	*FY20/21*	*FY19/20*	*FY18/19*	*FY17/18*	*FY16/17*	*21 vs 20 %*
July	8.0	8.9	10.2	9.5	7.9	-10%
August	8.8	8.4	9.9	8.8	7.4	5%
September	7.4	7.8	9.5	8.4	6.4	-4%
FYTD Total	24.2	25.0	29.7	26.6	21.7	-3%

Stafford Treatment Plant Production - in Million Gallons - FY to Date

Month	*FY20/21*	*FY19/20*	*FY18/19*	*FY17/18*	*FY16/17*	*21 vs 20 %*
July	105.8	68.2	78.6	112.6	69.9	55%
August	81.1	103.8	79.3	81.5	90.4	-22%
September	16.1	115.0	60.5	122.7	96.9	-86%
FYTD Total	203.0	286.9	218.4	316.8	257.3	-29%

Recycled Water Production* - in Million Gallons - FY to Date

Month	*FY20/21*	*FY19/20*	*FY18/19*	*FY17/18*	*FY16/17*	*21 vs 20 %*
July	39.0	36.5	30.2	27.7	27.1	7%
August	43.2	33.3	30.6	26.1	26.0	30%
September	29.5	29.7	33.5	25.0	23.5	-1%
FYTD Total*	111.6	99.5	94.3	78.8	76.6	12%

*Excludes potable water input to the RW system: FY21=9.2 MG; FY20=19.4; FY19=20.6 MG; FY18=15.8MG; FY17=1.4MG

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2. Stafford Lake Data

	September Average	September2019	September2020
Rainfall this month	0.23 Inches	0.13 Inches	0 Inches
Rainfall this FY to date	0.29 Inches	0.13 Inches	0.07 Inches
Lake elevation*	182.8 Feet	186.3 Feet	179.5 Feet
Lake storage**	583 MG	761 MG	447 MG

* Spillway elevation is 196.0 feet

** Lake storage less 390 MG = quantity available for delivery

Temperature (in degrees)

	Minimum	Maximum	Average
September2019 (Novato)	50	105	72
September2020 (Novato)	57	120	78

3. Number of Services

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	Novato Water			Recycled Water			West Marin Water			Oceana Marin Swr		
September 30	FY21	FY20	Incr %	FY21	FY20	Incr %	FY21	FY20	Incr %	FY21	FY20	Incr %
Total meters installed	20,783	20,748	0.2%	99	95	4.2%	791	791	0.0%	-	-	-
Total meters active	20,561	20,541	0.1%	94	91	3.3%	782	783	-0.1%	-	-	-
Active dwelling units	24,083	24,075	0.0%	-	-	-	832	833	-0.1%	235	235	0.0%

4. Oceana Marin Monthly Status Report (August)

Description	September2019	September2020
Effluent Flow Volume (MG)	0.404	0.583
Irrigation Field Discharge (MG)	0	0.656
Treatment Pond Freeboard (ft)	6.2	7.8
Storage Pond Freeboard (ft)	10.2	7.2

5. Developer Projects Status Report (September)

Job No.	Project	% Complete	% This month
1.2817.03	College of Marin – New Miwok Center	42	0
1.2828.00	Jonas Center (COM)	100	3
1.2795.00	McPhail's	99	3
1.2840.00	Starbucks Redwood	95	0
1.2820.00	Bahia Heights	93	92
1.2837.00	McPhails Phase 2A	93	43

District Projects Status Report - Const. Dept. (September)

Job No.	Project	% Complete	% This month
1.6112.24	Lynwood Pump Station MCC	20	4
2.6263.20	Replace PRE Tank 4A	60	10
1.7150.00	San Mateo Tank Inlet/Outlet	23	3
1.7183.00	Replace Plastic 4-inch –Scown Lane	90	10
2.7123.27	PB Replacements – Caltrans (WM Highway 1)	100	10
1.7123.28	PB Replacements – San Ramon, Vivian, Verissimo	75	70

Employee Hours to Date, FY 20/21

As of Pay Period Ending September30, 2020
Percent of Fiscal Year Passed = 25%

Developer Projects	Actual	Budget	% YTD Budget	District Projects	Actual	Budget	% YTD Budget
Construction	191	1,400	14%	Construction	1,139	3,460	33%
Engineering	549	1,504	37%	Engineering	709	2,722	26%

6. Safety/Liability

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	Industrial Injury with Lost Time				Liability Claims Paid		
	Lost Days	OH Cost of Lost Days ($)	No. of Emp. Involved	No. of Incidents	Incurred (FYTD)	Paid (FYTD) ($)	
FY 21 through September	11	$4,840	1	1	1	$6,590	*
FY 20 through September	1	$283	1	1	0	$0	

Days without a lost time accident through September 30, 2020 99 **Days**

* Vehicle accident involving District vehicle and ucoccupied parked vehicle during on-call event. Costs related to parked vehicle.

7. Energy Cost

FYE	September kWh	September ¢/kWh	September Cost/Day	Fiscal Year-to-Date thru September kWh	Fiscal Year-to-Date thru September ¢/kWh	Fiscal Year-to-Date thru September Cost/Day
2021 Stafford TP	46,911	20.3¢	$318	231,746	19.6¢	$494
Pumping	166,630	25.4¢	$1,409	522,134	25.6¢	$1,468
Other*	49,054	30.3¢	$495	146,695	30.3¢	$488
	262,595	25.4¢	$2,222	900,575	24.8¢	$2,449
2020 Stafford TP	102,399	18.3¢	$625	271,853	18.7¢	$553
Pumping	164,510	23.5¢	$1,286	503,428	23.4¢	$1,293
Other*	50,757	27.9¢	$472	161,040	27.7¢	$491
	317,666	22.5¢	$2,383	936,321	22.8¢	$2,337
2019 Stafford TP	64,238	20.3¢	$435	214,544	19.9¢	$464
Pumping	170,125	20.5¢	$1,161	519,116	20.4¢	$1,149
Other*	49,866	26.5¢	$441	151,172	26.4¢	$434
	284,229	21.5¢	$2,037	884,832	21.3¢	$2,047

*Other includes West Marin Facilities

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8. Water Conservation Update

	Month of September 2020	Fiscal Year to Date	Program Total to Date
High Efficiency Toilet (HET) Rebates	17	22	4,188
Retrofit Certificates Filed	16	63	6,469
Cash for Grass Rebates Paid Out	0	3	934
Washing Machine Rebates	1	5	6,809
Water Smart Home Survey	0	0	3,899

9. Utility Performance Metric

SERVICE DISRUPTIONS (No. of Customers Impacted)	September 2021	September 2020	Fiscal Year to Date 2021	Fiscal Year to Date 2020
PLANNED				
Duration Between 0.5 and 4 hours	8	1	63	7
Duration Between 4 and 12 hours				96
Duration Greater than 12 hours				
UNPLANNED				
Duration Between 0.5 and 4 hours	1	20	28	32
Duration Between 4 and 12 hours				
Duration Greater than 12 hours			1	
SERVICE LINES REPLACED				
Polybutylene	9	12	41	28
Copper (Replaced or Repaired)	0	0	3	1

NORTH MARIN WATER DISTRICT

Summary of Complaints & Service Orders September 2020

10/13/2020

Type	Sep-20	Sep-19	Action Taken September 2020
Consumers' System Problem			
Service Line Leaks	34	52	Notified Consumer
Noisy Plumbing	1	3	Notified Consumer
House Valve / Meter Off	5	16	Notified Consumer
Nothing Found	6	11	Notified Consumer
Low Pressure	4	1	60 PSI at hose bib. Recommended they inspect showers. 60 PSI at hose bib. Meter stop not fully opened. 65 PSI at hose bib and same at hydrant #863. Flushed line. Good pressure in home.
High Pressure	1	2	PRV failed @ 90 PSI. Advised to have PRV replaced.
Total	**51**	**85**	
Service Repair Reports			
Meter Replacement	3	2	Replaced
Box and Lids	2	2	Replaced
Water Off/On Due To Repairs	8	12	Notified Consumer
Misc. Field Investigation	9	15	Notified Consumer
Total	**22**	**31**	
Leak NMWD Facilities			
Main-Leak	0	2	~
Service- Leak	11	9	Repaired
Fire Hydrant-Leak	0	1	~
Meter Leak	0	2	~
Meters Damaged	1	0	Repaired
Washer Leaks	7	5	Repaired
Total	**19**	**19**	
High Bill Complaints			
Consumer Leaks	1	0	Notified Consumer
Meter Misread	1	0	Notified Consumer
Nothing Found	1	2	Notified Consumer
Excessive Irrigation	3	1	Notified Consumer
Total	**6**	**3**	
Low Bill Reports			
Meter Misread	0	0	~
Stuck Meter	0	0	~
Nothing Found	0	0	~
Projected Consumption	0	0	~
Minimum Charge Only	0	0	~
Total	**0**	**0**	
Water Quality Complaints			
Taste and Odor	0	1	~
Other	0	1	
Total	**0**	**2**	
TOTAL FOR MONTH:	**98**	**140**	**-30%**

NORTH MARIN WATER DISTRICT

Summary of Complaints & Service Orders September 2020

10/13/2020

Type	Sep-20	Sep-19	Action Taken September 2020	
Fiscal YTD Summary				**Change Primarily Due To**
Consumer's System Problems	139	284	-51%	Decrease In Service Line Leaks.
Service Repair Report	63	75	-16%	Decrease In Water Off/On Due To Repair
Leak NMWD Facilities	71	68	4%	Increase In Washer Leaks.
High Bill Complaints	18	27	-33%	Decrease In Excessive Irrigation.
Low Bills	0	0	0%	No Change.
Water Quality Complaints	0	10	-100%	Decrease in Taste and Odor.
Total	**291**	**464**	**-37%**	

"In House" Generated and Completed Work Orders		
Check Meter: possible consumer/District leak, high bill, flooded, need read, etc.	62	84
Change Meter: leaks, hard to read	12	14
Possible Stuck Meter	12	2
Repair Meter: registers, shut offs	0	3
Replace Boxes/Lids	0	1
Hydrant Leaks	0	3
Dig Outs	1	1
	87	**108**

Bill Adjustments Under Board Policy:

September 20 vs. September 19

Sep-20	14	$7,426
Sep-19	17	$4,499

Fiscal Year vs Prior FY

20/21 FY	47	$21,009
19/20 FY	73	$17,682

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Customer Service Questionnaire Quarterly Report

Quarter Ending 09/30/2020

NMWD

	Response		
Water Quality	Agree	Neutral	Disagree
Courteous & Helpful	0	0	0
Accurate Information	0	0	0
Prompt Service	0	0	0
Satisfactorily Resolved	0	0	0
Overall Experience	0	0	0
	0	0	0

Leak	Agree	Neutral	Disagree
Courteous & Helpful	23	0	0
Accurate Information	23	0	0
Prompt Service	23	0	0
Satisfactorily Resolved	22	0	0
Overall Experience	23	0	0
	114	0	0

Billing	Agree	Neutral	Disagree
Courteous & Helpful	2	0	1
Accurate Information	2	0	1
Prompt Service	3	0	0
Satisfactorily Resolved	2	0	1
Overall Experience	2	0	1
	11	0	4

	Response		
Pressure	Agree	Neutral	Disagree
Courteous & Helpful	1	0	0
Accurate Information	1	0	0
Prompt Service	1	0	0
Satisfactorily Resolved	1	0	0
Overall Experience	1	0	0
	5	0	0

Noisy Pipes	Agree	Neutral	Disagree
Courteous & Helpful	0	0	0
Accurate Information	0	0	0
Prompt Service	0	0	0
Satisfactorily Resolved	0	0	0
Overall Experience	0	0	0
	0	0	0

Other	Agree	Neutral	Disagree
Courteous & Helpful	2	0	0
Accurate Information	2	0	0
Prompt Service	2	0	0
Satisfactorily Resolved	2	0	0
Overall Experience	2	0	0
	10	0	0

Grand Total	140	0	4
	97%	0%	3%

Questionnaires Sent Out	54	100%
Questionnaires Returned	29	54%

Customer Service Questionnaire Quarterly Report

Quarter Ending 09/30/2020

Customer Comments	Staff Response to Negative Comments	Issues NMWD Should Address In The Future
PRESSURE		
Very helpful-problem solved.		
BILLING		
Thank you-excellent help.		
My bill was way off-he did not give me a good reason why.	Re-read meter to double check-meter was reading correct.	No fluoride in the water.
LEAK		
Yay NMWD!		
Thank you for fixing our leak!		
Both the field rep and repair crew were great-very polite and helpful.		
Tony was on scene within 15 mins of my call-very professional.		
Your receptionist and Bob were exceptional.		
Fast, friendly service-leak was repaired quickly.		I was disappointed that the bushes were
Chris R was very helpful trying to track down a leak-a true asset.		trimmed without my knowledge.
Your people came right away and it was fixed-wonderful!		
Service was amazing-called after-hours and staff responded immediately.		
Excellent!		
Rich went above and beyond to assist in identifying leak.		Lower your rates!
Chris R was very accommodating and put in a request for a cracked box.		
Staff member was very timely and helpful-great service.		Would be helpful to get our cars out of the way
		for the workers when there's NMWD work
OTHER		to be done in our street.
The person who answered the phone was super helpful.		
Super prompt-thanks guys!		
Nice staff!		

MEMORANDUM

To: Board of Directors

October 16, 2020

From: Julie Blue, Auditor-Controller JB
Nancy Holton, Accounting Supervisor

Subj: Auditor-Controller's Monthly Report of Investments for September 2020
t:\ac\word\invest\21\investment report 0920.doc

RECOMMENDED ACTION: Information

FINANCIAL IMPACT: None

At month end the District's Investment Portfolio had an amortized cost value (i.e., cash balance) of $23,202,966 and a market value of $23,285,571. During September the cash balance increased by $2,903,308. The market value of securities held increased $82,605 during the month. The ratio of total cash to budgeted annual operating expense stood at 131%, up 17% from the prior month.

At September 30, 2020, 72% of the District's Portfolio was invested in California's Local Agency Investment Fund (LAIF), 21% in Time Certificates of Deposit, 5% in the Marin County Treasury, and 2% retained locally for operating purposes. The weighted average maturity of the portfolio was 79 days, compared to 81 days at the end of August. The LAIF interest rate for the month was 0.69%, compared to 0.78% the previous month. The weighted average Portfolio rate was 1.00%, compared to 1.29% the previous month.

Investment Transactions for the month of September are listed below:

9/9/2020	US Bank	LAIF	$700,000.00	Trsf to LAIF account
9/11/2020	US Bank	LAIF	$2,300,000.00	Trsf to LAIF account
9/24/2020	LAIF	US Bank	$400,000.00	Trsf from LAIF account
9/25/2020	US Bank	Enerbank	$249,000.00	Purchase .45% TCD due 9/25/24
9/28/2020	Ally Bank	US Bank	$249,491.18	TCD Matured
9/28/2020	US Bank	LAIF	$700,000.00	Trsf to LAIF account
9/30/2020	US Treasury	US Bank	$1,013,750.00	US Treasury Note Matured
9/30/2020	US Bank	LAIF	$800,000.00	Trsf to LAIF account

NORTH MARIN WATER DISTRICT
AUDITOR-CONTROLLER'S MONTHLY REPORT OF INVESTMENTS
September 30, 2020

Type	Description	S&P Rating	Purchase Date	Maturity Date	Cost Basis[1]	9/30/2020 Market Value	Yield[2]	% of Portfolio
LAIF	State of CA Treasury	AA-	Various	Open	$16,814,318	$16,896,924	0.69% [3]	**72%**
Time Certificate of Deposit								
TCD	Barclays Bank	n/a	11/14/18	11/16/20	246,000	246,000	3.00%	1%
TCD	CIT Bank	n/a	12/17/18	12/17/20	246,000	246,000	3.00%	1%
TCD	Reliance Bank	n/a	1/11/19	1/11/21	249,000	249,000	2.70%	1%
TCD	Iberia Bank	n/a	1/25/19	1/25/21	246,000	246,000	2.70%	1%
TCD	Merrick Bank	n/a	2/8/19	2/8/21	249,000	249,000	2.60%	1%
TCD	Eaglebank	n/a	3/15/19	3/15/21	249,000	249,000	2.60%	1%
TCD	Central Bank	n/a	4/18/19	4/19/21	249,000	249,000	2.40%	1%
TCD	Morgan Stanley Private Bank	n/a	5/23/19	5/24/21	247,000	247,000	2.40%	1%
TCD	TIAA Bank	n/a	1/18/19	7/19/21	246,000	246,000	2.75%	1%
TCD	Capital One Bank NA	n/a	8/21/19	8/23/21	247,000	247,000	1.85%	1%
TCD	Capital One Bank USA	n/a	9/6/19	9/7/21	247,000	247,000	1.75%	1%
TCD	Goldman Sachs Bank USA	n/a	10/11/19	10/12/21	247,000	247,000	1.70%	1%
TCD	Flagstar Bank	n/a	11/15/19	11/15/21	247,000	247,000	1.75%	1%
TCD	Synovus Bank	n/a	12/9/19	12/9/21	247,000	247,000	1.65%	1%
TCD	Morgan Stanley Bank	n/a	1/16/20	1/18/22	247,000	247,000	1.75%	1%
TCD	Wells Fargo National Bank	n/a	3/6/20	3/7/22	248,000	248,000	1.35%	1%
TCD	American Express Natl Bank	n/a	4/7/20	4/7/22	248,000	248,000	1.35%	1%
TCD	Synchrony Bank	n/a	4/17/20	4/18/22	248,000	248,000	1.20%	1%
TCD	Pinnacle Bank	n/a	5/7/20	5/9/22	248,000	248,000	0.90%	1%
TCD	Enerbank	n/a	9/25/20	9/25/24	249,000	249,000	0.45%	1%
					$4,950,000	**$4,950,000**	**1.99%**	**21%**
Other								
Agency	Marin Co Treasury	AAA	Various	Open	$1,049,390	$1,049,390	1.63%	5%
Other	Various	n/a	Various	Open	389,257	389,257	0.41%	2%
			TOTAL IN PORTFOLIO		**$23,202,966**	**$23,285,571**	**1.00%**	**100%**

Weighted Average Maturity = **79 Days**

LAIF: State of California Local Agency Investment Fund.
TCD: Time Certificate of Deposit.
Agency: STP State Revolving Fund Loan Reserve.
Other: Comprised of 5 accounts used for operating purposes. US Bank Operating Account, US Bank STP SRF Loan Account, US Bank FSA Payments Account, Bank of Marin AEEP Checking Account & NMWD Petty Cash Fund.

1 Original cost less repayment of principal and amortization of premium or discount.
2 Yield defined to be annualized interest earnings to maturity as a percentage of invested funds.
3 Earnings are calculated daily - this represents the average yield for the month ending September 30, 2020.

Interest Bearing Loans	Loan Date	Maturity Date	Original Loan Amount	Principal Outstanding	Interest Rate
Marin Country Club Loan	1/1/18	11/1/47	$1,265,295	$1,161,347	1.00%
Marin Municipal Water - AEEP	7/1/14	7/1/32	$3,600,000	$2,224,108	2.71%
Employee Housing Loans (2)	Various	Various	525,000	525,000	Contingent
TOTAL INTEREST BEARING LOANS			**$5,390,295**	**$3,910,455**	

The District has the ability to meet the next six months of cash flow requirements.

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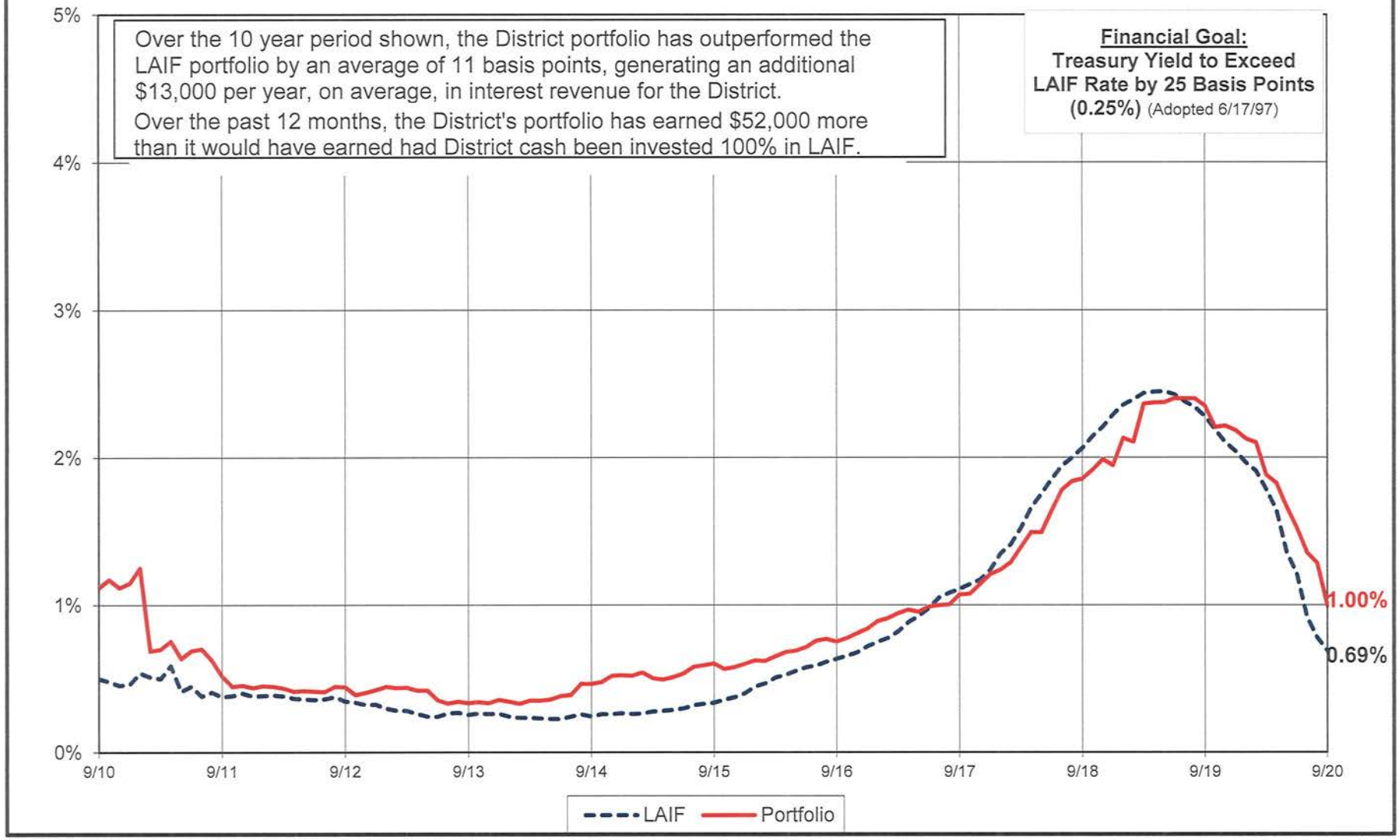
10/16/2020

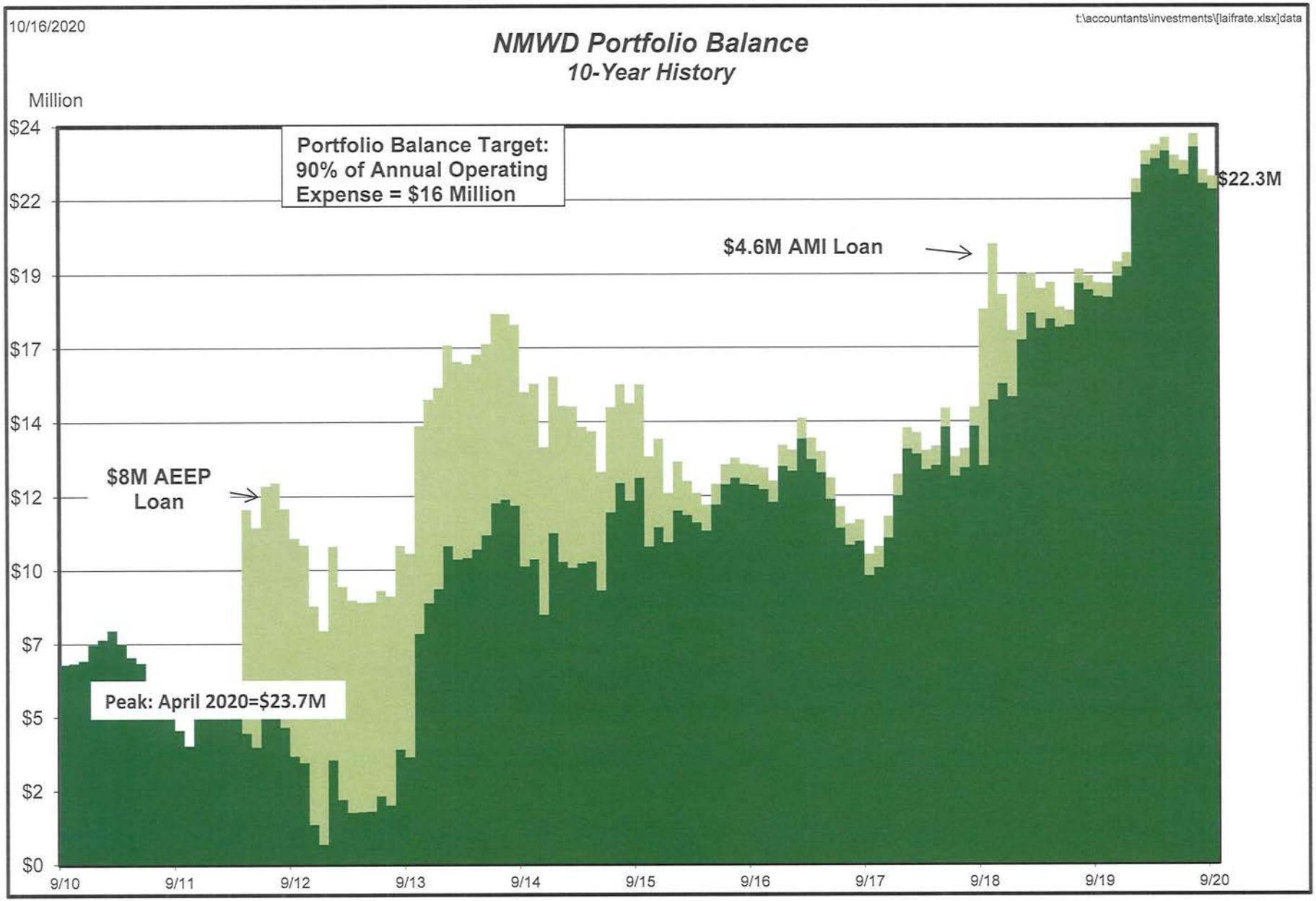
t:\acountants\investments\[laifrate.xls]chart3

NMWD Portfolio Rate of Return

State of CA Local Agency Investment Fund vs District Portfolio

10-Year History




10/16/2020
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NMWD Portfolio Balance
10-Year History
Million
$24
$22
$19
$17
$14
$12
$10
$7
$5
$2
$0
Portfolio Balance Target:
90% of Annual Operating
Expense = $16 Million
$4.6M AMI Loan
$22.3M
$8M AEEP
Loan
Peak: April 2020=$23.7M
9/10
9/11
9/12
9/13
9/14
9/15
9/16
9/17
9/18
9/19
9/20

6

MEMORANDUM

To: Board of Directors

October 16, 2020

From: Robert Clark Operations / Maintenance Superintendent RMC

Subj: Renewal of Horizon CATV License Agreement
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RECOMMENDED ACTION: Approve one-year extension

FINANCIAL IMPACT: $5,464.00 annual income

The Horizon CATV license agreement with the District allowing use of Paradise Ranch Estates (PRE) Tank Site #4 to place a 40' high antenna, 5' x 7' equipment shed and a propane tank and emergency generator will expire on October 31, 2020. The antenna was first moved to this site in 1995 after the Mt. Vision fire. Horizon has requested to exercise its' current agreement option to extend the contract.

Horizon is a small company, with a current cable TV subscriber base in West Marin from Stinson Beach extending to Dillon Beach. Their customer base is in large part the same as North Marin Water District, although the number of Horizon customers has been shrinking due to competition with satellite TV dish companies. Historically the license fee paid to the District by Horizon had been 1% of Horizon's annual basic revenue generated from its total number of cable customers served by the antenna at the PRE-4 tank site. Basic revenue is the monthly minimum charge levied for the basic service package, and did not include premium charges for additional channels or features. This complicated annual adjustment to the agreement was revised in 2018 to a $5,150 annual fee with an annual increase of 3% making the fee for this period $5,464.00 rounding to the nearest dollar.

The District requires that Horizon limit the extension term to one year so that the District can conclude the installation of the new PRE-4 water tank. Staff, proposes the renewed license agreement for one year from November 1, 2020 to October 31, 2021.

RECOMMENDATION

Board approval renewal of license agreement with Horizon CATV for a one-year extension term.

Approved by GM _____

Date 1/16/2020

LICENSE AGREEMENT

THIS LICENSE AGREEMENT, by and between NORTH MARIN WATER DISTRICT, a local governmental agency of the State of California, herein called "District," and HORIZON CABLE TV Inc., a California corporation, herein called " Horizon," is effective as of November 1, 2020.

1. Grant of License

The District hereby grants to Horizon a revocable license to enter the District's Paradise Ranch Estates water tank site number four, adjacent to 420 Drakes View Drive ("the site"), for the purpose of operating, maintaining and replacing facilities for off-air television signal receiving. Said facilities shall consist of:

a. one antenna tower approximately 40-feet tall on steel poles set in concrete;

b. underground cables for electricity, telephone and television;

c. one equipment shed approximately 7-feet in length by 5-feet in width; and

d. propane tank and stand-by generator for emergency power.

e. such other facilities as Horizon may deem necessary or advisable from time to time, provided that Horizon shall obtain the written consent of District before any additional facilities are installed.

The facilities shall be located on the site described on "Exhibit A" attached hereto, incorporated herein, in the respective locations depicted on "Exhibit B."

2. Term

The term of this license is one (1) years, beginning on November 1, 2020, and ending on October 31, 2021. The parties agree to discuss renewal of this agreement no later than August 31, 2021.

3. Option to Extend Term

The District will evaluate the option to extend the term of this license with the renewal of the agreement in September 2021.

4. Limitations on Use of License

a. Horizon shall be responsible for acquiring and maintaining all necessary permits and approvals from the County of Marin for installation, operation and maintenance of facilities described in Section 1 hereof.

b. Horizon's use of the site shall not hinder or interfere with the District's operation and maintenance of its Paradise Ranch Estates tanks. Accordingly, all facilities installed by Horizon on the site shall be a minimum of five-feet from the District's water tanks.

c. Horizon shall not do any grading or excavation on the site and shall not erect any structure thereon except the facilities described in Section 1 hereof. Said work shall be done at Horizon's sole expense and in accordance with plans and specifications reviewed and approved in writing by the District and with permits issued by the County of Marin. Horizon will not permit any lien or encumbrance to be placed on the site.

d. Horizon shall not permit the facilities or Horizon's use of the site to interfere with public reception or transmission of radio or television signals, nor with the District's radio communications or communications used by its SCADA system. If interference is traceable to Horizon's equipment or operations on the site, Horizon shall eliminate the interference without delay.

e. Horizon will use the license and operate the facilities in accordance with all applicable city, county, state and federal regulations, ordinances and statutes now or hereafter in effect and shall, at its expense, maintain in effect throughout the term of this license all permits, licenses and authorizations required by law for its operations. Horizon shall submit to the District a copy of its Federal Communications Commission license and if applicable a copy of its Bay Area Air Quality Management District ABA 6 standby generator emission permits upon renewal of this agreement.

f. Horizon shall maintain the facilities at all times in a safe, clean and orderly condition.

g. The District may require Horizon to shut down its electrical equipment and microwave facility from time to time to permit construction and maintenance of water tank(s) or other facilities. Said shutdown will only be required for safety reasons as determined by the District at its sole discretion. Future projects contemplated on the site include construction of a new water storage tank, which may require Horizon to relocate its facilities, and installation of a 2-way radio transmitter on the antenna tower, which the District warrants will not interfere with Horizon's cable television reception signal., The District shall endeavor to give Horizon a 30-day minimum notice before any required shut down.

h. To ensure the safety of District employees, Horizon shall provide the District with an EMF exposure report for the facility. This study shall show all EMF exposure levels at the site during normal operations. Any area where the EMF exposure level exceeds the safe exposure level as adopted by the FCC shall be clearly identified. At least 60 days before modifying the facilities or their operation in a manner that changes the exposure levels, Horizon will submit an updated EMF exposure report to the District for approval.

5. Payments by Horizon

a. Horizon agrees to pay as consideration for the license the sum of Five Thousand Four Hundred and Sixty-Four Dollars ($5,464.00) in a single annual payment. The annual payment shall be increased each year hereafter by three percent (3%) over the then existing rental rate. The payment for the term of the license shall be made simultaneously with the execution of this agreement.

b. Horizon further agrees to provide at no charge to the District two extra fiber optic cables for use by the District in the fiber-optic telecommunications line installed

between Horizon's antenna facility at the site and its facilities in Point Reyes Station. In the event Horizon extends its underground telecommunication line further, Horizon agrees to install underground conduit purchased by the District alongside its telecommunications line. Said underground conduit shall be for the exclusive use of the District.

6. Termination

Horizon acknowledges that its rights under this license are subordinate to the prior and superior right of the District to use the site for the purpose of providing a public water supply. The District reserves to itself the right to terminate the license at any time it determines that it is reasonably necessary to carry out its said purpose. Except in an emergency the District shall give Horizon 90 day's prior written notice of termination. The annual payment shall be prorated to the date of such termination. In addition, the District may terminate this license if Horizon fails to perform any of its undertakings herein and fails to remedy such default within 30 days after written notice from the District to do so.

7. Removal of Personal Property and Structures

Upon the expiration of the term of the license or the sooner termination thereof, Horizon shall coordinate removal of its facilities with the District. In the event the District has installed a 2-way radio transmitter on the antenna, the antenna shall be left on the site. If the 2-way radio transmitter is not installed on the antenna, Horizon shall at its expense remove all the facilities and personal property, including piers and bases, which it has placed on the site, leaving it vacant and clean, and shall restore the site as nearly as possible to the condition it was in at the commencement of this license.

If Horizon fails to remove its facilities and/or to restore the site, the District may cause the work to be done and Horizon shall reimburse the District for its costs thereby incurred within 30 days of receipt of an invoice therefor.

In lieu of removal, the District may, at its option, elect to retain Horizon facilities remaining on the property 30 days from expiration or termination of this agreement in exchange for Horizon not being required to pay removal and/or clean-up costs

8. Insurance, Hold-Harmless and Indemnification Requirements

a. Liability Insurance: Horizon shall hold the District harmless from and defend District against any claims, liability, loss, damage, including defense costs or expenses, in any way arising or occurring on account of injuries to persons or property sustained or alleged to have been sustained that arise out of or are connected with Horizon's use of this license. For the duration of this license, Horizon shall continuously maintain and pay for vehicle liability and general liability insurance written by insurer(s) licensed to do business in California and having Best's ratings of not less than A: VII. Said policies will provide coverage for the District and Horizon on an occurrence basis in amounts not less than one million dollars ($1,000,000) per occurrence, combined single limit. Such insurance policy(s) shall be endorsed to (1) add the District as an "additional insured"; (2) provide that said coverage is primary and underlying insurance to any insurance carried by the District, which insurance shall not contribute with Horizon's insurance; (3) provide that any insurance carried by the District shall be excess to any insurance provided by Horizon to cover the District under this section; and (4) provide that said policy(s) shall not be canceled

nor shall there be any material reductions in coverage without 60 days' notice in writing to the District. Forthwith upon the execution of this agreement and before the license shall commence, Horizon shall deliver to the District a certified copy of such insurance policy including the endorsements described above. Horizon shall also deliver to the District a certificate by the insurance company(s) stating that the insurance has been issued and is in good standing.

b. Workers Compensation: Horizon will provide evidence that it has in full force and effect Workers' Compensation Insurance as required by the Labor Code of the State of California and Employers Liability Insurance in amounts not less than one million dollars ($1,000,000) per occurrence.

c. Property Insurance: Horizon agrees that it will include within its property insurance policy(s) coverage for all facilities owned or leased by Horizon and that will at any time be on the site in amounts sufficient to replace all such facilities.

9. Non-assignability

This license shall not be assignable by Horizon or by operation of law without the prior written consent of District, which consent shall not be unreasonably withheld.

10. Notices

All notices herein provided to be given or made or which may be given or made by either party to the other, shall be deemed to have been duly given when made in writing and deposited in the United States mail postage prepaid and addressed as follows:

To District:
North Marin Water District
Attn: Operations/Maintenance Superintendent
PO Box 146
Novato, CA 94948

To Horizon:
Horizon Cable TV Inc.
PO Box 1240
Pt. Reyes Station, CA 94956

The address to which notices may be given or made by either party may be changed by written notice given by such party to the other pursuant to this paragraph.

IN WITNESS THEREOF, the parties hereto have caused this license to be executed as of the day and year first above written.

ATTEST:

NORTH MARIN WATER DISTRICT

_____ _____/_____

Theresa Kehoe, District Secretary

Michael Joly, President Date

HORIZON CABLE TV INC.

_____/_____

Kevin Daniel, President Date

"Exhibit A"

Tank Site:

That certain real property in the County of Marin, State of California, bounded and described as follows:

Beginning at a point that bears South 54° 56' East 8.17 feet from the most northerly corner of Parcel Two as described in the deed from Marin County Abstract and Title Company, a corporation, to James J. Zydonis, et ux, recorded May 25, 1959, in Liber 1281, O.R., page 462 and running thence North 35° 00' East 144.71 feet to the true point of beginning, thence North 43° 50' 20" West 73.41 feet, thence North 23° 53' 54" East 40.69 feet, thence South 78° 59' East 87.41 feet, thence South 35° 00' West 89.69 feet to the true point of beginning.

7

MEMORANDUM

TO: Board of Directors Date: October 16, 2020

FROM: Drew McIntyre, General Manager

SUBJECT: Old Ranch Road Tank No. 2 Project – Consider Adoption of Mitigated Negative Declaration

R:\Folders by Job No\6000 jobs\6207.20 Old Ranch Rd Tank Repl\BOD Memos\Oct 20 Items\Old Ranch Road Adopt MND BOD Memo 10_20_20.doc

RECOMMENDED ACTION: Adopt Mitigated Negative Declaration for Old Ranch Road Tank No. 2 Project; Approve Project; and Adopt Mitigation Monitoring and Reporting Program; Direct Staff to File Notice of Determination

FINANCIAL IMPACT: None at this time

The District has performed an environmental review for the Old Ranch Road Tank No. 2 Project as required by the California Environmental Quality Act. The Mitigated Negative Declaration is attached and consists of the following:

1. Initial Study and Mitigated Negative Declaration for the Old Ranch Road Tank No. 2 Project (Attachment A)
2. Public Notice of Intent for the Old Ranch Road Tank No. 2 Project (Attachment B)
3. Resolution certifying that the Mitigated Negative Declaration has been completed in accordance with applicable laws and regulations (Attachment C)
4. Response to Comments Received on the Draft Mitigated Negative Declaration for the Old Ranch Road Tank No. 2 Project (Attachment D)
5. Mitigation Monitoring and Reporting Program (Appendix A of Initial Study found in Attachment A)
6. Notice of Determination (Attachment E).

BACKGROUND

At the January 7, 2020 meeting, the Board discussed the Draft of the Initial Study for the North Marin Water District's Old Ranch Road Tank No. 2 Project (**Attachment A**). The Draft Initial Study stated that the project would have environmental impacts that could be mitigated to less than significant by following certain mitigation measures. In all areas in which potential adverse impacts were identified, the Initial Study found that mitigation measures could be incorporated into the project design to mitigate potential adverse impacts to a less than significant level.

On November 15, 2019, a Notice of Intent to file a Mitigated Negative Declaration (MND) was sent to the State Clearinghouse for distribution to the State agencies, as shown on **Attachment B**, for a 30-day public review period. In addition, the MND was posted on the District's website and copies of the MND were sent to various other State/Federal/local agencies and other interested parties, and Notice was provided in the Marin IJ and sent to all

properties within a 600-foot boundary surrounding the project site (including all Old Ranch road property owners).

A Resolution adopting the Mitigated Negative Declaration is attached as **Attachment C**. This Resolution is to be adopted at the meeting of October 20, 2020. In addition, the Board is being requested to adopt the Mitigation Monitoring and Reporting Program (MMRP) which can be found in Appendix A of Attachment A.

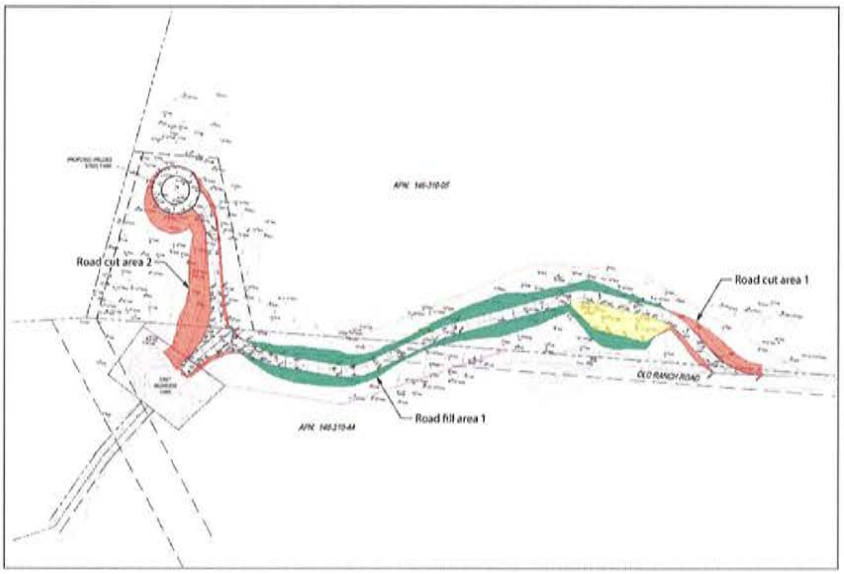
With the Clearinghouse mailings, the District also noticed a public hearing to be held on January 7, 2020. During the 30-day public comment period, the District received four letters/emails containing comments on the project (**Attachment D**). The District Board is also being requested to direct District staff to file the Notice of Determination (NOD) with the County Clerk and the State Clearinghouse. This NOD can be found in **Attachment E**.

RECOMMENDATION

1. Approve the attached resolution (Attachment C) certifying that the Mitigated Negative Declaration for the Old Ranch Road Tank No. 2 Project has been completed in accordance with applicable law and regulations, and adopt the Mitigated Negative Declaration.
2. Approve the project including Mitigation Monitoring or Reporting Program (Appendix A of Attachment A).
3. Authorize staff to file the attached Notice of Determination with the Marin County Clerk and the State Clearinghouse (Attachment E).

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

NORTH MARIN WATER DISTRICT
OLD RANCH ROAD TANK NO. 2 PROJECT



Prepared for

North Marin Water District

November 2019

Prepared by

Amy O. Skewes-Cox, AICP
Environmental Planner

ATTACHMENT A

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

NORTH MARIN WATER DISTRICT
OLD RANCH ROAD TANK NO. 2 PROJECT

Prepared for

North Marin Water District

November 2019

Prepared by

Amy O. Skewes-Cox, AICP
Environmental Planner

In conjunction with

BASELINE ENVIRONMENTAL CONSULTING
ENVIRONMENTAL COLLABORATIVE
LSA ASSOCIATES
NATALIE MACRIS
TOM CAMARA GRAPHICS
WORDSMITH WORD PROCESSING

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CHAPTER I
PROJECT DESCRIPTION

1. **Project Title:** North Marin Water District Old Ranch Road Tank No. 2

2. **Lead Agency Name and Address:**

   North Marin Water District
   999 Rush Creek Place
   Novato, CA 94945

3. **Contact Person and Phone Number:** Mr. Rocky Vogler, Chief Engineer, (415) 761-8945

4. **Project Location:** Terminus of Old Ranch Road, Novato. Grant deed and easement within APN 146-310-05 (Maiero)[1] and easement within APN 146-310-44 (Wright). A very small portion of the existing North Marin Water District (NMWD) property (APN 146-310-23) would be used for the road turnaround.

5. **Project Sponsor's Name and Address:**

   North Marin Water District
   999 Rush Creek Place
   Novato, CA 94945

6. **General Plan Designation:** Agriculture (AG2) and Conservation (CON) for APN 146-310-05, Planned Residential (PR) and Very Low Density Residential (RVL) for APN 146-310-44, Open Space/RVL for APN 146-310-23.

7. **Zoning:** Agriculture and Conservation (A10) for APN 146-310-05 and Residential, Multiple Planned (RMP-0.5) for APN 146-310-44.

8. **Description of Project:**

Introduction

The NMWD will serve as the lead agency for the California Environmental Quality Act (CEQA) document for the proposed project, a replacement water tank and new access road (referred to as "Tank No. 2") proposed near an existing water tank off Old Ranch Road in unincorporated Marin County near Novato, CA. After the adoption of the appropriate CEQA document, the new tank and access road can be approved.

[1] A new Assessor Parcel Number (APN) for the Tank No. 2 parcel will be assigned by Marin County after the grant deed is recorded.

Detailed drawings can be reviewed at the NMWD offices located at 999 Rush Creek Place, Novato, CA, and by contacting Mr. Rocky Vogler, Chief Engineer, at (415) 761-8945.

Project Location and Site Characteristics

A project location map is provided in **Figure 1**. Access to the project site is from Indian Valley Road and Old Ranch Road (see Figure 1). The project site has access off Old Ranch Road via a locked gate that also provides access to a single-family home as well as other undeveloped parcels. The project site is heavily wooded with a mixture of oak and bay trees, with grass undergrowth. The project site adjoins primarily undeveloped lands that are wooded sloping hills.

The project site is within the jurisdiction of Marin County and outside the city limits of the City of Novato. As a water district, NMWD is exempt from local land use controls of Marin County per Government Code Section 53091.

Project Characteristics

The project includes constructing a new water tank (referred to as "Tank No. 2") within an approximately 20,000-square-foot parcel that would be created by grant within the southern corner of Assessor Parcel Number (APN) 146-310-05 (about 44 acres currently). The planned improvements also include constructing a new road to provide access to Tank No. 2. The proposed tank location and access road are shown in **Figure 2**, and assessor's parcels are mapped in **Figure 3**. **Figure 4** shows a photo view of the new water tank site.

Proposed Water Tank Size and Capacity

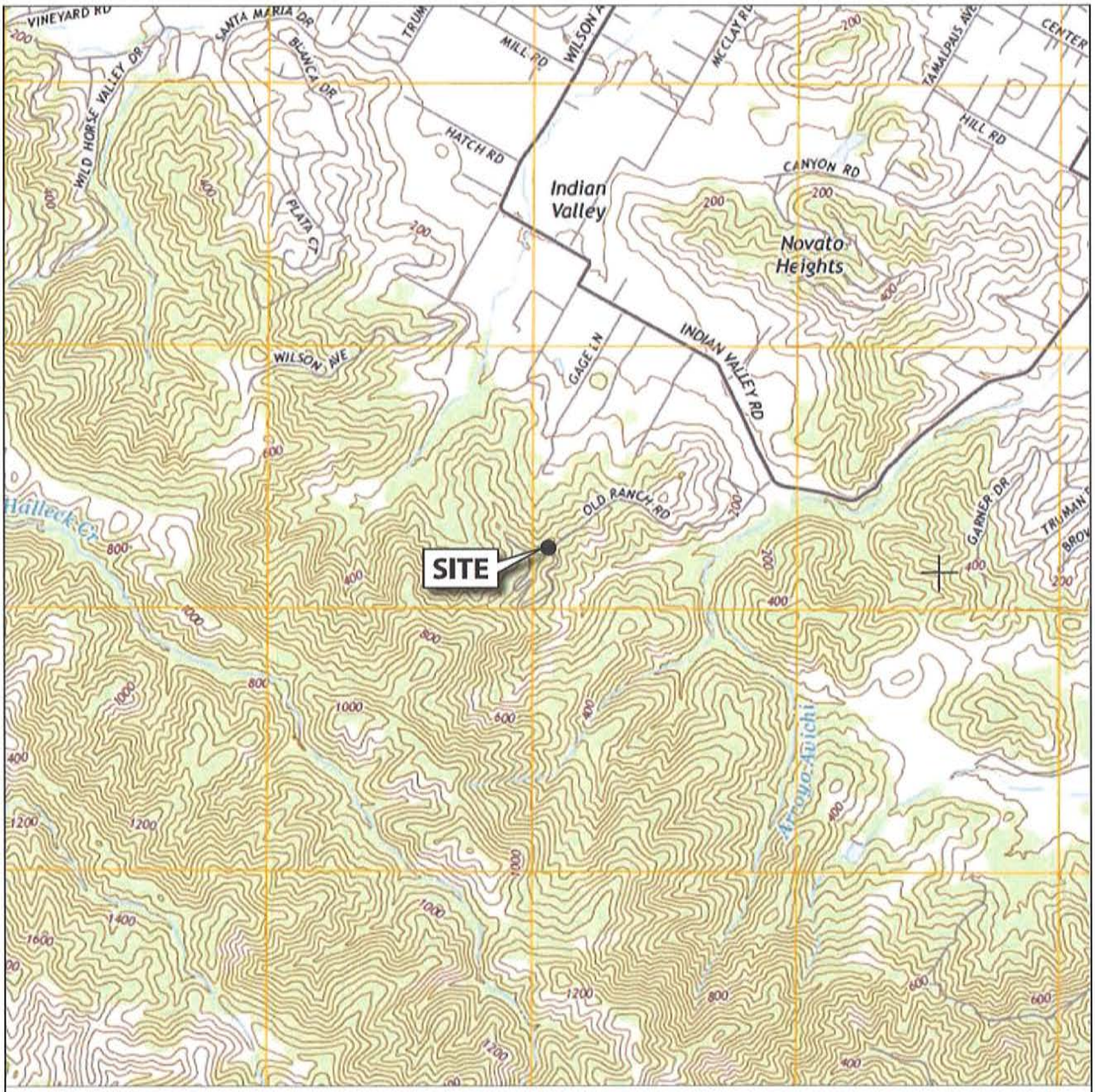
The new tank would be 28 feet in diameter and 26 feet tall (22 feet to overflow) and made of welded steel. It would have a storage capacity of approximately 100,000 gallons.

Proposed Disturbed Area and Site Grading

The proposed site for the replacement water tank and the access road would require grading. The disturbed area would encompass 0.62 acre, including 0.17 acre of the Maiero Grant Deed, 0.28 acre of the Maiero Easement, 0.16 acre of the Wright Easement, and 0.01 acre of the NMWD parcel.

Site grading for the building pad would consist primarily of excavation. The tank pad would be constructed at elevation 516 feet, and cuts of up to 12 feet are anticipated to achieve finished grades at the tank site. Cut slopes no steeper than 1.5:1 would be used to complete the planned excavations.

The access road alignment was selected to minimize cut and fill including grades not to exceed 18 percent slope. As such, the alignment would encroach on APN 146-310-05 to the north and APN 146-310-44 to the south. The parties owning these parcels have agreed to provide access and utility easements in these areas.



Site Coordinates
Lat. 38.0840°
Lon. -122.6012°

N

No scale

Figure 1

SOURCE: Miller Pacific Engineering Group, 2018

SITE LOCATION MAP

AMY SKEWES-COX
ENVIRONMENTAL PLANNING

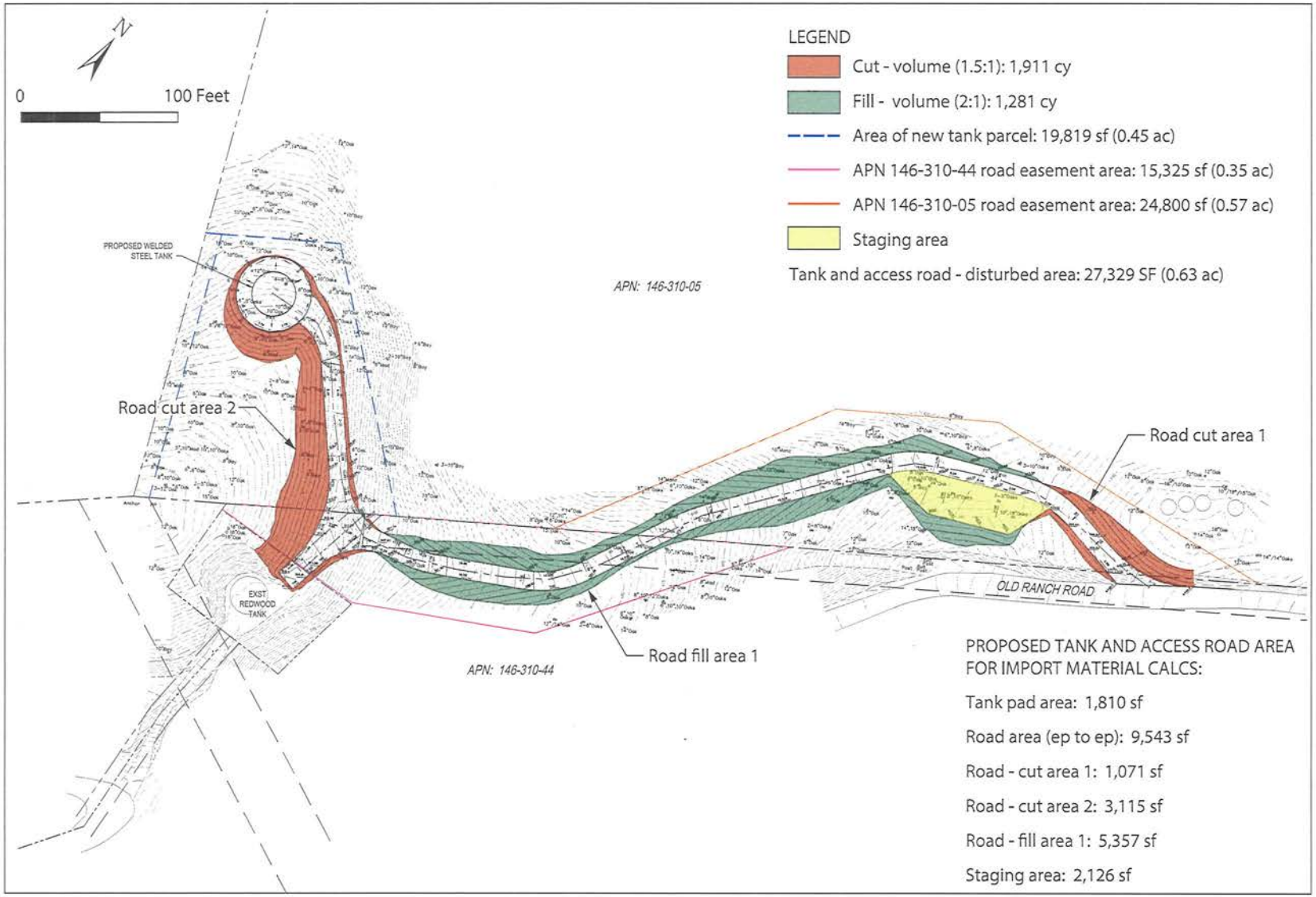


Figure 2

SITE PLAN

SOURCE: NMWD, 2019

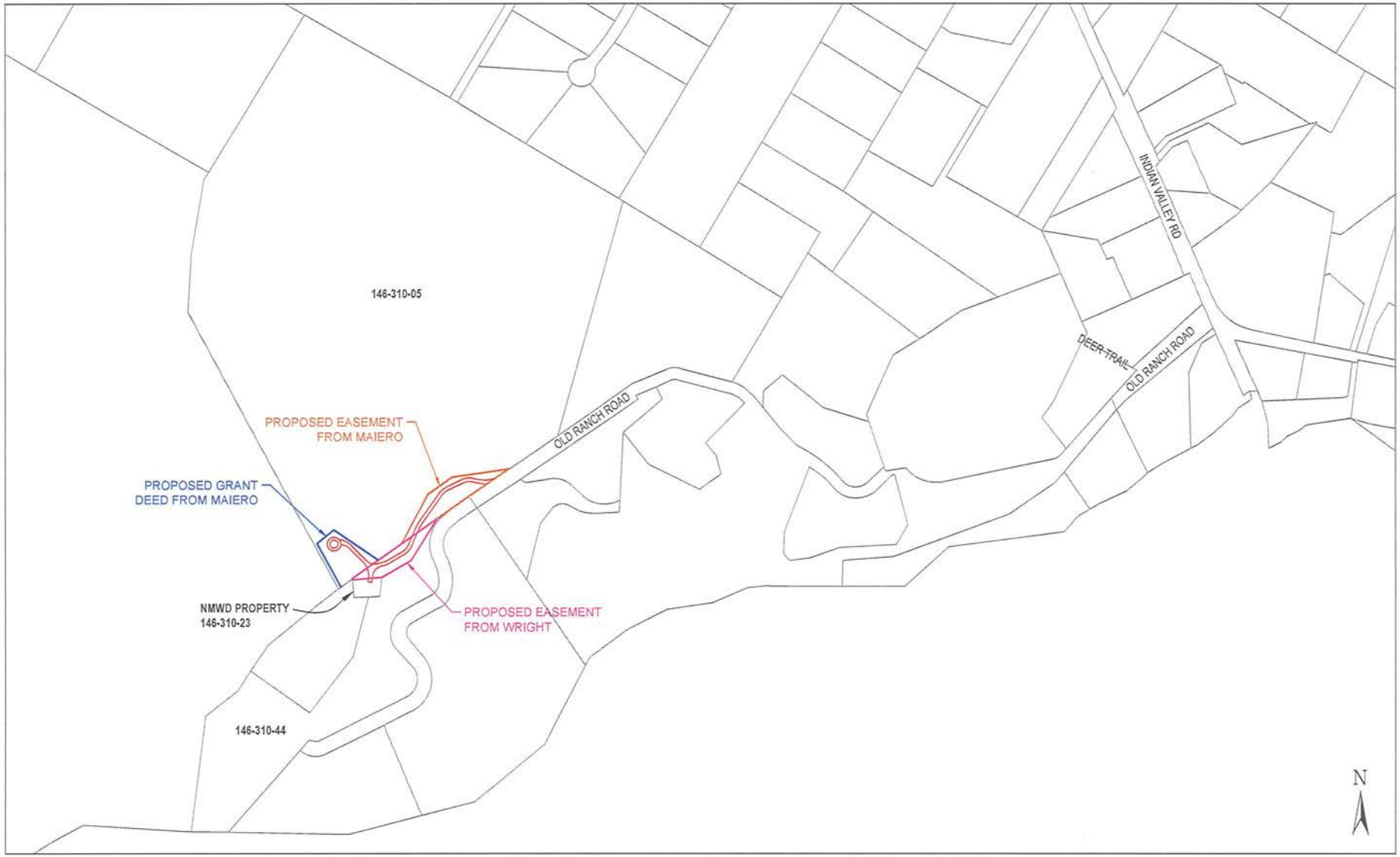


Figure 3

SOURCE: NMWD, 2019

ASSESSOR PARCEL MAP LOCATION AND SURROUNDINGS

View of site for new replacement water tank showing oak woodland and grass.

Figure 4

SOURCE: A. Skewes-Cox, 2019

VIEW OF SITE

As shown in Figure 2, the total estimated cut volume would be 1,911 cubic yards (CY), and the total estimated fill volume would be 1,281 CY, resulting in off-haul of about 630 CY of soil. Accounting for the "swell factor" of 1.25,[2] the off-haul would be about 788 CY. The cut slopes would be no steeper than 1.5:1 and fill slopes would be 2:1.

Proposed Access Road and Utilities

New pavement, surface drainage improvements, underground utilities, and other ancillary improvements are included as part of the project.

Typically, the paved area of the road would be 10 feet wide with 1-foot-wide shoulders on each side of the road, for a total width of 12 feet. The road would be paved with 0.25 foot asphalt concrete (AC) over a 7-inch layer of compacted Class 2 aggregate base (AB). During construction, NMWD would have a geotechnical engineer determine if the Class 2 AB layer thickness can be reduced.

In addition, there would be a 24-foot-wide-by-95-foot-long compacted earth staging area between the new access road and the southern boundary of APN 146-310-05 to reduce off-site hauling and for use as a staging area during tank construction. Properly sized runoff ditches, drainage pipes, and associated structures would be installed.

Proposed Vegetation Clearance

To construct the new tank and access road, existing vegetation including trees would have to be cleared. It is estimated that the project would require removal of 71 trees (62 oaks, 4 madrones, and 5 California bay trees).

Proposed Locked Gate

A locked gate would be placed at the access road where it would connect to Old Ranch Road. The gate would be about 15 to 20 feet from the intersection of Old Ranch Road and the tank access road.

Plans for Existing Water Tank Site

An existing 50,000-gallon redwood water tank on APN 146-310-23 that is located south of the proposed tank site would remain during construction and would likely be decommissioned and removed after construction and commissioning of the new tank. Currently, there are 20 customers served by the existing redwood tank, which was constructed in 1963 and is reaching the end of its life.

The new tank would approximately match the existing tank base elevation, but the overflow level would be 6 feet higher to provide better system hydraulics and minimize tank footprint. The increase in the tank size was driven by fire flow goals as discussed and agreed upon with Novato Fire District personnel. New future development may warrant additional storage requirements beyond the planned

[2] In a natural state, soil is dense. Soil loaded into a truck takes more space than soil in a natural state. Swell factor accounts for this volume expansion.

100,000 gallons, and a second tank could be constructed at a future date at the existing tank site. Any such construction would be subject to a separate future environmental review.

Timing of Construction

Construction of the Tank No. 2 project is expected to begin in Spring 2020 and to be completed by 2021. The project would begin with clearing, grubbing, and site/road preparation, followed by foundation construction and tank construction.

9. **Surrounding Land Uses and Setting:** The project is located in a wooded area of western Novato within the jurisdiction of Marin County. Single-family homes on large parcels are located near the access road and water tank site, but much of the area is undeveloped wooded hillsides.

10. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)** NMWD is the lead agency that will approve the CEQA document. No other permits are expected to be required for the project. The project site is within Marin County boundaries. As a water district, NMWD projects are exempt from local land use controls.

11. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code Section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?** No consultation has been requested.

REFERENCES

Marin County, 2019. Community Development Agency. Available at: https://www.marincounty.org/depts/cd/divisions/planning/projects/novato/claves_trust_dr_up_p2309_no, accessed on August 19, 2019.

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural and Forestry Resources	■ Air Quality
■ Biological Resources	■ Cultural Resources	☐ Energy
■ Geology and Soils	☐ Greenhouse Gas Emissions	■ Hazards and Hazardous Materials
■ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
■ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
■ Utilities and Service Systems	■ Wildfire	■ Mandatory Findings of Significance

Determination.

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

R. Vogler — 10/22/19

Signature — Date

Rocky Vogler — North Marin Water District

Printed Name — For

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CHAPTER II
ENVIRONMENTAL CHECKLIST

INTRODUCTION

The Checklist below addresses 20 environmental topics. Whenever a potentially significant impact is identified, a mitigation measure is identified. A summary of the identified mitigation measures (Mitigation Monitoring and Reporting Program) is included as **Appendix A**. At the end of each mitigation measure, the level of significance of the impact after mitigation is shown as "Less than Significant" (LTS) or "Potentially Significant" (PS).[3]

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
	a) Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
	b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?	☐	☐	☐	■
	c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
	d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	■

IMPACT EVALUATION

a) Would the project have a substantial adverse effect on a scenic vista?

Less Than Significant Impact

The project site is located within a heavily wooded area in the eastern portion of Novato but outside the city limits. Due to the thick vegetative cover, the site is not visible from many locations. Site grading for

[3] This Mitigated Negative Declaration (MND) includes a discussion of impacts of the environment on the project, which, pursuant to recent California Supreme Court authority, are not California Environmental Quality Act (CEQA) impacts. NMWD has included this discussion based on traditional checklist questions in order to be more thorough in the overall analyses.

the new tank and the new access road would require removal of about 71 trees, many of which are small oaks (see more detailed discussion in Section IV, Biological Resources, below). However, this activity would not have a substantial effect on a scenic vista. The project site is not visible from public viewing locations that would be negatively affected. Therefore, the project would have a less-than-significant impact related to scenic vistas.

b) *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?*

No Impact

The project site is not located within a State scenic highway.

c) *In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less Than Significant Impact

The project site is located in a non-urbanized area, and the only publicly accessible vantage points for the site are from Old Ranch Road. During construction, the removal of existing trees and the required grading for the access road would affect the existing visual character of the area, but this impact would be temporary. Following construction, new vegetation would grow at the edges of the access road and would lessen this visual impact. The impact would therefore be less than significant.

d) *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

No Impact

No lighting would be associated with the project; thus, no light or glare impacts would result.

REFERENCES

Site work by CEQA team.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II.	AGRICULTURAL AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts				

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to a non-agricultural use?*

No Impact

The project site is not designated as Prime Farmland or other important farmland category in the State of California's Farmland Mapping and Monitoring Program. The Marin County Important Farmland Map 2016 (California Department of Conservation, 2018) shows the site area as "Urban and Built-Up Land" and "Other Land." Thus, no conversion of Farmland to non-agricultural use would occur with the project.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

While a portion of the project site is zoned Agriculture and Conservation (A10), no agricultural uses occur at the site and the steepness of the terrain, which is generally about 32 percent slopes, makes the area unsuitable for agricultural use. No Williamson Act contracts apply to the site. The project therefore would not conflict with existing zoning for agricultural use or a Williamson Act contract. In addition, NMWD is exempt from local land use controls.

c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No Impact

The site is not zoned for timberland production.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

The site is not designated or used as forest land and thus no significant impacts related to forest land would result from the project.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact

Refer to the discussion above for Items (a) through (d).

REFERENCES

California Department of Conservation, 2018. Marin County Important Farmland Map 2016.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	■	☐
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?	☐	■	☐	☐
c)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	■	☐

The project site is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). In the SFBAAB, the primary criteria air pollutants of concern are ground-level ozone formed through reactions of nitrogen oxides (NO_x) and reactive organic gases (ROG), and suspended particulate matter (i.e., respirable particulate matter [PM_{10}] and fine particulate matter [$PM_{2.5}$]). The BAAQMD's CEQA Air Quality Guidelines (BAAQMD, 2017a) include thresholds of significance to assist lead agencies in evaluating and mitigating air quality impacts under CEQA. The BAAQMD's thresholds established levels at which emissions of ozone precursors (ROG and NO_x), PM_{10}, $PM_{2.5}$, carbon monoxide (CO), toxic air contaminants (TACs), and odors could cause significant air quality impacts. The scientific soundness of the thresholds is supported by substantial evidence presented in the BAAQMD's Revised Draft Options and Justification Report (BAAQMD, 2009). The BAAQMD's thresholds that relate to the analysis of the project's impacts on the environment are used in this CEQA analysis in conjunction with the BAAQMD's current CEQA Air Quality Guidelines (BAAQMD, 2017a). The thresholds of significance used in this CEQA analysis are summarized in **Table 1**.

IMPACT EVALUATION

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact

In accordance with the federal Clean Air Act and California Clean Air Act, the BAAQMD is required to prepare and update an air quality plan that outlines measures by which both stationary and mobile sources of pollutants can be controlled in order to achieve federal and state ambient air quality standards. In April 2017, the BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate (2017 Clean Air Plan), which includes 85 control measures to reduce ROG, NO_x, PM_{10}, $PM_{2.5}$, TACs, and greenhouse gases (GHGs). The 2017 Clean Air Plan was developed based on a multi-pollutant evaluation method that incorporates well-established studies and methods for quantifying the health benefits of air quality regulations, computer modeling and analysis of existing air quality monitoring data and emission inventories, and growth projections prepared by the Metropolitan Transportation Commission and the Association of Bay Area Governments (BAAQMD, 2017b).

TABLE 1 BAY AREA AIR QUALITY MANAGEMENT DISTRICT PROJECT-LEVEL THRESHOLDS OF SIGNIFICANCE

Impact Analysis	Pollutant	Threshold of Significance
Regional Air Quality (Construction)	ROG	54 pounds/day (average daily emission)
	NO_x	54 pounds/day (average daily emission)
	Exhaust PM_{10}	82 pounds/day (average daily emission)
	Exhaust $PM_{2.5}$	54 pounds/day (average daily emission)
	Fugitive Dust (PM_{10} and $PM_{2.5}$)	Best Management Practices
Regional Air Quality (Operation)	ROG	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	NO_x	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
	Exhaust PM_{10}	82 pounds/day (average daily emission) 15 tons/year (maximum annual emission)
	Exhaust $PM_{2.5}$	54 pounds/day (average daily emission) 10 tons/year (maximum annual emission)
Local Community Risks and Hazards (Operation and/or Construction)	CO	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)
	Exhaust $PM_{2.5}$ (project)	0.3 $\mu g/m^3$ (annual average)
	Exhaust $PM_{2.5}$ (cumulative)	0.8 $\mu g/m^3$ (annual average)
	TACs (project)	Cancer risk increase > 10 in 1 million Chronic hazard index > 1.0
	TACs (cumulative)	Cancer risk > 100 in 1 million Chronic hazard index > 10.0

Notes: ROG = reactive organic gases; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter; CO = carbon monoxide; TACs = toxic air contaminants; ppm = part per million; $\mu g/m^3$ = micrograms per cubic meter
Source: BAAQMD, 2017a.

Based on the BAAQMD's current CEQA Air Quality Guidelines (BAAQMD, 2017a), the following criteria should be considered to determine if a project would conflict with or obstruct implementation of the 2017 Clean Air Plan:

- Does the project include applicable control measures from the air quality plan?
- Does the project disrupt or hinder implementation of any air quality plan control measures?
- Does the project support the primary goals of the air quality plan?

The 2017 Clean Air Plan includes control measures that aim to reduce air pollution and greenhouse gases (GHGs) from stationary, area, and mobile sources. The control measures are organized into nine categories: stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants (e.g., methane, black carbon, and fluorinated gases).

As described in **Table 2**, the project would be consistent with applicable control measures from the 2017 Clean Air Plan. Because the project would not result in any significant and unavoidable air quality impacts related to emissions, ambient concentrations, or public exposures (see Items (b) through (d) below and Section VIII, Greenhouse Gas Emissions, of this Initial Study), the project would support the

TABLE 2 PROJECT CONSISTENCY WITH BAY AREA AIR QUALITY MANAGEMENT DISTRICT 2017 CLEAN AIR PLAN

2017 Clean Air Plan Control Measures	Proposed Project Consistency
Stationary Sources	The stationary source measures are enforced by the Bay Area Air Quality Management District (BAAQMD) pursuant to its authority to control emissions from permitted facilities. The project would not include any new stationary sources, such as an emergency diesel generator. Therefore, the stationary sources control measures of the 2017 Clean Air Plan are not applicable to the project.
Transportation	The transportation control measures are designed to reduce vehicle trips, use, miles traveled, idling, or traffic congestion for the purpose of reducing vehicle emissions. The project operation would not generate any additional vehicle trips compared to existing conditions. Therefore, the project would be consistent with the transportation control measures of the 2017 Clean Air Plan.
Energy	The energy control measures are designed to reduce emissions of criteria air pollutants, toxic air contaminants (TACs), and greenhouse gases (GHGs) by decreasing the amount of electricity consumed in the Bay Area, as well as decreasing the carbon intensity of the electricity used, by switching to less GHG-intensive fuel sources for electricity generation. Since these measures apply to electrical utility providers and local government agencies (and not individual projects), the energy control measures of the 2017 Clean Air Plan are not applicable to the project. Furthermore, project operation would require minimal consumption of electricity during tank inspection (once a week) and tank cleaning (once every five years) (Baseline Environmental Consulting, 2019). Therefore, the energy control measures of the 2017 Clean Air Plan are not applicable to the project.
Buildings	The BAAQMD has authority to regulate emissions from certain sources in buildings such as boilers and water heaters, but has limited authority to regulate buildings themselves. Therefore, the building control measures focus on working with local governments that have authority over local building codes to facilitate adoption of best GHG control practices and policies. The proposed project does not include construction of new buildings. Therefore, the building control measures of the 2017 Clean Air Plan are not applicable to the project.
Agriculture	The agriculture control measures are designed primarily to reduce emissions of methane. Since the project does not include any agricultural activities, the agriculture control measures of the 2017 Clean Air Plan are not applicable to the project.
Natural and Working Lands	The control measures for the natural and working lands sector focus on increasing carbon sequestration on rangelands and wetlands, as well as encouraging local governments to adopt ordinances that promote urban tree plantings. Since the project does not include the disturbance of any rangelands or wetlands, the natural and working lands control measures of the 2017 Clean Air Plan are not applicable to the project.
Waste Management	The waste management measures focus on reducing or capturing methane emissions from landfills and composting facilities, diverting organic materials away from landfills, and increasing waste diversion rates through efforts to reduce, reuse, and recycle. The project would generate a minimal amount of waste from tank cleaning every five years. Therefore, the waste management measures are not applicable to the project.
Water	The water control measures to reduce emissions from the water sector will reduce emissions of criteria pollutants, TACs, and GHGs by encouraging water conservation, limiting GHG emissions from publicly owned treatment works (POTWs), and promoting the use of biogas recovery systems. The proposed project would replace an existing water tank and upgrade the infrastructure, increase the water storage capacity, and improve the system hydraulics in the project vicinity. Because the project would improve operations of the POTW water distribution system, the project would be consistent with the water control measures of the 2017 Clean Air Plan.
Super GHGs	The super-GHG control measures are designed to facilitate the adoption of best GHG control practices and policies through the BAAQMD and local government agencies. Since these measures do not apply to individual projects, the super-GHG control measures of the 2017 Clean Air Plan are not applicable to the project.

Source: BAAQMD, 2017b.

primary goals of the 2017 Clean Air Plan. Therefore, based on the BAAQMD's CEQA Air Quality Guidelines (BAAQMD, 2017a), the project would not conflict with or obstruct implementation of the applicable air quality plan, and the impact would be less than significant.

b) *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard?*

Less Than Significant with Mitigation Incorporated

Construction Emissions

Construction of the project would generate criteria pollutant emissions that could potentially affect regional air quality. The primary pollutant emissions of concern would be ROG, NO_x, PM_{10}, and $PM_{2.5}$ from the exhaust of off-road construction equipment and on-road construction vehicles (worker vehicles, vendor trucks, and haul trucks). In addition, fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be generated by soil disturbance activities, and fugitive ROG emissions would result from paving activities.

The BAAQMD recommends using the most recent version of the California Emissions Estimator Model (CalEEMod Version 2016.3.2) to estimate construction and operational emissions of pollutants for a proposed project. CalEEMod uses widely accepted models for emission estimates combined with appropriate default data for a variety of land use projects that can be used if site-specific information is not available. The default data (e.g., power of construction equipment) are supported by substantial evidence provided by regulatory agencies and a combination of statewide and regional surveys. The primary input data used to estimate emissions associated with construction of the proposed project are provided by NMWD and contain information on construction phase duration, off-road construction equipment associated with each phase and the number of workers on-site during each phase. A summary of construction input parameters for estimating construction emissions is provided in **Table 3**. Construction information provided by NMWD and a copy of the CalEEMod report for the proposed project, which summarizes the input parameters, assumptions, and findings, are provided in **Appendix B**. To determine if project construction emissions could substantially contribute to existing violations of federal and/or state ambient air quality standards in the SFBAAB, the project's emissions are compared to the BAAQMD's thresholds of significance, below.

TABLE 3 CONSTRUCTION INPUT PARAMETERS FOR CALIFORNIA EMISSIONS ESTIMATOR MODEL (CALEEMOD)

CalEEMod Input Category	Construction Assumptions and Changes to Default Data
Construction Phase	Construction phases include clearing, grubbing, site/road preparation, foundation construction, and tank construction. Duration of each phase is provided by the North Marin Water District (NMWD) and is included in Appendix B.
On-Site Construction Equipment	The on-site construction equipment list was modified according to site-specific construction information provided by NMWD (see Appendix B).
Material Movement	Approximately 800 cubic yards of soil export and 330 cubic yards of soil import are anticipated during site/road preparation.
Worker and Vendor Trips	The default worker trips were modified according to information provided by NMWD (see Appendix B).

Note: Default CalEEMod data used for all other parameters not described.
Source: CalEEMod (see Appendix B).

Construction Fugitive Dust Emissions

Impact AIR-1: Fugitive dust emissions during project construction could result in a cumulatively considerable net increase in particulate matter concentrations for which the region is non-attainment under federal and State of California ambient air quality standards. (PS)

Project grading and material hauling activities during construction could generate fugitive dust PM_{10} and $PM_{2.5}$ emissions that could result in a potentially significant impact in relation to ambient air quality standards. The BAAQMD does not have a quantitative threshold of significance for fugitive dust PM_{10} and $PM_{2.5}$ emissions; however, the BAAQMD considers implementation of dust control measures during construction sufficient to reduce air quality impacts from fugitive dust to a less-than-significant level. More specifically, the BAAQMD recommends that all construction projects implement the Basic Construction Mitigation Measures from the BAAQMD's CEQA Air Quality Guidelines (BAAQMD, 2017a) to reduce emissions of fugitive dust (regardless of the estimated emissions). The BAAQMD's Basic Construction Mitigation Measures for controlling dust are included in Mitigation Measure AIR-1, below.

> *Mitigation Measure AIR-1: During project construction, the contractor shall implement a dust control program that includes the following measures recommended by the Bay Area Air Quality Management District (BAAQMD):*
>
> - *All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.*
> - *All haul trucks transporting soil, sand, or other loose material off-site shall be covered.*
> - *Track-out control mats shall be used to contain and minimize mud and dirt track-out onto adjacent public roads. Any remaining visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers, if necessary. The use of dry power sweeping is prohibited.*
> - *All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.*
> - *All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.*
> - *A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations.*
>
> *In addition, North Marin Water District (NMWD) staff or an independent construction monitor shall conduct periodic site inspections, but in no event fewer than four total inspections, during the course of construction to ensure these mitigation measures are implemented and shall issue a letter report documenting the inspection results. Reports indicating non-compliance with*

construction mitigation measures shall be cause to issue a stop-work order until such time as compliance is achieved. (LTS)

Construction ROG, NO_x, and Exhaust PM_{10} and $PM_{2.5}$ Emissions

Estimates of construction emissions were averaged over the total working days and compared to the BAAQMD's thresholds of significance in **Table 4**. The project's estimated emissions of ROG, NO_x, and exhaust PM_{10} and $PM_{2.5}$ were below the applicable thresholds. Therefore, project construction would not result in a considerable net increase in ozone or particulate matter concentrations for which the region is non-attainment under federal and state ambient air quality standards, and the associated impact would be less than significant.

TABLE 4 ESTIMATED AIR EMISSIONS (POUNDS PER DAY) DURING PROJECT CONSTRUCTION

	ROG	NO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Unmitigated Construction Emissions	2.9	25.5	1.3	1.2
BAAQMD's Thresholds of Significance	54	54	82	54
Exceed Threshold?	No	No	No	No

Notes: BAAQMD = Bay Area Air Quality Management District; ROG = reactive organic gases; NO_x = nitrogen oxides; PM_{10} = respirable particulate matter; $PM_{2.5}$ = fine particulate matter
Source: CalEEMod (see Appendix B).

Operational Emissions

Operation of the proposed water tank, the new access road, and other ancillary improvements would not generate criteria pollutant emissions except for vehicular emissions from tank inspection and cleaning. Because tank inspection would only occur once a week and tank cleaning would only occur once every five years (Baseline Environmental Consulting, 2019), criteria pollutant emissions from project operations would be negligible. Therefore, project operation would not result in a considerable net increase in ozone or particulate matter concentrations for which the region is non-attainment under federal and state ambient air quality standards, and the associated impact would be less than significant.

c) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact

The term "sensitive receptor" refers to a location where individuals are more susceptible to poor air quality. Sensitive receptors include schools, convalescent homes, and hospitals because the very young, the old, and the infirm are more susceptible than the rest of the public to air quality-related health problems. Residential areas are also considered sensitive to poor air quality because people are often at home for extended periods, thereby increasing the duration of exposure to potential air contaminants. The BAAQMD recommends evaluating the potential impacts on sensitive receptors

located within 1,000 feet of a project. The project's potential impacts on sensitive receptors from emissions of CO and TACs are discussed below.

Localized Carbon Monoxide Concentrations

The occurrence of localized CO concentrations, also known as "hotspots," can affect sensitive receptors in local communities. Local CO emissions are often associated with heavy traffic congestion, which most frequently occurs at signalized intersections of high-volume roadways. The BAAQMD's threshold of significance for local CO concentrations is equivalent to the 1- and 8-hour California Ambient Air Quality Standards (CAAQS) of 20.0 and 9.0 parts per million, respectively, because these represent levels that are protective of public health.

Operation of the proposed project would include infrequent vehicle trips associated with a weekly tank inspection and five-year tank cleaning (Baseline Environmental Consulting, 2019). According to the BAAQMD CEQA Guidelines (BAAQMD, 2017a), since operation of the proposed project would not generate more than 44,000 vehicles per hour at the affected intersections, the project would not be expected to increase local CO levels above the CAAQS. Therefore, the project would have a less-than-significant impact on nearby sensitive receptors exposed to local CO concentrations.

Toxic Air Contaminants from Construction

Project construction would generate diesel particulate matter (DPM) and $PM_{2.5}$ emissions from off-road diesel construction equipment and on-road vehicles traveling to and from the project site, and these emissions could affect nearby sensitive receptors. The annual average concentrations of DPM and $PM_{2.5}$ concentrations were estimated within 1,000 feet of the proposed project using the U.S. Environmental Protection Agency (EPA) Industrial Source Complex Short Term (ISCST3) air dispersion model (EPA, 1995). For this analysis, emissions of exhaust PM_{10} were used as a surrogate for DPM. Because less than 1 percent of the total construction emissions of DPM and $PM_{2.5}$ would be generated by on-road vehicles (worker, vendor, and haul trucks) traveling to and from the project site, only the off-road diesel construction equipment was included in the analysis. The input parameters and assumptions used for estimating emission rates of DPM and $PM_{2.5}$ from off-road diesel construction equipment are included in the Appendix B, which is available at NMWD's offices.

The exhaust from off-road equipment was represented in the ISCST3 model as a series of volume sources with a release height of 5 meters to represent the mid-range of the expected plume rise from frequently used construction equipment. Dispersion of air pollutants from off-road construction equipment was modeled using the χ/Q ("chi over q") method, such that each source has a unit emission rate (e.g., 1 gram per second for volume sources). The annual average concentration profiles from the air dispersion model were then scaled according to the ratio between the unit emission rate and the actual emission rate from each source. Actual emission rates for off-road equipment were based on the actual hours of work and averaged over the entire duration of construction. Daily emissions from construction were assumed to occur from 8:00 AM to 5:00 PM Monday through Friday (Baseline Environmental Consulting, 2019).

A uniform grid of receptors spaced 10 meters apart with receptor heights of 1.8 meters was encompassed around the project site as a means of developing isopleths (i.e., concentration contours) that illustrate the air dispersion pattern from the various emission sources. Terrain variation on and near the project site was incorporated in the ISCST3 model to assign elevations to the emission sources and receptors, based on the National Aeronautics and Space Administration Shuttle Radar Topography Mission Version 3.0 elevation data at 1-second resolution. The ISCST3 model input parameters included three years of BAAQMD meteorological data at the Sonoma Baylands weather station located about 7.6 miles northeast of the project site.

Based on the results of the air dispersion model (see Appendix B), potential health risks were evaluated for the maximally exposed individual resident (MEIR) located at a single-family home about 160 feet south of the project site. In accordance with guidance from the BAAQMD (2016) and the Office of Environmental Health Hazard Assessment (OEHHA) (OEHHA, 2015), a health risk assessment was conducted to calculate the incremental increase in cancer risk and chronic hazard index (HI) to the MEIR from DPM emissions during construction. Analysis of acute non-cancer health hazards from construction activity is not recommended by the BAAQMD, nor has a reference exposure level been approved by OEHHA and the California Air Resources Board (CARB). The annual average concentration of DPM at the MEIR was used to conservatively assess potential health risks to nearby sensitive receptors. At the MEIR location, the incremental increase in cancer risk from on-site DPM emissions during construction was assessed for a young child exposed to DPM for 10 months starting from in utero in the third trimester of pregnancy. This exposure scenario represents the most sensitive individuals who could be exposed to adverse air quality conditions in the vicinity of the project site. The input parameters and results of the health risk assessment are included in Appendix B.

Estimated health risks at the MEIR from DPM and $PM_{2.5}$ concentrations during construction of the proposed project are summarized and compared to the BAAQMD's thresholds of significance in **Table 5**. The estimated excess cancer risk, the chronic HI, and the annual average $PM_{2.5}$ concentrations at the MEIR were below the BAAQMD's thresholds of significance. Therefore, construction of the proposed project would have a less-than-significant impact related to the exposure of sensitive receptors to DPM and $PM_{2.5}$ concentrations.

TABLE 5 HEALTH RISKS AND HAZARDS FROM AIR EMISSIONS AT MAXIMALLY EXPOSED INDIVIDUAL RESIDENT DURING PROJECT CONSTRUCTION

	Diesel Particulate Matter (DPM)		Exhaust $PM_{2.5}$
	Cancer Risk (per million)	Chronic Hazard Index	Annual Average Concentration ($\mu g/m^3$)
Exposure of Maximally Exposed Individual Resident (MEIR) during Project Construction	6.8	0.01	0.05
Thresholds of Significance	10	1	0.3
Exceed Thresholds?	No	No	No

Notes: $PM_{2.5}$ = fine particulate matter; $\mu g/m^3$ = micrograms per cubic meter
Source: See Appendix B.

Toxic Air Contaminants from Operation

Project operations would not introduce a new stationary source of TAC emissions. Therefore, project operations would have no impact on nearby sensitive receptors related to substantial pollutant concentrations.

Cumulative TAC Emissions

The project site is located in a rural area. There is no existing stationary source or foreseeable future source of TACs within 1,000 feet of the MEIR according to the BAAQMD and the County of Marin, respectively (BAAQMD, 2019; County of Marin, 2019). Therefore, the cumulative impact on nearby sensitive receptors from exposure to TAC and $PM_{2.5}$ emissions during construction of the proposed project would be less than significant.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less Than Significant Impact

Project construction and operation would not be expected to generate significant odors because the project would not include handling or generation of noxious materials. Therefore, project impacts related to odors would be less than significant.

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Bay Area Air Quality Management District (BAAQMD), 2019. Permitted Stationary Sources 2017. Available at: https://baaqmd.maps.arcgis.com/apps/webappviewer/index.html?id=2387ae674013413f987b1071715daa65, accessed on August 26, 2019.

California Air Pollution Control Officers Association, 2016. California Emissions Estimator Model (CalEEMod). Version 2016.3.2.

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Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments, February.

U.S. Environmental Protection Agency (EPA), 1995. Industrial Source Complex Short Term (ISCST3) Air Dispersion Model.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	BIOLOGICAL RESOURCES. Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	■	☐	☐
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c)	Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	■	☐
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	■	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

Information regarding biological and wetland resources for the project site is based on the review of available information, including project designs and the occurrence records of the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW). A systematic survey for rare plants was conducted on June 24, 2019, and a follow-up field reconnaissance survey was conducted by the Initial Study biologist on August 28, 2019, to confirm existing conditions and assess the potential impacts of the proposed project.

The project site is located in an area of relatively dense woodlands and savanna, which is dominated by several species of oak and other native tree species. Tree species present on the site include black

oak (*Quercus kelloggii*), valley oak (*Q. lobata*), coast live oak (*Q. agrifolia*), blue oak (*Q. douglasii*), California bay (*Umbellularia californica*), and madrone (*Arbutus menziesii*). Where the woodland canopy is closed, understory vegetation is generally sparse, composed of poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis*), toyon (*Heteromels arbutifolia*) green leaved manzanita (*Arctostaphylos manzanita* ssp. *manzanita*), and other shrub and groundcover species. Where the canopy is open or sparse, the understory is dominated by a relatively dense cover of non-native grassland species and scattered shrubs. Common species are generally not native and include slender oats (*Avena barbata*), bromes (*Bromus* spp.), filaree (*Erodium* ssp.), and common vetch (*Vicia sativa* ssp. *sativa*). The grasslands contain native grasses and forbs, such as blue wild rye (*Elymus glaucus*), California oat grass (*Danthonia californica*), Torrey melic (*Melica californica*), smooth mule ears (*Wyethia glabra*), and bedstraw (*Galium* spp.) but these native species do not occur in densities that would qualify as a native grassland. Invasive Spanish broom (*Spartium junceum*) and French broom (*Genista monspessulana*) are beginning to spread through the woodland, contributing to fire fuel loads and replacing native cover, which is a common problem in undeveloped areas of Marin County.

The woodlands and open grasslands provide denning, nesting, and foraging opportunities for numerous species of small mammals, reptiles, and birds. Mammals and reptiles found in the project site vicinity likely include deer mouse, woodrat, stripped skunk, grey squirrel, western skink, newts, ensatina, ring-necked snake, and rubber boa. Larger mammals such as black-tailed deer and predatory species such as grey fox, mountain lion, and coyote most likely forage throughout the woodlands and open savanna. The trees provide nesting cavities, perching and foraging opportunities, and nesting substrate for numerous species of birds, including jays, woodpeckers, kinglets, and bushtits. Several species of raptors use the mature trees for roosting and possibly nesting with foraging in the understory and areas of open grassland. These raptor species include red-tailed hawk, Cooper's hawk, white-tailed kite, turkey vulture, great-horned owl, and barn owl.

IMPACT EVALUATION

a) *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Less Than Significant with Mitigation Incorporated

A record search conducted by the CNDDB and the other relevant information sources indicate that numerous plant and animal species with special status have either been recorded from or are suspected to occur in the Novato vicinity and northeastern Marin County area. Special-status species[4]

[4] Special-status species include:

- Officially designated (rare, threatened, or endangered) and candidate species for listing identified by the CDFW;
- Officially designated (threatened or endangered) and candidate species for listing identified by the U.S. Fish and Wildlife Service (USFWS);
- Species considered to be rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines, such as those with a rank of 1 or 2 in the *Inventory of Rare and Endangered Plants of California* maintained by the California Native Plant Society (CNPS); and

are plants and animals that are legally protected under the State of California and/or federal Endangered Species Acts[5] or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species protected by the California Endangered Species Act (CESA) and federal Endangered Species Act (FESA) often represent major constraints to development, particularly when the species are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take"[6] of these species.

Figures 5 and **6** show the distribution of special-status plant and animal species, respectively, as reported by the CNDDB within approximately 5 miles of the project site. According to CNDDB records, no special-status plant or animal species have been reported from the project site, but a general occurrence of Townsend's big-eared bat (*Corynorhinus townsendii*) extends over the southwest area of Novato. Townsend's big-eared bat is one of several native bat species recognized as "Species of Special Concern" (SSC) by the CDFW. It is known to establish day roosts in rock outcrops, mines, caves, building, bridges, and tree cavities. Inspection of the trees on the project site did not indicate any cavities that would allow for roosting by Townsend's or other special-status bat species, which typically avoid areas of human activity.

Most of the special-status species reported from the Novato vicinity occur in natural habitats such as coastal salt marsh, riparian woodlands, and forest habitats, all of which are absent from the project site. A number of special-status plant species are known from open woodlands and grasslands of eastern Marin County, but none were detected during the systematic survey of the site or are believed to be present. With the exception of possible presence of nesting birds that would be protected under state and federal regulations when the nests are in active use, no special-status species are suspected to occur on the project site.

Nests of most bird species are protected under the Migratory Bird Treaty Act (MBTA) when the nests are in active use, and nests of raptors (birds-of-prey) are also protected under the California Fish and Game Code when the nests are in active use. No nesting or roosting locations have been identified by the CNDDB for the project site or immediate vicinity, or were observed during the field surveys. However, trees on the project site contain suitable nesting substrate for some bird species recognized as SSC by the CDFW, as well as more common species, and new nests could be established in the future. The MBTA prohibits killing, possessing, or trading in migratory birds, except in accordance with

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- Possibly other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those with a rank of 3 and 4 in the CNPS *Inventory* or identified as animal "Species of Special Concern" (SSC) by the CDFW. Species of Special Concern have no legal protective status under the CESA but are of concern to the CDFW because of severe decline in breeding populations in California.

[5] The federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of the FESA and pertains to native California species.

[6] "Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. "Harm" is further defined by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The CDFW also considers the loss of listed species habitat as take, although this policy lacks statutory authority and case law support under the CESA.

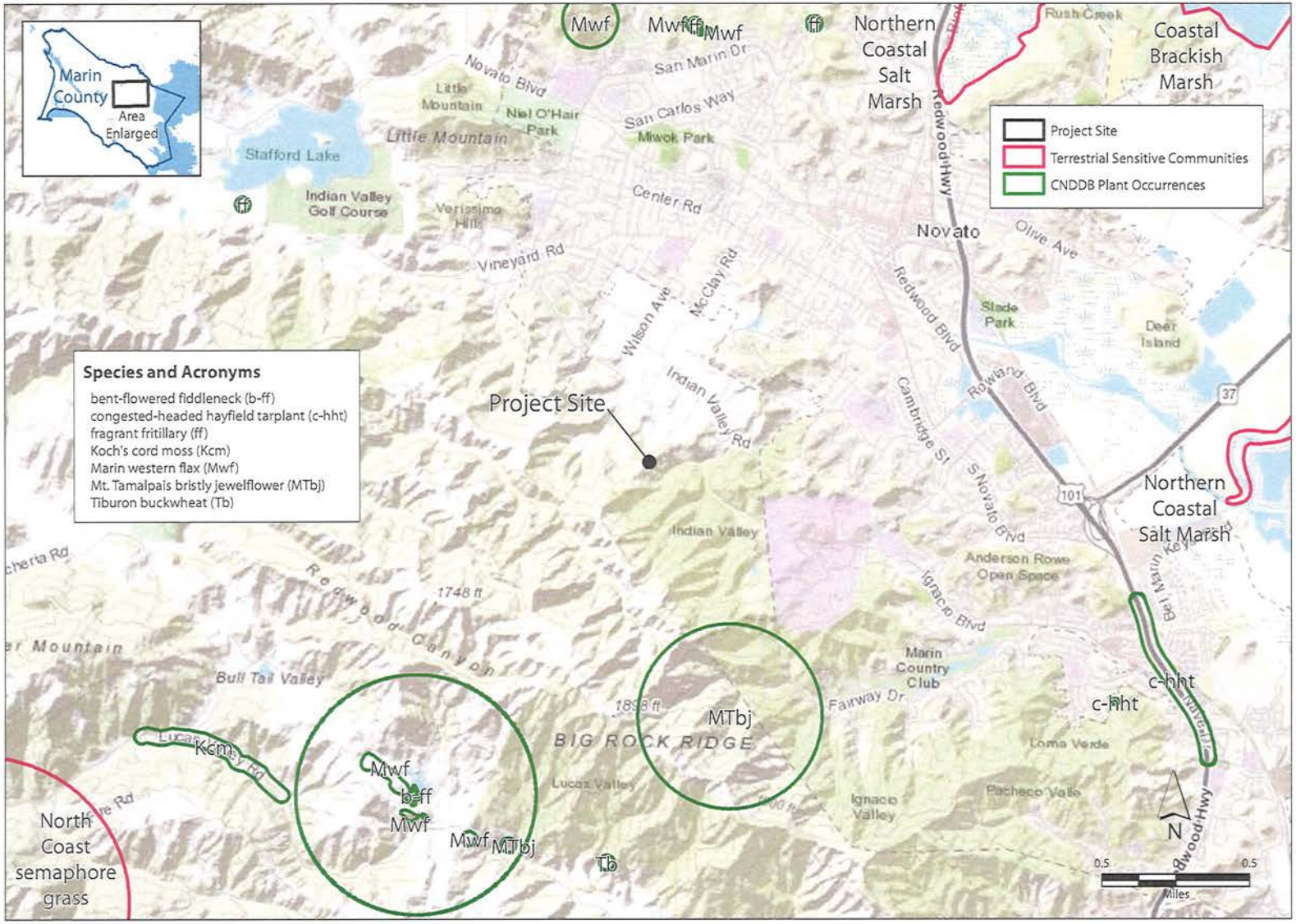
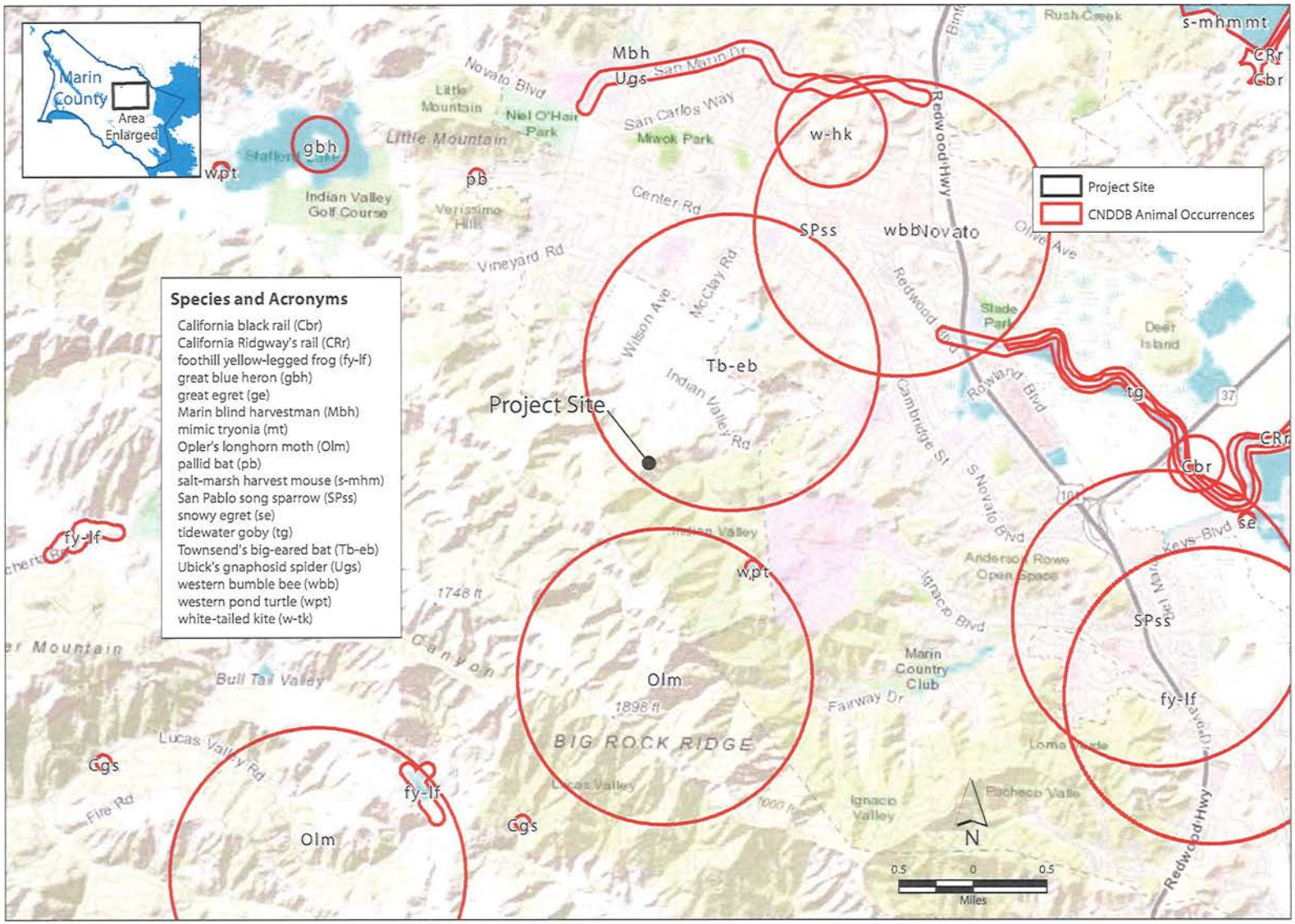


Figure 5

SOURCES: California Natural Diversity Database accessed on August 15, 2019;
USGS base map by ESRI and NGS.
Map produced by www.digitalmappingsolutions.com on 8/15/2019.

SPECIAL-STATUS PLANT SPECIES AND SENSITIVE NATURAL COMMUNITIES



SOURCES: California Natural Diversity Database accessed on August 15, 2019;
USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 8/16/2019.

Figure 6

SPECIAL-STATUS ANIMAL SPECIES

either shall confirm absence of any active nests or shall confirm that any young within a designated no-disturbance zone have fledged and construction can proceed.

Implementation of Mitigation Measure BIOLOGY-1 would reduce potentially significant impacts on nesting birds to a less-than-significant level. (LTS)

b) *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

No Impact

Sensitive natural communities are community types recognized by the CDFW and other agencies because of their rarity. In the Novato vicinity, sensitive natural community types include coastal salt marsh, brackish water, freshwater marshlands, and native grasslands, among other community types. While the grassland cover in the open woodlands on the project site includes some clumps of native grasses, such as Torrey melic and California oat grass, these do not occur in high enough densities or special area to be considered a sensitive natural community type. Thus, sensitive natural community types are absent from the site and vicinity of proposed construction, and no adverse impacts are anticipated. No significant impacts are expected and no mitigation is required.

c) *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions.

The CDFW, U.S. Army Corps of Engineers (Corps), and California Regional Water Quality Control Board (RWQCB) have jurisdiction over modifications to wetlands and other "waters of the United States." Jurisdiction of the Corps is established through provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material without a permit. The RWQCB jurisdiction is established through Section 401 of the Clean Water Act, which requires certification or waiver to control discharges in water quality, and the State Porter-Cologne Act. Jurisdictional authority of the CDFW over wetland areas is established under Sections 1600-1607 of the California Fish and Game Code, which pertain to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream.

A preliminary wetland assessment was conducted during the field reconnaissance survey. No indications of any jurisdictional waters, including headwater drainages, were observed on the project

site. As part of the project, Standard Best Management Practices (BMPs) would be used to prevent any sedimentation or erosion, preventing any potential for water quality degradation to downgradient waters, as discussed further under Section X, Hydrology and Water Quality, below. No direct or indirect impacts on the jurisdictional waters are anticipated, and no mitigation is required.

d) *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant Impact

The proposed project would not have any significant adverse impacts on wildlife movement opportunities or adversely affect native wildlife nursery sites. The project site would remain open to movement opportunities by terrestrial wildlife and dispersing birds following construction of the access road and water tank. Grading and construction would temporarily disrupt wildlife use of the immediate vicinity, but this would be a relatively short-term effect on common wildlife species, which could continue to use the surrounding undeveloped hillside for foraging and other activities. Pre-construction surveys recommended in Mitigation Measure BIOLOGY-1 would ensure avoidance of any nesting birds if new nests become established before construction is initiated. No substantial disruption of movement corridors or access to native wildlife nursery sites is anticipated. Potential impacts on wildlife movement opportunities would be less than significant and no mitigation is required.

e) *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Less Than Significant Impact

Policies in the National Resources Element of the *Marin Countywide Plan* address the protection of sensitive biological and wetland resources, including creeks, significant habitat for fish, wildlife and flora, and natural features. With the exception of trees of protected size under the Marin County Tree Protection Ordinance, there are no other sensitive biological resources on the project site. No impacts on creeks, special-status species, or sensitive natural communities are anticipated as a result of the project; appropriate measures would be taken to minimize damage or loss of trees, and BMPs would be followed to prevent sediment and other construction-generated pollutants from reaching downstream waters. Preconstruction surveys for possible nesting birds would be conducted as recommended in Mitigation Measure BIOLOGY-1, which would ensure avoidance of any nesting birds if new nests become established before construction is initiated. No substantial conflicts with the *Marin Countywide Plan* are anticipated as a result of the project.

Chapter 22.27, Native Tree Protection and Preservation, of the Marin County Code provides for the protection of native trees that qualify as "protected" or "heritage" size. The minimum size for trees that qualify as "protected" under the code varies from either 6 or 10 inches diameter at breast height (DBH), with oaks and madrone having a minimum size of 6 inches and California bay having a minimum size of 10 inches. Trees that qualify as "heritage" under the code also vary in size, with oaks and madrone having a minimum size of 18 inches DBH and California bay having a minimum size of 30 inches. The

ordinance prohibits the removal of any protected or heritage tree without a permit for individuals and organizations subject to its provisions, defines the process for securing a tree removal permit, and identifies exemptions and options for addressing tree loss where avoidance is infeasible.

The project would be located in an area of open woodland, and numerous young trees would be removed or could be damaged as a result of project construction. Based on mapping prepared by NMWD's engineer, a total of 66 trees with trunk diameters ranging from 6 to 15 inches DBH would be removed to accommodate the proposed new road and water tank. These consist of 62 oaks and 4 madrones that would meet the minimum trunk size to qualify as a "protected" tree under the Marin County Code. An additional five California bay trees with trunk diameters of 6 to 8 inches would also be removed, but these are below the minimum to qualify as "protected" under the Marin County Code. The health of these trees varies, but most are in good to poor condition, growing in a relatively dense woodland where native regeneration is considerable. Numerous younger sapling trees also occur within the limits of grading and on the surrounding hillside, and are adding to the density of trees growing in the woodland. This density is most likely due to the absence of domestic grazing in the area, fire prevention, and absence of any vegetation management on the site.

As a public water district, NMWD is not subject to the provisions of the Marin County Code, although it typically strives to comply with the intent of these regulations. In this case, potential conflict with the Marin County Code is considered less than significant, for the following reasons. First, while the number of trees to be removed would be considerable, the proposed alignment for the new road and location of the new tank have generally been sited to minimize tree removal. Providing replacement plantings for trees to be removed would contribute to further densification of the existing conditions in the woodlands on the site, and it is unlikely these trees would thrive. Providing replacement plantings also may create overcrowded conditions that compromise the health of the existing established trees in the area. Natural regeneration will continue in the area, as is currently taking place, and new trees will eventually become established along the margins of the new maintenance road where their survival is possible. For these reasons, no major conflicts with the intent of the Marin County Code are anticipated; the impact would be considered less than significant, and no mitigation is necessary.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan?

No Impact

There are currently no adopted Habitat Conservation Plans or Natural Community Conservation Plans for the project site or surrounding areas. No adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other conservation plan applies to the project site, no impacts regarding possible conflicts with an adopted plan are anticipated, and no mitigation is required.

REFERENCES

California Department of Fish and Wildlife (CDFW), Biogeographic Information Services, 2019. California Natural Diversity Data Base (CNDDB) GIS data accessed online on August 15, 2019.

U.S. Fish and Wildlife Service (USFWS), Sacramento Endangered Species Division, 2019. Critical Habitat database accessed online on August 15, 2019.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	CULTURAL RESOURCES. Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	■	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	■	☐	☐
c)	Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?*

Less Than Significant with Mitigation Incorporated

For a cultural resource to be considered a historical resource (i.e., eligible for listing in the California Register of Historical Resources [CRHR]), it generally must be at least 50 years old. Under CEQA, historical resources can include pre-contact (i.e., Native American) archaeological deposits, historic-period archaeological deposits, historic buildings, and historic districts.

To identify historical resources at the project site, the following tasks were completed for this Initial Study: 1) a records search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System;[7] 2) geologic and historical maps and information were reviewed to assess the potential for buried historic-period and pre-contact Native American archaeological deposits; and 3) a qualified archaeologist surveyed the project site to identify surface evidence of archaeological deposits. Based on the results of these tasks—which are described below—the project would have a potentially significant impact on archaeological historical resources unless mitigation is incorporated.

[7] The NWIC is an affiliate of the State of California Office of Historic Preservation (OHP) and is the official State repository of cultural resources records and reports for Marin County.

Records Search

The NWIC records search was conducted on August 12, 2019, and included the project site and a 0.25-mile search radius.

The NWIC database indicates that there are no recorded cultural resources at, or previous cultural resource studies of, the project site. There are no recorded cultural resources within 0.25 mile of the project site.

Map Review

The surface geology of the project site is Franciscan Complex sandstone and shale (KJfs) (Rice et al., 2002). The Franciscan Complex formed during the late Mesozoic era, long before human occupation of North America. Buried pre-contact archaeological deposits are not anticipated at the project site due to the age of the Franciscan Complex and absence of a depositional environment that could have buried former living surfaces. Pre-contact archaeological materials—should these occur at the project site—would be expected to occur at or near the present-day ground surface.

The historical maps reviewed do not indicate a potential for historic-period archaeological deposits or features. Sanborn Fire Insurance maps do not provide coverage of the project site or vicinity, indicating that physical development was too sparse to warrant inspection by the insurance industry in the late 19th and early 20th centuries. Historical topographic maps published between 1914 and 1968 indicate no buildings or structures at or near the project site (U.S. Army Corps of Engineers, 1942; U.S. Geological Survey, 1914, 1954, 1968).

Field Survey

A Registered Professional Archaeologist surveyed the project site on August 28, 2019. The length of the project site was walked twice in spaced, parallel, zig-zag transects. A hoe was used intermittently to scrape surface vegetation to inspect the underlying rocky loam for archaeological materials.

No archaeological cultural resources were identified during the survey.

There is a redwood water tank near the project site that is over 50 years old. NMWD has determined that the existing water tank is not a historical resource for purposes of CEQA.

Summary

The NWIC records search and field survey did not identify cultural resources at the project site. The map review indicates a low potential for buried pre-contact and historic-period archaeological historical resources. Although the potential for identifying archaeological historical resources during project ground disturbance is low, the presence of such resources cannot be entirely discounted. The dense surface vegetation encountered during the field survey, for example, could have obscured archaeological deposits that could be uncovered during project implementation. Should such deposits be encountered during project ground disturbance, a substantial adverse change in the significance of

a historical resource would occur from the resource's demolition, destruction, relocation, or alteration such that the significance of the resource would be materially impaired (CEQA Guidelines Section 15064.5(b)(1)) (see Impact CULTURAL-1 and Mitigation Measure CULTURAL-1 below).

Impact CULTURAL-1: The project could unearth archaeological deposits, thereby causing a substantial adverse change in the significance of a historical resource as defined in California Environmental Quality Act (CEQA) Guidelines Section 15064.5. (PS)

Mitigation Measure CULTURAL-1: Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources [CRHR]), the North Marin Water District (NMWD) shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recording of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods, findings, and recommendations shall be prepared and submitted to NMWD for review, and the final report shall be submitted to the Northwest Information Center (NWIC) at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate local curation facility and used for future research and public interpretive displays, as appropriate.

NMWD shall inform its contractor(s) of the sensitivity of the project area for archaeological deposits and shall verify that the following directive has been included in the appropriate contract documents:

> *"The subsurface of the construction site may be sensitive for Native American archaeological deposits and associated human remains. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall stop and a qualified archaeologist contacted to assess the situation and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include shellfish remains; bones; flakes of, and tools made from, obsidian, chert, and basalt; and mortars and pestles. Contractor acknowledges and understands that excavation or removal of archaeological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5."*

With implementation of this mitigation measure, the potential impact on historical and archaeological resources would be reduced to a less-than-significant level. (LTS)

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less Than Significant with Mitigation Incorporated

According to the CEQA Guidelines, "When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource" (CEQA Guidelines Section 15064.5(c)(1)). Those archaeological sites that do not qualify as historical resources shall be assessed to determine if these qualify as "unique archaeological resources" (California Public Resources Code Section 21083.2). Archaeological deposits identified during project construction must be treated by NMWD—in consultation with a qualified archaeologist meeting the *Secretary of the Interior's Professional Qualifications Standards for Archeology*—in accordance with Mitigation Measure CULTURAL-1.

Impact CULTURAL-2: The project could unearth archaeological deposits, thereby causing a substantial adverse change in the significance of an archaeological resource as defined in California Environmental Quality Act (CEQA) Guidelines Section 15064.5. (PS)

> *Mitigation Measure CULTURAL-2: Mitigation Measure CULTURAL-1 shall be implemented. (LTS)*

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

No Impact

There are no known historic-period human burials at the project site. Background research and a cultural resources field survey conducted for this Initial Study (see discussion under Item (a) above) did not identify recorded Native American skeletal or cremated remains at the project site.

In the event that human remains are identified during project construction, these remains would be treated in accordance with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code, as appropriate.

Section 7050.5 of the California Health and Safety Code states that, in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission (NAHC) within 24 hours of this identification. The NAHC will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

Section 5097.98 of the Public Resources Code states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5, shall immediately notify those persons (i.e., the MLD) it believes to be descended from the deceased. With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

With these regulations in place, no impact on human remains is anticipated, and no mitigation is necessary.

REFERENCES

Rice, Salem R., Theodore C. Smith, Rudolph G. Strand, David L. Wagner, Carolyn E. Randolph-Loar, Robert C. Witter, and Kevin B. Clahan, 2002. *Geologic Map of the Novato 7.5' Quadrangle, Marin and Sonoma Counties, California: A Digital Database.* California Department of Conservation, Sacramento.

U.S. Army Corps of Engineers (Corps), 1942. *California Petaluma Quadrangle*. 15-minute topographic quadrangle.

U.S. Geological Survey (USGS), 1914. *California Petaluma Quadrangle*. 15-minute topographic quadrangle.

U.S. Geological Survey (USGS), 1954. *Novato, California*. 7.5-minutes topographic quadrangle.

U.S. Geological Survey (USGS), 1954. *Novato, California*. 7.5-minutes topographic quadrangle. Photo revised 1968.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI.	ENERGY. Would the project:				
	a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☐	■
	b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

No Impact

During project construction, energy would be needed for fuel for construction equipment in the site preparation and construction activities. However, this would be a short-term energy demand that would not be wasteful or inefficient. During project operation, energy would be required for the pumping of water to the tank. However, this energy demand similarly would not be wasteful or inefficient, especially given that 1) the project is relatively small, and 2) the energy demand would be similar to that associated with the existing water tank that would likely be decommissioned. Energy for pumping would be provided by the Pacific Gas & Electric Company (PG&E), which provides electricity and natural gas to customers in the City of Novato.

b) *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

No Impact

The project would not conflict with any state plan for renewable energy or energy efficiency. The project is exempt from local plans related to energy efficiency. However, it is assumed that NMWD would use energy-efficient pumps and other elements for the project as there would be cost savings by doing so.

REFERENCES

City of Novato, 2009. *2009 Climate Change Action Plan, City of Novato,* December.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII.	GEOLOGY AND SOILS. Would the project:				
	a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	■	☐	☐
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	■	☐
	ii) Strong seismic ground shaking?	☐	■	☐	☐
	iii) Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
	iv) Landslides?	☐	■	☐	☐
	b) Result in substantial soil erosion or the loss of topsoil?	☐	■	☐	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	■	☐	☐
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

The project site is located within the central portion of the Coast Ranges geomorphic province, which includes numerous active faults identified by the California Geological Survey (CGS) under the Alquist-Priolo Earthquake Fault Zoning Act. CGS defines an active fault as one that has ruptured during the Holocene Epoch (i.e., the last 11,000 years).

The nearest known active faults are the Rodgers Creek Fault, located approximately 10 miles northeast of the project site, and the San Andreas Fault, located approximately 10 miles southwest of the project site. Mapping by CGS also shows the Burdell Mountain Fault approximately 4 miles northeast of the project site. The Burdell Mountain Fault is categorized as a Quaternary fault; however, the age of displacements along the fault is undifferentiated (CGS, 2010). This fault is not considered "active" under the Alquist-Priolo Earthquake Fault Zoning Act.

a) *Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42; ii) Strong seismic ground shaking; iii) Seismic-related ground failure, including liquefaction; iv) Landslides?*

Less Than Significant with Mitigation Incorporated

Fault Rupture

Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. Surface rupture generally occurs along an existing (usually active) fault trace. Areas susceptible to surface fault rupture are delineated by the CGS Alquist-Priolo Earthquake Fault Zones and require specific geological investigations prior to development to reduce the threat to public health and safety and to minimize the loss of life and property posed by earthquake-induced ground failure. There are no Alquist-Priolo Earthquake Fault Zones mapped in the vicinity of the project site (CGS, 2019); therefore, the project would result in a less-than-significant impact related to fault rupture.

Strong Seismic Ground Shaking

Seismic ground shaking generally refers to all aspects of motion of the Earth's surface resulting from an earthquake and is normally the major cause of damage in seismic events. The extent and severity of ground shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. The magnitude of a seismic event is a measure of the energy released by an earthquake; it is assessed by seismographs that measure the amplitude of seismic waves. The intensity of an earthquake is a subjective measure of the perceptible effects of a seismic event at a given point. The Modified Mercalli Intensity scale is the most commonly used scale to measure the subjective effects of earthquake intensity. It uses values ranging from I to XII.

The Association of Bay Area Governments (ABAG) and the United States Geological Survey (USGS) have mapped the likely shaking intensities in the Bay Area that would have a 10 percent chance of occurring in any 50-year period (ABAG, 2019). Based on the ABAG and USGS mapping, the project site is in an area susceptible to strong ground shaking (VII on the Modified Mercalli Intensity scale) from a major earthquake on the San Andreas Fault or Rodgers Creek Fault.

A Geotechnical Investigation (Miller Pacific Engineering Group, 2018) prepared for the project indicates that designing new structures in accordance with the provisions of the most recent version of the California Building Code and appropriate American Water Works Association (AWWA) standards or subsequent codes in effect when final design occurs would mitigate potential damage from strong seismic shaking. NMWD typically strives to comply with the intent of local land use controls and current industry design standards. However, because NMWD projects are exempt from local (Marin County) land use controls per Government Code Section 53091, there would be no permitting mechanism to ensure that the project is designed and constructed according to the California Building Code and appropriate American Water Works Association standards or subsequent codes. This issue is addressed through Mitigation Measure GEOLOGY-1 below.

Impact GEOLOGY-1: Strong seismic shaking could result in potential damage to structures and improvements. (PS)

> *Mitigation Measure GEOLOGY-1: The proposed improvements shall be designed and constructed in accordance with the provisions of the most recent version of the California Building Code and appropriate American Water Works Association (AWWA) standards or subsequent codes in effect when final design occurs.*
>
> *Implementation of Mitigation Measure GEOLOGY-1 would ensure that project impacts related to strong seismic ground shaking would be less than significant. (LTS)*

Liquefaction

Soil liquefaction is a phenomenon primarily associated with saturated soil layers located close to the ground surface. During ground shaking, these soils lose strength and acquire a "mobility" sufficient to permit both horizontal and vertical movements. Soils that are most susceptible to liquefaction are clean,

loose, uniformly graded, saturated, fine-grained sands that lie relatively close to the ground surface. However, loose sands that contain a significant amount of fines (silt and clay) may also liquefy.

The project site is underlain by shallow sandstone bedrock that is not susceptible to liquefaction (Miller Pacific Engineering Group, 2018). Therefore, potential impacts associated with liquefaction would be less than significant.

Lateral Spreading

Lateral spreading is a phenomenon in which surficial soil displaces along a gently sloping ground surface as the result of liquefaction in a subsurface layer. Upon reaching mobilization, the surficial soils are transported downslope or in the direction of a free face by earthquake and gravitational forces. As discussed above, the project site is underlain by shallow sandstone bedrock that is not susceptible to liquefaction. Therefore, potential impacts associated with lateral spreading would be less than significant.

Seismically Induced Settlement

Seismically induced settlement can occur when non-saturated, cohesionless soil is densified by earthquake vibrations. Varying degrees of settlement can occur, resulting in differential settlement of structures founded on such deposits. The Geotechnical Investigation for the project indicates that the planned excavation would likely expose bedrock at the finished surface throughout the building pad for the proposed water tank, and therefore the likelihood of seismically induced settlement is low (Miller Pacific Engineering Group, 2018). Therefore, potential impacts associated with seismically induced settlement would be less than significant.

Landslides

Seismically induced landslides occur as the rapid movement of large masses of soil on unstable slopes during an earthquake. The Geotechnical Investigation for the project indicates that ravines to the west and southeast of the project site are mapped as large, debris flow-type landslides; however, scarps, cracking, or other evidence that would suggest active or recent slope movement or large-scale instability within or around the proposed tank location were not observed during the Geotechnical Investigation. The Geotechnical Investigation also indicates that the planned excavation for the tank pad would remove the weight of the existing rock and soil from the slope, which should help to improve slope stability, and the risk of damage to the proposed water tank due to slope instability is generally low provided that grading of the project site consists of primarily excavation to remove material as is currently planned. The Geotechnical Investigation includes recommendations to mitigate potential slope instability and landslides, including founding the proposed water tank on a level pad that exposes firm bedrock, minimizing the thickness of new fills, keying and benching new fill slopes, constructing new fill slopes no steeper than 2:1 (horizontal:vertical) and new excavation slopes in bedrock no steeper than 1.5:1, installing subsurface drains to reduce the potential for hydrostatic forces behind the fill, and planting new permanent fill slopes with vegetation cover following construction to reduce sloughing and erosion. The Geotechnical Investigation indicates that the actual depth and extent of

keyways, benches, and subdrains should be determined by the Geotechnical Engineer during grading, and that if grading plans are altered to include new fills or reduced excavation depths, the Geotechnical Engineer should be consulted to evaluate potential impacts on slope stability (Miller Pacific Engineering Group, 2018).

Project plans were modified following preparation of the Geotechnical Investigation. Changes to the project plans include construction of the proposed water tank farther to the northwest (which altered the amount of excavation required), modifying the proposed alignment of the access road to follow the ridgeline (which altered excavation/grading plans and would involve the placement of fill), and construction of a staging area near the east end of the proposed access road (which would require the placement of fill). The changes in project plans could result in different slope stability conditions than were analyzed in the Geotechnical Investigation.

Impact GEOLOGY-2: Excavation, grading, and placement of new structural loads and fill could potentially increase slope instability and risk of landslides. (PS)

> *Mitigation Measure GEOLOGY-2: The updated project plans shall be submitted to the Geotechnical Engineer for review to determine whether additional geotechnical investigation and/or modification of geotechnical recommendations would be required to mitigate the potential for slope instability and risk of landslides. The detailed project plans shall be designed in accordance with all geotechnical recommendations. As project plans near completion, the plans and specifications shall be provided to the Geotechnical Engineer for review to confirm that geotechnical recommendations have been incorporated. During construction, the Geotechnical Engineer shall perform observation and testing of geotechnical-related work (e.g., excavation, grading, subsurface drain installations, and fill placement) to confirm that conditions are as anticipated, adjust geotechnical recommendations and design criteria if needed, and confirm that construction is performed in accordance with the project plans and specifications.*
>
> *Implementation of Mitigation Measure GEOLOGY-2 would ensure that the project impacts related to slope stability and landslides would be less than significant. (LTS)*

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant with Mitigation Incorporated

Soil erosion, which is discussed in detail in Section X, Hydrology and Water Quality, could occur during project construction and operation if appropriate erosion control and stormwater control measures are not implemented.

Impact GEOLOGY-3: Soil erosion and loss of top soil could occur during project construction and operation.

> *Mitigation Measure GEOLOGY-3: See Mitigation Measures HYDROLOGY-1. As described in Section X, Hydrology and Water Quality, implementation of Mitigation Measure HYDROLOGY-1, which requires preparation of and implementation of an Erosion and Stormwater Control Plan*

(ESCP) during construction; and periodic inspection and maintenance of erosion and sediment control BMPs during project operation, would reduce the potential impacts related to erosion or the loss of topsoil to a less-than-significant level. (LTS)

c) *Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

Less Than Significant with Mitigation Incorporated

As discussed under Item (a) above, potential impacts related to liquefaction, lateral spreading, and seismically induced settlement would be less than significant, and implementation of Mitigation Measure GEOLOGY-2 would ensure that the project impacts related to slope stability and landslides would be less than significant.

Subsidence

Subsidence or collapse can result from the removal of subsurface water, resulting in either catastrophic or gradual depression of the surface elevation of the project site. Groundwater was not encountered in geotechnical borings that were drilled to depths of 20 to 30 feet below ground surface at the project site (Miller Pacific Engineering Group, 2018); therefore, dewatering is not anticipated to be required and potential impacts related to subsidence or collapse would be less than significant.

Consolidation

Consolidation (or static settlement) of soils is a process by which the soil volume decreases as water is expelled from saturated soils under static loads. As the water moves out from the pore space of the soil, the solid particles realign into a denser configuration that results in settlement. Consolidation typically occurs as a result of new buildings or fill materials being placed over compressible soils.

The Geotechnical Investigation for the project indicates that the planned excavations would expose firm sandstone bedrock, and therefore settlement is not considered a significant hazard and expected settlements of less than 1 inch could occur across the tank diameter based on the anticipated load (Miller Pacific Engineering Group, 2018). Therefore, potential impacts related to consolidation would be less than significant.

d) *Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Less Than Significant Impact

Expansive soils are characterized by the potential for shrinking and swelling as the moisture content of the soil decreases and increases, respectively. Shrink-swell potential is influenced by the amount and type of clay minerals present and can be measured by the percent change of the soil volume.

Expansive soils are capable of exerting significant pressures on building foundations, slabs, and exterior pavement, which can result in cracking and uneven surfaces.

The project site is underlain by a thin layer of sandy soils over sandstone bedrock, which is not expansive (Miller Pacific Engineering Group, 2018). Geotechnical recommendations for placement of fill also indicate that the fill should be non-expansive (Miller Pacific Engineering Group, 2018). Therefore, potential impacts associated with expansive soil would be less than significant.

e) *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?*

No Impact

The project would not include the use of septic tanks or alternative wastewater disposal systems.

f) *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Less Than Significant with Mitigation Incorporated

Paleontological resources include fossilized remains or traces of organisms including plants, vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), and microscopic plants and animals (microfossils), including their imprints, from a previous geological period. Collecting localities and the geologic formations containing those localities are also considered paleontological resources as they represent a limited, non-renewable resource and, once destroyed, cannot be replaced. The Society of Vertebrate Paleontology (SVP) has established guidelines for the identification, assessment, and mitigation of adverse impacts on non-renewable paleontological resources (SVP, 2010). The SVP has helped define the value of paleontological resources and, in particular, states that significant paleontological resources are fossils and fossiliferous deposits consisting of identifiable vertebrate fossils, large or small; uncommon invertebrate, plant, and trace fossils; and other data that provide taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 years) (SVP, 2010).

The project site is underlain by shale and sandstone bedrock of Cretaceous age (Miller Pacific Engineering Group, 2018). The results of a search of paleontological localities in the fossil collections database maintained by the University of California Museum of Paleontology identified no vertebrate, plant, or micro fossil localities and four invertebrate fossil localities in Cretaceous period geologic formations within Marin County (University of California Museum of Paleontology, 2019). Information regarding the types of invertebrate fossil specimens found is not available on the database, and therefore it is not known whether the invertebrate fossils could be uncommon. Therefore, the project site is considered to have a potentially high paleontological sensitivity.

Impact GEOLOGY-4: Paleontological resources on the project site could be encountered and damaged during construction-related excavation and grading. (PS)

Adverse impacts on paleontological resources could occur during excavation into the native soil and bedrock where fossils may be buried and physical destruction of fossils could occur.

Mitigation Measure GEOLOGY-4: Should paleontological resources be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet of the find shall be stopped and a qualified paleontologist shall be contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the discovery is found to be significant and project activities cannot avoid the paleontological resources, adverse effects on paleontological resources shall be mitigated. Mitigation may include monitoring, recording of the fossil locality, data recovery and analysis, preparation of a technical report, and provision of the fossil material and technical report to a paleontological repository, such as the University of California Museum of Paleontology. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the North Marin Water District (NMWD) for review.

NMWD shall inform its contractor(s) of the sensitivity of the project area for paleontological resources and shall include the following directive in the appropriate contract documents:

> *"The subsurface of the construction site may be sensitive for paleontological resources. If paleontological resources are encountered during project subsurface construction, all ground-disturbing activities within 25 feet of the find shall be stopped or redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as animal tracks."*

Implementation of Mitigation Measure GEOLOGY-4 would reduce potential impacts on paleontological resources to a less-than-significant level. (LTS)

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		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII.	GREENHOUSE GAS EMISSIONS. Would the project:				
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b)	Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	■	☐

Climate change refers to change in the Earth's weather patterns, including the rise in temperature due to an increase in heat-trapping greenhouse gases (GHGs) in the atmosphere. An increase of GHGs in the atmosphere affects the energy balance of the Earth and results in a global warming trend. Increases in global average temperatures have been observed since the mid-20th century and have been linked to observed increases in GHG emissions from anthropogenic sources. The primary GHG emissions of concern are carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O). Other GHGs of concern include hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6), but their contribution to climate change is less than 1 percent of the total GHGs that are well-mixed (i.e., that have atmospheric lifetimes long enough to be homogeneously mixed in the troposphere) (Intergovernmental Panel on Climate Change [IPCC], 2013). Each GHG has a different global warming potential (GWP). For instance, CH_4 traps about 21 times more heat per molecule than CO_2. As a result, emissions of GHGs are reported in metric tons of carbon dioxide equivalents (CO_2e), wherein each GHG is weighted by its GWP relative to CO_2.

According to the Intergovernmental Panel on Climate Change (IPCC), the atmospheric concentrations of CO_2, CH_4, and N_2O have increased to levels unprecedented in at least the last 800,000 years due to anthropogenic sources (IPCC, 2013). Some of the potential effects of increased GHG emissions and the associated climate change may include loss in snow pack (affecting water supply), sea level rise, more frequent extreme weather events, more large forest fires, and more drought years. In addition, climate change may increase electricity demand for cooling, decrease the availability of hydroelectric power, and affect regional air quality and public health (Bay Area Air Quality Management District [BAAQMD], 2017a).

In October 2018, the IPCC published a special report on potential long-term climate change impacts based on the projected increases in temperature due to global climate change. The IPCC report found that the Earth is already seeing the consequences of global warming due to a 1 degree Celsius (°C) increase in pre-industrial levels, such as extreme weather, rising sea levels, and diminishing Arctic sea ice. Global warming is likely to reach 1.5°C above pre-industrial levels between 2030 and 2052 if it continues to increase at the current rate. Some of the impacts due to ongoing global warming could be avoided by limiting future global warming to 1.5°C compared to 2°C. For example, by limiting global warming to 1.5°C or lower, the likelihood of an Arctic Ocean free of sea ice in summer would be ten times lower compared to the likelihood under the scenario of a 2°C increase. Beyond the 1.5°C threshold, there would be significant increases in the risk associated with long-lasting or irreversible changes, such as the loss of ecosystems. The IPCC states that in order to limit the global warming to 1.5°C, rapid transitions are needed in land, energy, industry, building, transport, and urban sectors to reach the goal of carbon neutrality by 2050, which means that the Earth's production of GHG emissions each year would be removed completely through carbon offsetting, sequestration, or other means (IPCC, 2018).

In 2006, the California State Legislature passed the California Global Warming Solutions Act (Assembly Bill [AB] 32), which requires the California Air Resources Board (CARB) to develop and implement regulatory and market mechanisms that will reduce GHG emissions to 1990 levels by 2020. In 2016, the State Legislature adopted Senate Bill (SB) 32, which requires further reduction of GHG emissions to 40 percent below the 1990 level by 2030. In addition, Executive Order S-3-05 set a GHG reduction goal of 80 percent below 1990 levels by 2050. In November 2015, Marin County adopted the 2015 Climate Action Plan (CAP) (Marin County, 2015). The CAP outlines a course of action to reduce community-wide GHG emissions to 30 percent below 1990 levels by 2020, and municipal GHG emissions to 15 percent below 1990 levels by 2020. Adopting these targets put Marin County on track to meet the Executive Order S-03-5 statewide target for 2050. The CAP includes 15 local community actions and 8 local municipal actions grouped into the following strategy areas: energy efficiency and renewable energy; land use, transportation, and off-road equipment; vehicle fleet and employee commute; water conservation and wastewater treatment; waste reduction, reuse, and recycling; and agriculture.

The proposed project is located in the San Francisco Bay Area Air Basin (SFBAAB), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). In 2010, the BAAQMD developed and adopted GHG thresholds of significance that were incorporated into the BAAQMD's 2017 CEQA Air Quality Guidelines (BAAQMD, 2017b). The GHG thresholds are designed to help lead agencies in the SFBAAB evaluate potential environmental impacts from GHG emissions for new projects and meet GHG emission reduction goals, such as those contained in AB 32. Therefore, the BAAQMD's thresholds of significance were used in this CEQA analysis.

IMPACT EVALUATION

a) *Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?*

Less Than Significant Impact

The proposed project would generate temporary GHG emissions through construction activities, such as operation of on-site heavy construction equipment and off-site construction vehicle trips, and would generate long-term GHG emissions through project operations related to the direct and indirect use of fossil fuels such as electricity, diesel, and gasoline.

The BAAQMD does not recommend a threshold of significance for GHG emissions during construction because there is not sufficient evidence to determine a level at which temporary construction emissions are significant (BAAQMD, 2009). A construction contractor has no incentive to waste fuel during construction and, therefore, it is generally assumed that GHG emissions during construction would be minimized to the maximum extent feasible. Furthermore, the idling times for off-road construction equipment would be limited to a maximum idling time of 5 minutes, as required by the CARB's Airborne Toxic Control Measure to reduce emissions from diesel-fueled vehicles (Title 13, Section 2485 of California Code of Regulations). Therefore, GHG emissions during project construction would have a less-than-significant impact on the environment.

Operation of the proposed project would generate direct GHG emissions from vehicles traveling to and from the site for inspection and cleaning, and indirect GHG emissions from the electrical tools that may be used for tank maintenance. Because of the infrequent nature of tank inspection and cleaning (Baseline Environmental Consulting, 2019), it is unlikely that operation of the proposed project would generate any substantial amount of GHGs. Furthermore, the proposed water tank is to replace the existing tank that would likely be decommissioned and removed after the construction of the proposed project. Emission-generating activities associated with project operation would be similar in nature and frequency compared to the emission-generated activities associated with the existing water tank. Therefore, the proposed project would result in minimal change, if any, in GHG emissions compared to the existing conditions, and would have a less-than-significant impact on the environment.

b) *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

Less Than Significant Impact

The BAAQMD's thresholds of significance were designed to ensure compliance with the state's AB 32 GHG reduction goals, as set forth in the CARB's Climate Change Scoping Plan (California Air Resources Board, 2017). Since the GHG emissions from the proposed project would have a less-than-significant impact (see Item (a) above), it can be assumed that the project would be consistent, and not in fundamental conflict, with AB 32 GHG reduction goals and the Climate Change Scoping Plan.

The proposed project is an infrastructure improvement project. Therefore, goals, measures, and actions from the Marin County CAP are not applicable to the project. However, the increased tank size under the proposed project was driven by fire flow goals of the Novato Fire District. This is consistent with the climate adaptation option for wildfires in the CAP, which calls for the provision of water resources to put out fires (Marin County, 2015). Therefore, the proposed project would be consistent with the Marin County CAP.

In summary, the project would have a less-than-significant impact related to conflict with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions.

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		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX.	HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
	a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	■	☐	☐
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	■
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	☐	■	☐	☐

IMPACT EVALUATION

g) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less Than Significant Impact

Hazardous materials (e.g., fuel, oils, and paints) would be routinely transported, stored, and used at the project site used during construction activities. Operation of the project would not involve the routine transport, use, or disposal of hazardous materials. The routine transportation, use, and disposal of hazardous materials during construction may pose health and safety hazards to construction workers if the hazardous materials are improperly handled, or to nearby residents and the environment if the hazardous materials are accidentally released into the environment. Potential impacts associated with accidental releases of hazardous materials into the environment are discussed under Item (b) below.

The routine handling and use of hazardous materials by construction workers would be performed in accordance with Occupational Safety and Health Administration (OSHA) regulations, which include training requirements for construction workers and a requirement that hazardous materials are accompanied by manufacturer's Safety Data Sheets (SDSs). California OSHA (Cal/OSHA) regulations include requirements for protective clothing, training, and limits on exposure to hazardous materials. Compliance with these existing regulations would ensure that construction workers are protected from exposure to hazardous materials that may be used on the project site.

Compliance with the existing regulations described above would ensure that potential impacts from the routine transport, use, or disposal of hazardous materials during construction of the proposed project would be less than significant.

b) *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

Less Than Significant with Mitigation Incorporated

An accidental release of hazardous materials (e.g., oils, fuels, solvents, paints) during project construction could result in exposure of construction workers, the public, and/or the environment to hazardous materials.

Impact HAZARDS-1: An accidental release of hazardous materials could occur during project construction. (PS)

As described in detail in Section X, Hydrology and Water Quality, the proposed project would be required to implement Mitigation Measure HYDROLOGY-1, which requires preparation and implementation of an Erosion and Stormwater Control Plan (ESCP), which would reduce the risk of spills or leaks occurring or reaching the environment. The ESCP must include hazardous materials storage requirements. For example, chemicals must be stored in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). The ESCP must also include procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping must be addressed through structural as well as non-structural BMPs. For example, equipment and materials for cleanup of spills must be available on-site, and spills and leaks must be cleaned up immediately and disposed of properly. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

The transportation of hazardous materials must be performed by a licensed hazardous waste hauler and is subject to regulations of the United States Department of Transportation (DOT), federal Resource Conservation and Recovery Act (RCRA), and the State of California. If a discharge or spill of hazardous materials occurs during transportation, the transporter is required to take appropriate immediate action to protect human health and the environment (e.g., notify local authorities and contain the spill), and is responsible for the discharge cleanup.

> *Mitigation Measure HAZARDS-1: Mitigation Measure HYDROLOGY-1 shall be implemented. Combined with compliance with applicable existing regulations, implementation of Mitigation Measure HYDROLOGY-1 would ensure that potential impacts related to accidental releases of hazardous materials would be less than significant. (LTS)*

c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact

The project site is located in a rural area and land uses within a quarter mile of the project site include only a few residential properties; therefore, the project would have no impacts related to hazardous emissions or handling hazardous materials within a quarter mile of an existing or proposed school.

d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact

The project site is located on rural undeveloped land and is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, also known as the "Cortese List" (CalEPA, 2019).

e) *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact

The nearest airports to the project site are the Marin County Airport at Gnoss Field in Novato, approximately 4 miles northeast of the project site, and the San Rafael Airport, approximately 6 miles southeast of the project site. San Rafael Airport is a private use airport (AirNav, 2019) and does not have a land use plan. The project site is not located within the land use plan area for the Marin County Airport at Gnoss Field (Marin County Planning Department, 1991). There are no airports located within 2 miles of the project site. Therefore, the proposed project would have no impacts related to aviation hazards.

f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact

The project would not alter existing roadways in the vicinity of the project site. During construction, no access disruptions would occur on Old Ranch Road and any evacuations along this route would be unencumbered. Therefore, the project would have a less-than-significant impact related to impeding or interfering with emergency response or evacuation plans. The increase in water storage capacity that would result from the project would have a positive impact on emergency response by providing additional water supply for fire suppression.

g) *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?*

Less Than Significant with Mitigation Incorporated

The project site is located in a State Responsibility Area and is identified as a moderate Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection (CAL FIRE, 2007).The project site and adjacent areas include steep terrain that is covered in vegetation and trees and therefore could be susceptible to wildland fires.

Construction of the project would entail use of construction equipment that could generate sparks (e.g., vehicles, saws, mowers, acetylene torches, and welding equipment) and would involve storage and use of flammable materials (e.g., fuel and compressed gasses), which would temporarily increase fire risks. Operation of the project would also involve the use of vegetation management equipment (e.g., mowers, weed whackers, and chainsaws) that could generate sparks and increase fire risks. If vegetation on the project site is not appropriately managed, the project could increase the risk of fire occurring on the project site and spreading from the project site to surrounding areas.

Impact HAZARDS-2: The proposed project could increase the risk of wildfire during construction and operation due to equipment use that could generate sparks. (PS)

Mitigation Measure HAZARDS-2a: Construction contractors shall ensure the following measures are implemented to minimize the potential for accidental ignition of construction materials and vegetation: 1) flammable/combustible materials shall be stored away from vegetated areas; 2) spark arrestors shall be fitted on all construction vehicles and equipment; 3) work that generates sparks, such metal cutting, torching, and welding, shall only be performed in areas where vegetation has been sufficiently cleared and the ground surface has been wetted; and 4) an adequate water source and fire extinguishers shall be available at all times for fire suppression.

Mitigation Measure HAZARDS-2b: The North Marin Water District (NMWD) shall develop a Vegetation Management and Fire Prevention Plan, and shall implement the plan during construction and operation of the project. The Vegetation Management and Fire Prevention Plan shall include, at a minimum, the following measures:

- *Using spark arrestors on all vehicles and equipment used for vegetation management;*
- *Using fire-resistant plants when planting areas for erosion control;*
- *Pruning the lower branches of tall trees;*
- *Clearing out ground-level brush and debris; and*
- *Storing combustible materials away from vegetated areas.*

Implementation of Mitigation Measures HAZARDS-2a and HAZARDS-2b would ensure that the proposed project would result in less-than-significant impacts related to wildfires. (LTS)

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		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	HYDROLOGY AND WATER QUALITY. Would the project:				
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	■	☐	☐
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	■	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
	(i) result in substantial erosion or siltation on- or off-site;	☐	■	☐	☐
	(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	■	☐	☐
	(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	☐	■	☐	☐
	(iv) impede or redirect flood flows?	☐	☐	■	☐
d)	In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?	☐	☐	☐	■
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	■	☐	☐

The southern portion of the project site (south of the proposed access road) is located in a watershed that drains to Arroyo Avichi Creek, which is a tributary to Novato Creek. The northern portion of the project site (north of the proposed access road) is located in a watershed that drains to Warner Creek,

which is also a tributary to Novato Creek (RWQCB, 2017). There is no stormwater drainage infrastructure within the project site or its vicinity; therefore, stormwater runoff from the project site flows overland and either flows through drainage courses into the receiving waters described above, or infiltrates the ground surface.

IMPACT EVALUATION

a) *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?*

Less Than Significant with Mitigation Incorporated

Construction activities related to the proposed project would involve grading of soil, including excavation and placement of fill, which could result in erosion and movement of sediments into creeks, particularly during precipitation events. The potential for chemical releases is present at most construction sites due to the use of paints, fuels, lubricants, and other hazardous materials associated with construction activities. Once released, these hazardous materials could be transported to nearby surface waterways in stormwater runoff, wash water, and dust control water, potentially reducing the quality of the receiving waters. The release of sediments and other pollutants during construction could adversely affect water quality in receiving waters.

Impact HYDROLOGY-1: Project construction activities could result erosion and movement of sediments into creeks and the release of hazardous materials, which can degrade water quality. (PS)

> *Mitigation Measure HYDROLOGY-1: An Erosion and Stormwater Control Plan (ESCP) shall be prepared for the proposed project. The ESCP shall address potential pollutants and their sources, including erosion and exposure of construction materials to runoff, and must include a list of Best Management Practices (BMPs) to reduce the discharge of construction-related stormwater pollutants. The ESCP shall include a detailed description of controls to reduce pollutants and outline periodic maintenance and inspection procedures during construction and operation of the project. Sediment and erosion BMPs shall include, but not be limited to perimeter controls (e.g., straw wattles and silt fences) to prevent sediment from being transported off-site in surface runoff, and establishing and maintaining construction exits to avoid tracking sediment off-site onto adjacent roadways. The ESCP shall define proper building material staging and storage areas, paint and concrete washout areas, proper equipment/vehicle fueling and maintenance practices, and measures to control equipment/vehicle washing and allowable non-stormwater discharges; and shall include a spill prevention and response plan. The ESCP shall require that chemicals be stored in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). The ESCP shall include procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping shall be addressed through structural as well as non-structural BMPs. For example, equipment and materials for cleanup of spills shall be available on-site, and spills and leaks shall be cleaned up immediately and disposed of properly.*

BMPs shall also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (LTS)

The discharge of potable water would be required during construction for testing and flushing of new water pipelines that would connect to the proposed tank, and the discharge of potable water from the proposed tank may also be required for maintenance purposes during operation of the project. Discharges of potable water can result in water quality impacts as the discharged water may contain elevated levels of chlorine, and the discharge of potable water could result in erosion and sedimentation in receiving waters if the discharge is not appropriately controlled. Any discharge of potable water would be performed in accordance with the State Water Resources Control Board (State Water Board) Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States (State Water Board, 2014). This NPDES permit requires implementation of BMPs to treat or control pollutants from potable water discharges, including the following:

- Prevent aquatic toxicity by using dechlorination chemical additions, implementing equivalent proven dechlorination methods, and/or assuring that the chlorine in the discharge dissipates naturally, such that the level of chlorine in the discharge is less than 0.019 milligrams per liter (mg/L) prior to entering a receiving water;
- Prevent riparian erosion and hydromodification by implementing flow dissipation, erosion control, and hydromodification-prevention measures; and
- Minimize sediment discharge, turbidity, and color impacts by implementing sediment, turbidity, erosion, and color control measures.

This NPDES permit requires that the discharger maintain a documented log of all BMPs implemented for its different types of discharges that enter receiving waters, and make it available to State Water Board and RWQCB staff upon request

The project would create slopes of exposed soil and bedrock as a result of excavation and placement of fill, and would also create an unpaved staging area. Post-construction stormwater runoff from the project site could therefore result in erosion and transport of sediments into creeks if appropriate post-construction erosion controls and stormwater control systems are not incorporated into the project design. The project would also result in new impervious surfaces (e.g., the water tank and paved access road), areas of reduced permeability (e.g., areas of exposed bedrock), and subsurface drainage from fill slopes, which would increase the amount of stormwater runoff from the project site compared to existing conditions.

NMWD proposes to control post-construction erosion through hydroseeding of exposed soil slopes, and by installing a storm drain with multiple discharge outlets for energy dissipation. The majority of the access road would be cross-sloped to direct runoff to the adjacent hillsides as sheet flow, which would minimize erosion and allow infiltration of stormwater runoff from new impervious surfaces into surrounding pervious areas. In addition, implementation of Mitigation Measure HYDROLOGY-1 would

ensure that erosion and sediment control BMPS are periodically inspected and maintained throughout the project operation period.

Implementation of Mitigation Measure HYDROLOGY-1 and compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States would ensure that the proposed project would result in less-than-significant impacts on water quality.

b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less Than Significant Impact

The project site is not located within a designated groundwater basin (RWQCB, 2017). The project site is located to the south and east of the Novato Valley Groundwater Basin, which is designated as a "very low priority" groundwater basin under the Sustainable Groundwater Management Act and does not have a sustainable groundwater management plan (California Department of Water Resources, 2019). The project is not anticipated to require dewatering during construction and would not increase the use of groundwater during operation. While the project would increase impervious surface area, which can reduce infiltration and groundwater recharge, stormwater runoff from the project site would be directed to surrounding pervious areas and therefore would still have the opportunity to infiltrate the ground surface and recharge groundwater. Therefore, the project would result in less-than-significant impacts related to decreasing groundwater supplies, interfering with groundwater recharge, or impeding sustainable groundwater management of the basin.

c) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; (iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or (iv) impede or redirect flood flows?*

Less Than Significant with Mitigation Incorporated

The project would not alter the course of a river or stream. The project would create new impervious area and increase runoff as described under Item (a) above.

Erosion or Siltation

Implementation of Mitigation Measure HYDROLOGY-1, which requires implementing an ESCP during project construction and operation, would ensure that the proposed project would result in less-than-significant impacts related to erosion and sedimentation.

Increased Runoff Resulting in Flooding or Exceeding the Capacity of Stormwater Drainage Systems

Stormwater runoff from the project site would be directed to and infiltrate adjacent hillsides. Implementation of Mitigation Measure HYDROLOGY-1, which requires implementing an ESCP during project construction and operation would ensure that stormwater control systems and erosions control BMPS are periodically inspected and monitored to ensure that they are properly functioning and not resulting in erosion from concentrated flows due to increased runoff, therefore, the project would result in less-than-significant impacts related to increased runoff.

Additional Sources of Polluted Runoff

Implementation of Mitigation Measure HYDROLOGY-1, which requires implementing an ESCP during project construction and operation, would ensure that the proposed project would not result in additional sources of polluted runoff.

Impeding or Redirecting Flood Flows

The project site is located in an area of minimal flood hazard (i.e., not within 100-year or 500-year flood hazard zones) as mapped by the Federal Emergency Management Agency (FEMA, 2019), and the project site does not include any drainage courses or low-lying areas that could be susceptible to flooding. Therefore, potential impacts related to impeding or redirecting flood flows would not occur.

d) In flood hazard, tsunami, or seiches zones, would the project risk release of pollutants due to project inundation?

No Impact

The project site is located inland and at an elevation that would ensure it would not be inundated by tsunamis or other coastal flooding hazards (e.g., sea level rise and extreme high tides).

A seiche is the oscillation of a body of water. Seiches occur most frequently in enclosed or semi-enclosed basins such as lakes, bays, or harbors. They can be triggered in an otherwise still body of water by strong winds, changes in atmospheric pressure, earthquakes, tsunamis, or tides. There are no bodies of water near the project site that could result in inundation of the project site due to a seiche.

As discussed under Item (c) above, the project site is located in an area of minimal flood hazard (i.e., not within 100-year or 500-year flood hazard zones) as mapped by FEMA (FEMA, 2019). The project site does not include any drainage courses or low-lying areas that could be susceptible to flooding. Therefore, potential impacts related to the release of pollutants during flooding inundation would not occur.

e) *Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

Less Than Significant with Mitigation Incorporated

As discussed under Item (b) above, the project site is not located within a designated groundwater basin (RWQCB, 2017). The project site is located to the south and east of the Novato Valley Groundwater Basin, which is designated as a "very low priority" groundwater basin under the Sustainable Groundwater Management Act and does not have a sustainable groundwater management plan (California Department of Water Resources, 2019). Therefore, the project would not conflict with or obstruct a sustainable groundwater management plan.

The applicable water quality control plan for the project site is the RWQCB's San Francisco Bay Basin Water Quality Control Plan (Basin Plan) (RWQCB, 2017). As discussed above, stormwater runoff from the project site drains to Novato Creek through Arroyo Avichi Creek (runoff south of the proposed access road) and Warner Creek (runoff north of the proposed access road). The Basin Plan identifies Arroyo Avichi Creek, Warner Creek, and Novato Creek as water bodies with beneficial uses of cold and warm water habitat, rare and endangered species habitat, wildlife habitat, and water contact and non-contact recreation. Novato Creek also has beneficial uses of municipal and domestic water supply, commercial fishing, and fish migration and spawning, and Warner Creek also has beneficial use fish migration (RWQCB, 2017). Compliance with existing regulations and implementation of Mitigation Measures HYDROLOGY-1, as described under Item (a) above, would ensure that the project would not result in significant impacts on water quality that could conflict with the water quality goals and beneficial uses of water bodies established in the Basin Plan. Therefore, the proposed project would result in less-than-significant impacts related to conflicting with or obstructing implementation of a water quality control plan.

REFERENCES

California Department of Water Resources, 2019. SGMA Data Viewer, Available at: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer, accessed on August 22, 2019.

Federal Emergency Management Agency (FEMA), 2019. National Flood Hazard Layer Viewer, Map Number 06041C0278D, effective May 4, 2009, Available at: https://www.fema.gov/national-flood-hazard-layer-nfhl, accessed on August 22, 2019.

Miller Pacific Engineering Group, 2018. Geotechnical Investigation, North Marin Water District, Old Ranch Road Tank, Novato, California, May 18.

San Francisco Regional Water Quality Control Board (RWQCB), 2017. San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan). Incorporating all amendments as of May 4.

State Water Resources Control Board (State Water Board), 2014. Order WQ 2014-0194-DWQ General Order No. CAG140001 Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Drinking Water System Discharges to Waters of the United States.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	LAND USE AND PLANNING. Would the project:				
	a) Physically divide an established community?	☐	☐	☐	■
	b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■

IMPACT EVALUATION

a) Would the project physically divide an established community?

No Impact

The project would be constructed in an undeveloped area outside the western boundary of the City of Novato in lands that are within the jurisdiction of Marin County. The site is heavily vegetated with sloping hills nearby. Very low density residential development is located on lots near the site. The project would not divide an established community.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact

The General Plan designations are Agriculture (AG2) and Conservation (CON) for Assessor's Parcel Number (APN) 146-310-05, and Planned Residential (PR) and Very Low Density Residential (RVL) for APN 146-310-44. The General Plan designation for the existing NMWD parcel (APN 146-310-23) is Open Space/RVL. The zoning is Agriculture and Conservation (A10) for APN 146-310-05 and Residential, Multiple Planned (RMP-0.5) for APN 146-310-44. The zoning designation for the NMWD parcel is Open Area. The RVL designation generally requires lot sizes of 5 to 60 acres, and the PR designation requires lot sizes of 20,000 square feet to 10 acres (Marin County, 2007). Water tanks would be allowed within these General Plan designations. As a water district, NMWD is exempt from local land use controls of Marin County per Government Code Section 53091.

The *Marin Countywide Plan* addresses the need for services and facilities such as that proposed by the project. The following is a relevant implementing program from the *Marin Countywide Plan* (Marin County, 2007):

> *Implementing Program PFS-1.b: Plan for Service Expansion. Work with LAFCO, cities and towns, and special districts to ensure that necessary public facilities and adequate water supply are in place prior to occupancy of new development and funded at levels that reflect their true short- and long-terms costs.*

The project would have no impact related to conflict with a land use plan, policy, or regulation.

REFERENCES

Marin County, 2007. *Marin Countywide Plan*, adopted November 6.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII.	MINERAL RESOURCES. Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	☐	☐	☐	■
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?*

No Impact

No known mineral resources have been identified at the project site; therefore, no loss of such resources would occur (Marin County Community Development Agency, 2005).

b) *Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

No Impact

Refer to Item (a) above.

REFERENCES

Marin County Community Development Agency, 2005. *Geology, Mineral Resources and Hazardous Material Technical Background Report.* Originally published in 2002 and updated in November 2005.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII.	NOISE. Would the project result in:				
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	■	☐	☐
b)	Generation of excessive ground borne vibration or ground borne noise levels?	☐	☐	■	☐
c)	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, exposure of people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

Noise Concepts and Terminology

Noise is commonly defined as unwanted sound that annoys or disturbs people and can have an adverse psychological or physiological effect on human health. Sound is measured in decibels (dB), which is a logarithmic scale. Decibels describe the purely physical intensity of sound based on changes in air pressure, but they cannot accurately describe sound as perceived by the human ear since the human ear is only capable of hearing sound within a limited frequency range. For this reason, a frequency-dependent weighting system is used and monitoring results are reported in A-weighted decibels (dBA). Technical terms used to describe noise are defined in **Table 6**.

It should be noted that because decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. For instance, if one noise source emits a sound level of 90 dBA, and a second source is placed beside the first and also emits a sound level of 90 dBA, the combined sound level is 93 dBA, not 180 dBA. When the difference between two co-located sources of noise is 10 dBA or more, the higher noise source dominates and the lower noise source makes no perceptible difference in what people can hear or measure. For example, if the noise level is 95 dBA, and another noise source is added that produces 80 dBA noise, the noise level will still be 95 dBA.

In an unconfined space, such as outdoors, noise attenuates with distance according to the inverse square law. Noise levels at a known distance from point sources are reduced by 6 dBA for every doubling of that distance for hard surfaces such as cement or asphalt surfaces, and 7.5 dBA for every doubling of distance for soft surfaces such as undeveloped or vegetative surfaces (Caltrans, 1998). Noise levels at a known distance from line sources (e.g., roads, highways, and railroads) are reduced by 3 dBA for every doubling of the distance for hard surfaces and 4.5 dBA for every doubling of distance for soft surfaces (Caltrans, 1998). A greater decrease in noise levels can result from the presence of intervening structures or buffers.

TABLE 6 DEFINITION OF ACOUSTICAL TERMS

Term	Definition
Decibel (dB)	A unit describing the amplitude of sound on a logarithmic scale. Sound described in decibels is usually referred to as sound or noise "level." This unit is not used in this analysis because it includes frequencies that the human ear cannot detect.
Vibration Decibel (VdB)	A unit describing the amplitude of vibration on a logarithmic scale.
A-Weighted Sound Level (dBA)	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels noted in this analysis are A-weighted.
Equivalent Noise Level (L_{eq})	The average A-weighted noise level during the measurement period. For this CEQA evaluation, L_{eq} refers to a 1-hour period unless otherwise stated.
Day/Night Noise Level (L_{dn})	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured during the night between 10:00 PM and 7:00 AM.
Maximum Sound Level (L_{max})	The maximum A-weighted sound level measured by the sound level meter over a given period of time.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Peak Particle Velocity (PPV)	The maximum instantaneous peak of a vibration signal.
Root Mean Square (RMS) Velocity	The average of the squared amplitude of a vibration signal.

Source: Charles M. Salter Associates Inc., 1998. Federal Transit Administration, 2018.

A typical method for determining a person's subjective reaction to a new noise is by comparing it to existing conditions. The following describes the general effects of noise on people (Charles M. Salter Associates Inc., 1998):

- A change of 1 dBA cannot typically be perceived, except in carefully controlled laboratory experiments;
- A 3-dBA change is considered a just-perceivable difference;
- A minimum of a 5-dBA change is required before any noticeable change in community response is expected; and
- A 10-dBA change is subjectively perceived as approximately a doubling (or halving) in loudness.

Groundborne Vibration Concepts and Terminology

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Several different methods are used to quantify vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors to vibration include structures (especially older masonry structures), people (especially residents, the elderly, and the sick), and vibration-sensitive equipment. As defined in Table 6, vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal. PPV is appropriate for evaluating potential

damage to buildings, but it is not suitable for evaluating human response to vibration because it takes the human body time to respond to vibration signals. The response of the human body to vibration is dependent on the average amplitude of a vibration. The RMS of a signal is the average of the squared amplitude of the signal and is more appropriate for evaluating human response to vibration. PPV and RMS are normally described in units of inches per second (in/sec), and RMS is also often described in vibration decibels (VdB).

IMPACT EVALUATION

a) *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

Less Than Significant with Mitigation Incorporated

During operation, the proposed project would involve inspection once a week and tank cleaning every five years. Because operation of the proposed project would not involve many noise-generating activities and because of the infrequency of these operational activities, operation of the proposed project would not result in generation of a substantial permanent increase in ambient noise levels.

During construction, the proposed project would involve the use of heavy construction equipment for clearing, grubbing, site/road preparation, foundation, and tank construction, which would temporarily increase noise levels in the vicinity of the project site. Noise impacts related to temporary noise generated by the operation of heavy construction equipment are discussed below.

Exposure of Construction Workers to Noise

Construction workers could be exposed to excessive noise from the heavy equipment used during construction of the proposed project. Noise exposure of construction workers is regulated by the California Occupational Safety and Health Administration (Cal/OSHA). Title 8, Subchapter 7, Group 15, Article 105 of the California Code of Regulations (Control of Noise Exposure) sets noise exposure limits for workers and requires employers that have workers who may be exposed to noise levels above these limits to establish a hearing conservation program, make hearing protectors available, and keep records of employee noise exposure measurements. The Cal/OSHA also requires backup warning alarms that activate immediately upon reverse movement on all vehicles that have a haulage capacity of 2.5 cubic yards or more (Title 8, California Code of Regulations). The backup alarms must be audible above the surrounding ambient noise level at a distance of 200 feet. In order to meet this requirement, backup alarms are often designed to emit a sound as loud as 82 to 107 dBA Lmax at 4 feet (NCHRP, 1999). The construction contractor for the proposed project would be subject to these regulations, and compliance with Cal/OSHA regulations would ensure that the potential for construction workers to be exposed to excessive noise would be less than significant.

Exposure of Noise-Sensitive Receptors to Construction Noise

Noise-sensitive receptors are defined as land uses where noise-sensitive people may be present or where noise-sensitive activities may occur. As specified in the *Marin Countywide Plan* (Marin County, 2007), noise-sensitive receptors include residential land uses. Single-family homes are located near the project site. The nearest noise-sensitive receptors to the project site include 1) a single-family home located 160 feet southwest of the project site, 2) a single-family home located 180 feet southeast of the project site, and 3) a single-family home located 300 feet east of the project site.

The project site is located on undeveloped lands that include little to no noise-generating activities, and therefore the existing ambient noise levels are low. The primary noise source in the vicinity of the project site is traffic noise on Old Ranch Road. The *Marin Countywide Plan* includes noise measurements results from 2005. Ambient noise level at the nearest measurement location to the project site (Novato Boulevard near Stafford Lake, approximately 3 miles from the project site) was 65 dBA L_{dn} in 2005. Because this location has a similar land use as the project site (recreational and residential) and because land use in the vicinity of the project site has not changed much since 2005, the 2005 noise measurement at this location is considered representative of the ambient noise level at the project site.

Table 7 shows typical noise levels associated with various types of construction equipment that may be used at the project site. To evaluate potential construction noise impacts associated with the proposed project, this analysis quantified the noise levels that would result from the simultaneous operation of the two noisiest pieces of equipment expected to be used during each construction phase (this is a standard analytical approach used in acoustical analysis to estimate construction noise associated with proposed projects) (Federal Transit Administration, 2018). The addition of the two noisiest pieces of equipment is presented in **Table 8** to characterize the noise impact from the proposed project at the nearest noise-sensitive receptors in the vicinity of the project site.

Based on the construction noise estimates presented in Table 8, the nearest noise-sensitive receptors could be subject to noise levels of up to 75 dBA, 74 dBA, and 69 dBA, depending on distance from the project site. At the closest noise-sensitive receptor location, construction noise could be 10 dBA higher than the ambient noise levels (approximately 65 dBA L_{dn}), which is subjectively perceived as approximately a doubling in loudness.

According to Marin County Code Section 6.70.030, Enumerated Noises, loud noise-generating construction-related equipment (e.g., backhoes, generators, jackhammers) can be maintained, operated, or serviced at a construction site for permits administered by the Marin County Community Development Agency from 8:00 AM to 5:00 PM. Monday through Friday only. The Marin County Code does not specify any quantitative standards for construction noise. The potential temporary noise impacts of construction activities would be mitigated in part by the project's compliance with the limitations on construction hours specified in the Marin County Code.

TABLE 7 TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT (dBA)

Phase	Equipment	Amount	Noise Level at 50 Feet
Clearing	Aerial Lifts	3	85
	Crawler Tractors	1	84
	Dumpers/Tenders	2	84
	Excavators	2	85
	Rubber Tired Loaders	1	80
	Skid Steer Loaders	1	80
	Tractors/Loaders/Backhoe	1	80
Grubbing	Crawler Tractors	1	84
	Dumpers/Tenders	2	84
	Excavators	2	85
	Rubber Tired Loaders	1	80
	Skid Steer Loaders	1	80
	Tractors/Loaders/Backhoe	1	80
Site/Road Preparation	Crawler Tractors	1	84
	Dumpers/Tenders	2	84
	Excavators	1	85
	Graders	1	85
	Pavers	1	85
	Rollers	2	85
	Scrapers	1	85
	Skid Steer Loaders	1	80
	Tractors/Loaders/Backhoe	1	80
Foundation	Air Compressor	1	80
	Cement and Mortar Mixers	1	85
	Dumpers/Tenders	1	84
	Excavators	1	85
	Forklift	1	NA
	Tractors/Loaders/Backhoe	1	84
	Trenchers	1	84

TABLE 7 TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT (DBA)

Phase	Equipment	Amount	Noise Level at 50 Feet
Tank Construction	Aerial Lifts	2	85
	Cranes	1	85
	Dumpers/Tenders	1	84
	Forklift	1	NA
	Generator Sets	1	82
	Pressure Washers	1	85
	Rollers	1	85
	Rough Terrain Forklifts	1	85
	Tractors/Loaders/Backhoe	1	84
	Welders	4	73

Notes: NA = Not available.
Forklifts are not considered heavy construction equipment and therefore their noise levels are not available.
Sources: U.S. Department of Transportation (DOT), 2006. The types of construction equipment are based on the California Emissions Estimator Model (CalEEMod) equipment list.

TABLE 8 CALCULATED NOISE LEVELS AT NEAREST NOISE-SENSITIVE RECEPTORS FOR TWO NOISIEST PIECES OF EQUIPMENT FROM EACH PROJECT CONSTRUCTION PHASE (DBA)

Phase	At 160 Feet from Project Site	At 180 Feet from Project Site	At 300 Feet from Project Site
Clearing	75	74	69
Grubbing	75	74	69
Site/Road Preparation	75	74	69
Foundation	75	74	69
Tank Construction	75	74	69

Notes: According to Table 7, the two noisiest pieces of equipment during each construction phase are 1) two of the following: three aerial lifts and two excavators (clearing); 2) two excavators (grubbing); 3) two of the following: one excavator, one grader, one paver, two rollers, or one scraper (site/road preparation); 4) one cement and mortar mixer and one excavator (foundation); and 5) two of the following: two aerial lifts, one crane, one pressure washer, one roller, or one rough terrain forklift (tank construction).

In addition, the *Marin Countywide Plan* includes the following goal, policy, and implementing program that are applicable to the proposed project:

> *Goal NO-1: Protection from Excessive Noise. Ensure that new land uses, transportation activities, and construction do not create noise levels that impair human health or quality of life.*
>
> *Policy NO-1.3: Regulate Noise Generating Activities. Require measures to minimize noise exposure to neighboring properties, open space, and wildlife habitat from construction-related activities, yard maintenance equipment, and other noise sources, such as amplified music.*
>
> *Program NO-1.i: Regulate Noise Sources. Sections 6.70.030(5) and 6.70.040 of the Marin County Code establish allowable hours of operation for construction-related activities. As a condition of permit approval for projects generating significant construction noise impacts during the construction phase, construction management for any project shall develop a construction noise reduction plan and designate a disturbance coordinator at the construction site to implement the provisions of the plan.*

As a water district, NMWD is exempt from local land use controls of Marin County per Government Code Section 53091. However, NMWD typically strives to comply with the intent of these local land use controls.

Impact NOISE-1: Project construction could result in significant increases in ambient noise levels. (PS)

> *Mitigation Measure NOISE-1a: Construction equipment operation shall be limited to the hours of Monday through Friday from 8:00 AM to 5:00 PM. No exception to the above limitations shall be allowed.*
>
> *Mitigation Measure NOISE-1b: The North Marin Water District (NMWD) shall implement measures to reduce noise impacts due to construction. Noise reduction measures shall include, but not be limited to, the following:*
>
> *a) Equipment and trucks used for project construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds), wherever feasible.*
>
> *b) Noisy operations shall be combined to occur in the same time period, if possible. The total noise level produced shall not be significantly greater than the level produced if the operations were performed separately.*
>
> *c) Stationary noise sources shall be located as far from adjacent properties as possible.*
>
> *Mitigation Measure NOISE-1c: NMWD shall develop a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:*
>
> *a) Designation of an on-site construction complaint and enforcement manager for the project;*

b) Protocols specific to receptors for receiving, responding to, and tracking received complaints; and

c) Maintenance of a complaint log that records received complaints and how complaints were addressed.

Compliance with Mitigation Measures NOISE-1a through NOISE-1c would reduce the adverse impacts associated with construction noise to a less-than-significant level. (LTS)

b) Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

Less Than Significant Impact

The *Marin Countywide Plan* does not provide a definition for vibration-sensitive receptors. According to the Federal Transit Administration (Federal Transit Administration, 2018), the nearby single-family homes are classified as "Category 2, Residential," which includes all residential land uses and buildings where people normally sleep. Therefore, the nearby homes are considered vibration-sensitive.

In addition, in some cases extreme vibration can cause minor cosmetic or substantial building damage. Potential vibration effects related to cosmetic or substantial building damage could also occur at the nearby homes.

Consistent with guidance from the Federal Transit Administration (FTA), vibration impacts from the proposed project would be considered potentially significant if they would exceed the FTA's recommended vibration thresholds to prevent disturbance to people from "Occasional Events" (see **Table 9**) or damage to buildings (see **Table 10**). Specifically, in this analysis, vibration would be considered a potentially significant impact if it would exceed the following thresholds: 75 VdB at nearby homes where people normally sleep, or 0.3 in/sec PPV for potential cosmetic damage at nearby homes.

TABLE 9 VIBRATION CRITERIA TO PREVENT DISTURBANCE – RMS (VDB)

Land Use Category	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Buildings where vibration would interfere with interior operations	65	65	65
Residences and buildings where people normally sleep	72	75	80
Institutional land uses with primarily daytime use	75	78	83

Notes: RMS = root mean square; VdB = vibration decibels
[a] More than 70 vibration events of the same kind per day or vibration generated by a long freight train.
[b] Between 30 and 70 vibration events of the same kind per day.
[c] Fewer than 30 vibration events of the same kind per day.
Source: Federal Transit Administration, 2018.

TABLE 10 VIBRATION CRITERIA TO PREVENT DAMAGE TO STRUCTURES – PPV (IN/SEC)

Building Category	Peak Particle Velocity
Reinforced-concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Notes: PPV = peak particle velocity; in/sec = inches per second
Source: Federal Transit Administration, 2018.

Construction activities associated with the proposed project would result in varying degrees of groundborne vibration, depending on the equipment type, activity, and soil conditions. Published reference vibration levels for construction equipment that could be used at the project site are presented in **Table 11**. Table 11 also presents the buffer distance that would be required to reduce vibration levels to below the 75-VdB threshold for single-family homes and the 0.3-in/sec PPV threshold for potential cosmetic damage to occur at the nearby homes. The impacts associated with vibration disturbance and vibration damage are discussed in detail below.

TABLE 11 REFERENCE VIBRATION LEVELS AND BUFFER DISTANCES FOR CONSTRUCTION EQUIPMENT

			Buffer Distances for Vibration Disturbance (Feet)	Buffer Distances for Vibration Damage (Feet)
Equipment	RMS at 25 Feet (VdB)[a]	PPV at 25 Feet (In/Sec)[b]	Single-Family Homes (75 VdB Threshold)	Single-Family Homes (0.3 in/sec PPV Threshold)
Vibratory Roller	94	0.210	107	18
Large Bulldozer	87	0.089	63	8.3
Loaded Trucks	86	0.076	58	7.2
Small Bulldozer	58	0.003	7	0.4

Notes: Receptors within the buffer distance could be affected by construction-generated vibration.
Buffer distances are calculated based on the following equations:

PPV2 = PPV1 x (D1/D2)^1.1

Where:

PPV1 is the reference vibration level at the reference distance (25 feet), and PPV2 is the calculated vibration level (in this case 0.3 in/sec).
D1 is the reference distance (in this case 25 feet), and D2 is the distance from the equipment to the receiver (in this case the buffer distance).

RMS2 = RMS1 – 30 Log10 (D2/D1)

Where:

RMS1 is the reference vibration level at the reference distance (25 feet), and RMS2 is the calculated vibration level (in this case 75 VdB).
D1 is the reference distance (in this case 25 feet), and D2 is the distance from the equipment to the receiver (in this case the buffer distance).

[a] RMS = root mean square, VdB = vibration decibel.
[b] PPV = peak particle velocity, in/sec = inches per second.
Source of Equation: Federal Transit Administration, 2018; California Department of Transportation (Caltrans), 2013.

The closest single-family home is located 160 feet southwest of the project site. Based on the buffer distances presented in Table 11, the closest single-family home is located outside of the buffer distance of 107 feet and therefore would not be exposed to vibration levels that exceed the 75-VdB disturbance threshold. The closest single-family home is also located outside of the buffer distance of 18 feet and therefore would not be exposed to vibration levels that exceed the 0.3-in/sec damage threshold. Therefore, the potential for the proposed project to result in generation of excessive ground borne vibration would be less than significant.

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

No Impact

The proposed project would not introduce new residents or users to the project site. Therefore, the proposed project would not expose people in the project area to excessive noise from any public use airport or private airstrip.

REFERENCES

California Code of Regulations, Title 8, Subchapter 7, Group 15, Article 105.

California Department of Transportation (Caltrans), 1998. Technical Noise Supplement-A Technical Supplement to the Traffic Noise Analysis Protocol.

California Department of Transportation (Caltrans), 2013. Transportation and Construction Vibration Guidance Manual. September.

Charles M. Salter Associates Inc., 1998. *Acoustics – Architecture, Engineering, the Environment.*

Federal Transit Administration, 2018. Transit Noise and Vibration Impact Assessment Manual, FTA Report No.0123, September.

Marin County, 2007. Marin Countywide Plan. Adopted November 6.

Marin County Code, Section 6.70.030.

National Cooperative Highway Research Program (NCHRP), 1999. Mitigation of Nighttime Construction Noise, Vibrations, and Other Nuisances. NCHRP Synthesis 218.

U.S. Department of Transportation (DOT), 2006. FHWA Highway Construction Noise Handbook.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV.	POPULATION AND HOUSING. Would the project:				
	a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	■
	b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

No Impact

The new replacement water tank would not result in substantial unplanned population growth. While the capacity of the new tank would be greater than the existing redwood tank that would likely be decommissioned, the increased capacity would primarily cover firefighting needs. No growth would occur from the new access road as this would only serve the tank site.

b) *Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

No Impact

No people or housing would be displaced by the project.

REFERENCES

Project description information.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	■
Police protection?	☐	☐	☐	■
Schools?	☐	☐	☐	■
Parks?	☐	☐	☐	■
Other public facilities?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: Fire protection, police protection, schools, parks, other public facilities?*

No Impact

The new replacement water tank would not affect fire protection, police, schools, parks, or other public facilities. The project would improve firefighting capability for this area of Novato and Marin County, given the increased capacity provided by the new replacement tank.

REFERENCES

Project description information.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI.	RECREATION.				
a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

IMPACT EVALUATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact

No increased recreational or park use would occur in association with the project.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact

The project does not include recreational facilities or have associated requirements for recreational facilities.

REFERENCES

Project description information.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII.	TRANSPORTATION. Would the project:				
a)	Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☐	☐	■
b)	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?	☐	☐	☐	■

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	■
d)	Result in inadequate emergency access?	☐	☐	☐	■

IMPACT EVALUATION

a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

No Impact

The proposed project would have no impact on transportation related to increased transit, roadway, bicycle, or pedestrian use.

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b)?

No Impact

Section 15063.3, Subdivision (b) of the CEQA Guidelines addresses evaluation of a project's transportation impacts. The proposed project, a replacement water tank, would have no transportation impacts other than during construction when construction vehicles would be using local roads for access to the site and for construction of the new access road and new tank. During project operation, a minor number of vehicle trips would occur to and from the site for maintenance of the water tank. Addressing potential vehicle miles traveled would not be relevant for the proposed project.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact

The new access road to the project site has been designed to minimize any hazards for vehicles entering and exiting the project site. A locked gate would limit access to the site to NMWD employees. Sight distance would be maintained so that vehicles entering and exiting the site on the access road would have adequate visibility of cars using Old Ranch Road. A turnaround area would also be included near the existing redwood water tank (see Figure 2).

d) Would the project result in inadequate emergency access?

No Impact

The new access road to the new replacement tank would allow adequate emergency access for fire personnel.

REFERENCES

Project description information.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES. Would the project:				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or,	☐	☐	■	☐
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	■	☐

IMPACT EVALUATION

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); or ii) A resource determined by the lead agency, in its discretion and supported by

substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

Less Than Significant Impact

Background

Assembly Bill (AB) 52, which became law on January 1, 2015, provides for consultation with California Native American tribes during the CEQA environmental review process and equates significant impacts on "tribal cultural resources" with significant environmental impacts.

The consultation provisions of the law require that a public agency consult with local Native American tribes that have requested placement on that agency's notification list for CEQA projects. Within 14 days of determining that a project application is complete, or a decision by a public agency to undertake a project, the lead agency must notify tribes of the opportunity to consult on the project, should a tribe have previously requested to be on the agency's notification list. California Native American tribes must be recognized by the Native American Heritage Commission (NAHC) as traditionally and culturally affiliated with the project site and must have previously requested that the lead agency notify them of projects. Tribes have 30 days following notification of a project to request consultation with the lead agency.

The purpose of consultation is to inform the lead agency in its identification and determination of the significance of tribal cultural resources. If a project is determined to result in a significant impact on an identified tribal cultural resource, the consultation process must occur and conclude prior to adoption of a Negative Declaration or Mitigated Negative Declaration, or certification of an Environmental Impact Report (Public Resources Code Sections 21080.3.1, 21080.3.2, and 21082.3).

Tribal Outreach

NAHC in West Sacramento was contacted to review its Sacred Lands File to identify registered, Native American sacred sites in or near the project site. Andrew Green, NAHC Staff Services Analyst, stated in a letter as follows: "A record search of the Native American Heritage Commission Sacred Lands File was completed for the information you have submitted for the above referenced project. The results were positive. Please contact the Federated Indians of Graton Rancheria on the attached list for more information."

The Federated Indians of Graton Rancheria (FIGR) has not requested, in writing, that NMWD inform them of its projects that are subject to CEQA, consistent with California Public Resources Code Section 21080.3.1. As a result, NMWD is not required to consult with FIGR for this project.

No pre-contact archaeological deposits or Native American human remains have been identified at or near the project site. Furthermore, although the NAHC Sacred Lands File search was "positive," the NAHC database is not necessarily site-specific. In other words, while the Sacred Lands File search indicates that a FIGR sacred site is reported in the vicinity, that sacred site is not necessarily at the

project site. Several Native American sites and human remains are reported in Indian Valley, and it is possible that the "positive" result refers to these more distant resources.

For the reasons stated above, NMWD has determined that the project site is of low sensitivity for tribal cultural resources. The project would have a less-than-significant impact on reported tribal cultural resources that are in the vicinity.

REFERENCES

Native American Heritage Commission, 2019. *North Marin Water District New Tank Project, Marin County*, August 14.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	■	☐	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	☐	☐	■	☐
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☐	■
e) Comply with federal, State, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*

Less Than Significant with Mitigation Incorporated

The project itself is a replacement of a nearby water tank that was constructed in 1963 and is reaching the end of its life. This Initial Study addresses potential impacts for a variety of topics, and mitigation

measures have been identified for potentially significant impacts. Refer to other sections of this Initial Study (e.g., cultural resources, hazards, etc.).

b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?*

Less Than Significant Impact

The project itself is a water supply and storage project and adequate water is available to serve the community served by this new water tank.

c) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

No Impact

No wastewater impacts are associated with the new replacement water tank.

d) *Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

No Impact

No major solid waste generation would be associated with the replacement water tank other than general construction debris, which would be minor. Every five years, the tank cleaning may generate a small amount of solid waste.

e) *Would the project comply with federal, State, and local management and reduction statutes and regulations related to solid waste?*

No Impact

NMWD would comply with any regulations related to solid waste as associated with construction debris and tank cleaning.

REFERENCES

Project description information.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XX.	WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
	a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
	b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	■	☐	☐
	c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	■
	d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	■

IMPACT EVALUATION

a) *Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*

Less Than Significant Impact

The project would be constructed on an undeveloped site with a new access road connecting to Old Ranch Road. During construction, no access disruptions would occur on Old Ranch Road and any evacuations along this route would be unencumbered.

b) *Due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*

Less Than Significant with Mitigation Incorporated

As addressed in the Section IX, Hazards and Hazardous Materials, of this Initial Study, the project site is located in a State Responsibility Area and is identified as a moderate Fire Hazard Severity Zone as mapped by the California Department of Forestry and Fire Protection. The project site and adjacent areas include steep terrain that is covered in vegetation and trees and therefore could be susceptible to wildland fires.

Construction of the project would entail use of construction equipment that could generate sparks (e.g., vehicles, saws, mowers, acetylene torches, and welding equipment) and would involve storage and use of flammable materials (e.g., fuel and compressed gasses), which would temporarily increase

fire risks. Operation of the project would also involve the use of vegetation management equipment (e.g., mowers, weed whackers, and chainsaws) that could generate sparks and increase fire risks. If vegetation on the project site is not appropriately managed, the project could increase the risk of fire occurring on the project site and spreading from the project site to surrounding areas.

Impact WILDFIRE-1: The proposed project could increase the risk of wildfire. (PS)

Mitigation Measure WILDFIRE-1: Mitigation Measures HAZARDS-2a and HAZARDS-2b shall be implemented. (LTS)

c) *Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

No Impact

The project would require the installation of an access road connecting to Old Ranch Road. However, construction of this road would not exacerbate fire risk. Conversely, the new access road would provide new access for fire trucks in an emergency. No new overhead electrical lines or other utilities that could exacerbate fire risk would be constructed.

d) *Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

No Impact

The project would not expose people or structures to significant post-wildfire risks. The new tank would be constructed of welded steel and would be located on a level portion of the hillside. Post-fire impacts such as slope instability or landslides would not result from the project.

REFERENCES

Project description information.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI.	MANDATORY FINDINGS OF SIGNIFICANCE.				
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	■	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	■	☐	☐

IMPACT EVALUATION

a) *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?*

Less Than Significant with Mitigation Incorporated

No significant impacts would occur with implementation of the mitigation measures identified in this Initial Study. Potentially significant impacts on plants and wildlife would be limited to possible inadvertent loss of bird nests, which would be mitigated through measures identified in Section IV, Biological Resources, above. Potentially significant impacts on archaeological and historical resources (i.e., as-yet unidentified archaeological deposits) would be mitigated through measures identified in Section V, Cultural Resources, above.

b) *Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)*

Less Than Significant Impact

The only other project in the vicinity of the project is a proposed Marin County Design Review approval of a residential addition/accessory structure located at 1650 Indian Valley Road, about 0.8 mile northeast of the project site (Marin County, 2019). This project entails a 502-square-foot addition to the rear of an existing structure. Given the distance of this other project from the water tank site, and the type of impacts identified for the project, no cumulatively significant cumulative effects are expected.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Less Than Significant with Mitigation Incorporated

Any potential impacts of the project are able to be mitigated to less than significant and would not cause substantial adverse effects on human beings, either directly or indirectly. Refer to Appendix A for a list of all identified mitigation measures, which would be adopted as part of the Initial Study/Mitigated Negative Declaration.

REFERENCES

Marin County, 2019. Community Development Agency. Available at: https://www.marincounty.org/depts/cd/divisions/planning/projects/novato/claves_trust_dr_up_p2309_no; accessed on August 19, 2019.

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APPENDIX A
MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
AIR QUALITY						
AIR-1: During project construction, the contractor shall implement a dust control program that includes the following measures recommended by the Bay Area Air Quality Management District (BAAQMD): ▪ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. ▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered. ▪ Track-out control mats shall be used to contain and minimize mud and dirt track-out onto adjacent public roads. Any remaining visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers, if necessary. The use of dry power sweeping is prohibited. ▪ All vehicle speeds on unpaved roads shall be limited to 15 miles per hour. ▪ All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. ▪ A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD phone number shall also be visible to ensure compliance with applicable regulations. In addition, North Marin Water District (NMWD) staff or an independent construction monitor shall conduct periodic site inspections, but in no event fewer than four total inspections, during the course of construction to ensure these mitigation measures are implemented and shall issue a letter report documenting the inspection results. Reports indicating non-compliance with construction mitigation measures shall be cause to issue a stop-work order until such time as compliance is achieved.	Contractor	District	During construction			

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
BIOLOGICAL RESOURCES						
BIOLOGY-1: Adequate measures shall be taken to avoid inadvertent take of raptor nests and other nesting birds protected under the Migratory Bird Treaty Act when in active use. This shall be accomplished by taking the following steps: ▪ If construction is proposed during the nesting season (February through August), a focused survey for nesting raptors and other migratory birds shall be conducted by a qualified biologist within 14 days prior to the onset of tree removal or construction, in order to identify any active nests on the project site and in the vicinity of proposed construction. ▪ If no active nests are identified during the survey period, or if development is initiated during the non-breeding season (September through February), construction may proceed with no restrictions. ▪ If bird nests are found, an adequate setback shall be established around the nest location and construction activities restricted within this no-disturbance zone until the qualified biologist has confirmed that any young birds have fledged and are able to function outside the nest location. Required setback distances for the no-disturbance zone shall be based on input received from the California Department of Fish and Wildlife (CDFW), and may vary depending on species and sensitivity to disturbance. As necessary, the no-disturbance zone shall be fenced with temporary orange construction fencing if construction is to be initiated on the remainder of the construction area. ▪ A report of findings shall be prepared by the qualified biologist and submitted to the North Marin Water District (NMWD) for review and approval prior to initiation of construction within the no-disturbance zone during the nesting season (February through August). The report either shall confirm absence of any active nests or shall confirm that any young within a designated no-disturbance zone have fledged and construction can proceed. Implementation of Mitigation Measure BIOLOGY-1 would reduce potentially significant impacts on nesting birds to a less-than-significant level.	District	District	Before and during construction			
CULTURAL RESOURCES						
CULTURAL-1: Should an archaeological deposit be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology contacted to assess the situation, determine if the deposit qualifies as a historical resource, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the deposit is found to be significant (i.e., eligible for listing in the California Register of Historical Resources [CRHR]), the North Marin Water District	Contractor	District	During construction			

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
(NMWD) shall be responsible for funding and implementing appropriate mitigation measures. Mitigation measures may include recording of the archaeological deposit, data recovery and analysis, and public outreach regarding the scientific and cultural importance of the discovery. Upon completion of the selected mitigations, a report documenting methods, findings, and recommendations shall be prepared and submitted to NMWD for review, and the final report shall be submitted to the Northwest Information Center (NWIC) at Sonoma State University. Significant archaeological materials shall be submitted to an appropriate local curation facility and used for future research and public interpretive displays, as appropriate. NMWD shall inform its contractor(s) of the sensitivity of the project area for archaeological deposits and shall verify that the following directive has been included in the appropriate contract documents: "The subsurface of the construction site may be sensitive for Native American archaeological deposits and associated human remains. If archaeological deposits are encountered during project subsurface construction, all ground-disturbing activities within 25 feet shall stop and a qualified archaeologist contacted to assess the situation and make recommendations for the treatment of the discovery. Project personnel shall not collect or move any archaeological materials. Archaeological deposits can include shellfish remains; bones; flakes of, and tools made from, obsidian, chert, and basalt; and mortars and pestles. Contractor acknowledges and understands that excavation or removal of archaeological material is prohibited by law and constitutes a misdemeanor under California Public Resources Code, Section 5097.5." With implementation of this mitigation measure, the potential impact on historical and archaeological resources would be reduced to a less-than-significant level.						
CULTURAL-2: Mitigation Measure CULTURAL-1 shall be implemented.	District	District	During construction			
GEOLOGY AND SOILS						
GEOLOGY-1: The proposed improvements shall be designed and constructed in accordance with the provisions of the most recent version of the California Building Code and appropriate American Water Works Association (AWWA) standards or subsequent codes in effect when final design occurs. Implementation of Mitigation Measure GEOLOGY-1 would ensure that project impacts related to strong seismic ground shaking would be less than significant.	District	District	During final design and construction			
GEOLOGY-2: The updated project plans shall be submitted to the Geotechnical Engineer for review to determine whether additional geotechnical investigation and/or modification of geotechnical recommendations would be required to mitigate the potential for slope instability	District and Geotechnical Engineer	District	During final design and construction			

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
and risk of landslides. The detailed project plans shall be designed in accordance with all geotechnical recommendations. As project plans near completion, the plans and specifications shall be provided to the Geotechnical Engineer for review to confirm that geotechnical recommendations have been incorporated. During construction, the Geotechnical Engineer shall perform observation and testing of geotechnical-related work (e.g., excavation, grading, subsurface drain installations, and fill placement) to confirm that conditions are as anticipated, adjust geotechnical recommendations and design criteria if needed, and confirm that construction is performed in accordance with the project plans and specifications. Implementation of Mitigation Measure GEOLOGY-2 would ensure that the project impacts related to slope stability and landslides would be less than significant.						
GEOLOGY-3: See Mitigation Measures HYDROLOGY-1. As described in Section X, Hydrology and Water Quality, implementation of Mitigation Measure HYDROLOGY-1, which requires preparation of and implementation of an Erosion and Stormwater Control Plan (ESCP) during construction; and periodic inspection and maintenance of erosion and sediment control BMPs during project operation, would reduce the potential impacts related to erosion or the loss of topsoil to a less-than-significant level.	Contractor	District	During construction and operation			
GEOLOGY-4: Should paleontological resources be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet of the find shall be stopped and a qualified paleontologist shall be contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. If the discovery is found to be significant and project activities cannot avoid the paleontological resources, adverse effects on paleontological resources shall be mitigated. Mitigation may include monitoring, recording of the fossil locality, data recovery and analysis, preparation of a technical report, and provision of the fossil material and technical report to a paleontological repository, such as the University of California Museum of Paleontology. Public educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the North Marin Water District (NMWD) for review. NMWD shall inform its contractor(s) of the sensitivity of the project area for paleontological resources and shall include the following directive in the appropriate contract documents: "The subsurface of the construction site may be sensitive for paleontological resources. If paleontological resources are encountered during project subsurface construction, all ground-disturbing activities within 25 feet of the find shall be stopped or redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. Project	District, working with Paleontologist	District	During construction			

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
personnel shall not collect or move any paleontological materials. Paleontological resources include fossil plants and animals, and such trace fossil evidence of past life as animal tracks." Implementation of Mitigation Measure GEOLOGY-4 would reduce potential impacts on paleontological resources to a less-than-significant level.						
HAZARDS AND HAZARDOUS MATERIALS						
HAZARDS-1: Mitigation Measure HYDROLOGY-1 shall be implemented. Combined with compliance with applicable existing regulations, implementation of Mitigation Measure HYDROLOGY-1 would ensure that potential impacts related to accidental releases of hazardous materials would be less than significant.	District	District	During construction and operation			
HAZARDS-2a: Construction contractors shall ensure the following measures are implemented to minimize the potential for accidental ignition of construction materials and vegetation: 1) flammable/combustible materials shall be stored away from vegetated areas; 2) spark arrestors shall be fitted on all construction vehicles and equipment; 3) work that generates sparks, such metal cutting, torching, and welding, shall only be performed in areas where vegetation has been sufficiently cleared and the ground surface has been wetted; and 4) an adequate water source and fire extinguishers shall be available at all times for fire suppression.	District and Contractor	District	During construction			
HAZARDS-2b: The North Marin Water District (NMWD) shall develop a Vegetation Management and Fire Prevention Plan, and shall implement the plan during construction and operation of the project. The Vegetation Management and Fire Prevention Plan shall include, at a minimum, the following measures: ▪ Using spark arrestors on all vehicles and equipment used for vegetation management; ▪ Using fire-resistant plants when planting areas for erosion control; ▪ Pruning the lower branches of tall trees; ▪ Clearing out ground-level brush and debris; and ▪ Storing combustible materials away from vegetated areas. Implementation of Mitigation Measures HAZARDS-2a and HAZARDS-2b would ensure that the proposed project would result in less-than-significant impacts related to wildfires.	District	District	During construction and operation			
HYDROLOGY AND WATER QUALITY						
HYDROLOGY-1: An Erosion and Stormwater Control Plan (ESCP) shall be prepared for the proposed project. The ESCP shall address potential pollutants and their sources, including erosion and exposure of construction materials to runoff, and must include a list of Best Management Practices (BMPs) to reduce the discharge of construction-related stormwater pollutants. The ESCP shall include a detailed description of controls to reduce pollutants and	District	District	During construction and operation			

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
outline periodic maintenance and inspection procedures during construction and operation of the project. Sediment and erosion BMPs shall include, but not be limited to perimeter controls (e.g., straw wattles and silt fences) to prevent sediment from being transported off-site in surface runoff, and establishing and maintaining construction exits to avoid tracking sediment off-site onto adjacent roadways. The ESCP shall define proper building material staging and storage areas, paint and concrete washout areas, proper equipment/vehicle fueling and maintenance practices, and measures to control equipment/vehicle washing and allowable non-stormwater discharges; and shall include a spill prevention and response plan. The ESCP shall require that chemicals be stored in watertight containers (with appropriate secondary containment to prevent any spillage or leakage) or in a storage shed (completely enclosed). The ESCP shall include procedures to address minor spills of hazardous materials. Measures to control spills, leakage, and dumping shall be addressed through structural as well as non-structural BMPs. For example, equipment and materials for cleanup of spills shall be available on-site, and spills and leaks shall be cleaned up immediately and disposed of properly. BMPs shall also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.						
NOISE						
NOISE-1a: Construction equipment operation shall be limited to the hours of Monday through Friday from 8:00 AM to 5:00 PM. No exception to the above limitations shall be allowed.	District	District	During construction			
NOISE-1b: The North Marin Water District (NMWD) shall implement measures to reduce noise impacts due to construction. Noise reduction measures shall include, but not be limited to, the following: a) Equipment and trucks used for project construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds), wherever feasible. b) Noisy operations shall be combined to occur in the same time period, if possible. The total noise level produced shall not be significantly greater than the level produced if the operations were performed separately. c) Stationary noise sources shall be located as far from adjacent properties as possible.	District	District	During construction			
NOISE-1c: NMWD shall develop a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include: a) Designation of an on-site construction complaint and enforcement manager for the project; b) Protocols specific to receptors for receiving, responding to, and tracking received complaints; and	District	District	During construction			

Mitigation Measure	Party Responsible for Ensuring Implementation	Party Responsible for Monitoring	Monitoring Timing	Compliance Verification		
				Initial	Date	Project/ Comments
c) Maintenance of a complaint log that records received complaints and how complaints were addressed.						
Compliance with Mitigation Measures NOISE-1a through NOISE-1c would reduce the adverse impacts associated with construction noise to a less-than-significant level.						
WILDFIRE						
WILDFIRE-1: Mitigation Measures HAZARDS-2a and HAZARDS-2b shall be implemented.	District	District	During construction and operation			

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APPENDIX B
AIR QUALITY TECHNICAL APPENDIX

Appendix B can be found in the North Marin Water District offices.

North Marin Water District Tank.v1

Marin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	1.00	User Defined Unit	0.63	0.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	69
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Construction would begin in Spring 2020 and be completed by 2021. Selection of utility company does not affect construction emissions.

Land Use - Select user defined land use which would not affect the construction emissions

Construction Phase - Construction phases established based on the information provided by the project applicant.

Off-road Equipment - Construction equipment based on the list provided by project applicant

Off-road Equipment - Construction equipment based on the list provided by project applicant

Off-road Equipment - Construction equipment based on the list provided by project applicant

Off-road Equipment - Construction equipment based on the list provided by project applicant

Off-road Equipment - Construction equipment based on the list provided by project applicant

Trips and VMT - Number of workers on site modified according to information provided by the project applicant.

Grading - Approximately 800 CY would be off-hauled and 330 CY of materials would be imported.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Energy Use -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	5.00
tblConstructionPhase	NumDays	1.00	20.00
tblConstructionPhase	NumDays	100.00	15.00
tblConstructionPhase	NumDays	100.00	40.00
tblGrading	MaterialExported	0.00	800.00
tblGrading	MaterialImported	0.00	300.00
tblLandUse	LotAcreage	0.00	0.63
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		1 - Clearing
tblOffRoadEquipment	PhaseName		1 - Clearing
tblOffRoadEquipment	PhaseName		1 - Clearing
tblOffRoadEquipment	PhaseName		1 - Clearing
tblOffRoadEquipment	PhaseName		1 - Clearing
tblOffRoadEquipment	PhaseName		1 - Clearing
tblTripsAndVMT	WorkerTripNumber	28.00	10.00
tblTripsAndVMT	WorkerTripNumber	20.00	10.00
tblTripsAndVMT	WorkerTripNumber	28.00	14.00
tblTripsAndVMT	WorkerTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	0.00	12.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1283	1.1370	0.9760	1.7500e-003	0.0299	0.0567	0.0866	4.9400e-003	0.0537	0.0586	0.0000	149.5958	149.5958	0.0352	0.0000	150.4762
Maximum	0.1283	1.1370	0.9760	1.7500e-003	0.0299	0.0567	0.0866	4.9400e-003	0.0537	0.0586	0.0000	149.5958	149.5958	0.0352	0.0000	150.4762

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1283	1.1370	0.9760	1.7500e-003	0.0299	0.0567	0.0866	4.9400e-003	0.0537	0.0586	0.0000	149.5957	149.5957	0.0352	0.0000	150.4761
Maximum	0.1283	1.1370	0.9760	1.7500e-003	0.0299	0.0567	0.0866	4.9400e-003	0.0537	0.0586	0.0000	149.5957	149.5957	0.0352	0.0000	150.4761

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-1-2020	5-31-2020	0.9264	0.9264
2	6-1-2020	8-31-2020	0.3312	0.3312
		Highest	0.9264	0.9264

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	1 - Clearing	Demolition	3/1/2020	3/13/2020	5	10	
2	2 - Grubbing	Site Preparation	3/14/2020	3/20/2020	5	5	
3	3 - Site and Road Preparation	Site Preparation	3/21/2020	4/17/2020	5	20	
4	4 - Foundation Construction	Building Construction	4/18/2020	5/8/2020	5	15	
5	5 - Tank Construction	Building Construction	5/9/2020	7/3/2020	5	40	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
1 - Clearing	Aerial Lifts	3	8.00	63	0.31
1 - Clearing	Concrete/Industrial Saws	0	8.00	81	0.73
1 - Clearing	Crawler Tractors	1	8.00	212	0.43
1 - Clearing	Dumpers/Tenders	2	8.00	16	0.38
1 - Clearing	Excavators	2	8.00	158	0.38
1 - Clearing	Graders	0		187	0.41
1 - Clearing	Rubber Tired Dozers	1	1.00	247	0.40
1 - Clearing	Skid Steer Loaders	1	8.00	65	0.37
1 - Clearing	Tractors/Loaders/Backhoes	1	6.00	97	0.37
2 - Grubbing	Crawler Tractors	1	8.00	212	0.43
2 - Grubbing	Dumpers/Tenders	2	8.00	16	0.38

2 - Grubbing	Excavators	2	8.00	158	0.38
2 - Grubbing	Graders	0	8.00	187	0.41
2 - Grubbing	Rubber Tired Dozers	1	1.00	247	0.40
2 - Grubbing	Skid Steer Loaders	1	8.00	65	0.37
2 - Grubbing	Tractors/Loaders/Backhoes	1	8.00	97	0.37
3 - Site and Road Preparation	Crawler Tractors	1	8.00	212	0.43
3 - Site and Road Preparation	Dumpers/Tenders	2	8.00	16	0.38
3 - Site and Road Preparation	Excavators	1	8.00	158	0.38
3 - Site and Road Preparation	Graders	1	8.00	187	0.41
3 - Site and Road Preparation	Pavers	1	8.00	130	0.42
3 - Site and Road Preparation	Rollers	2	8.00	80	0.38
3 - Site and Road Preparation	Scrapers	1	8.00	367	0.48
3 - Site and Road Preparation	Skid Steer Loaders	1	8.00	65	0.37
3 - Site and Road Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
4 - Foundation Construction	Air Compressors	1	8.00	78	0.48
4 - Foundation Construction	Cement and Mortar Mixers	1	8.00	9	0.56
4 - Foundation Construction	Cranes	0	4.00	231	0.29
4 - Foundation Construction	Dumpers/Tenders	1	8.00	16	0.38
4 - Foundation Construction	Excavators	1	8.00	158	0.38
4 - Foundation Construction	Forklifts	1	6.00	89	0.20
4 - Foundation Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
4 - Foundation Construction	Trenchers	1	8.00	78	0.50
5 - Tank Construction	Air Compressors	2	8.00	78	0.48
5 - Tank Construction	Cranes	1	4.00	231	0.29
5 - Tank Construction	Dumpers/Tenders	1	8.00	16	0.38
5 - Tank Construction	Forklifts	1	6.00	89	0.20
5 - Tank Construction	Generator Sets	1	8.00	84	0.74

5 - Tank Construction	Pressure Washers	1	8.00	13	0.30
5 - Tank Construction	Rollers	1	8.00	80	0.38
5 - Tank Construction	Rough Terrain Forklifts	1	8.00	100	0.40
5 - Tank Construction	Tractors/Loaders/Backhoes	1	8.00	97	0.37
5 - Tank Construction	Welders	4	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
1 - Clearing	11	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
2 - Grubbing	8	10.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
3 - Site and Road Preparation	11	14.00	0.00	138.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
4 - Foundation Construction	7	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
5 - Tank Construction	14	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 1 - Clearing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.5300e-003	0.0960	0.0822	1.5000e-004		4.0400e-003	4.0400e-003		3.7300e-003	3.7300e-003	0.0000	13.1520	13.1520	4.1300e-003	0.0000	13.2554
Total	**8.5300e-003**	**0.0960**	**0.0822**	**1.5000e-004**		**4.0400e-003**	**4.0400e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**13.1520**	**13.1520**	**4.1300e-003**	**0.0000**	**13.2554**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.1800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3513	0.3513	1.0000e-005	0.0000	0.3515
Total	**1.7000e-004**	**1.2000e-004**	**1.1800e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3513**	**0.3513**	**1.0000e-005**	**0.0000**	**0.3515**

3.2 1 - Clearing - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.5300e-003	0.0960	0.0822	1.5000e-004		4.0400e-003	4.0400e-003		3.7300e-003	3.7300e-003	0.0000	13.1520	13.1520	4.1300e-003	0.0000	13.2554
Total	**8.5300e-003**	**0.0960**	**0.0822**	**1.5000e-004**		**4.0400e-003**	**4.0400e-003**		**3.7300e-003**	**3.7300e-003**	**0.0000**	**13.1520**	**13.1520**	**4.1300e-003**	**0.0000**	**13.2554**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.1800e-003	0.0000	3.9000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3513	0.3513	1.0000e-005	0.0000	0.3515
Total	**1.7000e-004**	**1.2000e-004**	**1.1800e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**4.0000e-004**	**1.0000e-004**	**0.0000**	**1.1000e-004**	**0.0000**	**0.3513**	**0.3513**	**1.0000e-005**	**0.0000**	**0.3515**

3.3 2 - Grubbing - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2100e-003	0.0000	3.2100e-003	1.1800e-003	0.0000	1.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1000e-003	0.0445	0.0343	6.0000e-005		2.0000e-003	2.0000e-003		1.8400e-003	1.8400e-003	0.0000	5.6401	5.6401	1.7600e-003	0.0000	5.6842
Total	**4.1000e-003**	**0.0445**	**0.0343**	**6.0000e-005**	**3.2100e-003**	**2.0000e-003**	**5.2100e-003**	**1.1800e-003**	**1.8400e-003**	**3.0200e-003**	**0.0000**	**5.6401**	**5.6401**	**1.7600e-003**	**0.0000**	**5.6842**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1756	0.1756	0.0000	0.0000	0.1757
Total	**9.0000e-005**	**6.0000e-005**	**5.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1756**	**0.1756**	**0.0000**	**0.0000**	**0.1757**

3.3 2 - Grubbing - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2100e-003	0.0000	3.2100e-003	1.1800e-003	0.0000	1.1800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.1000e-003	0.0445	0.0343	6.0000e-005		2.0000e-003	2.0000e-003		1.8400e-003	1.8400e-003	0.0000	5.6401	5.6401	1.7600e-003	0.0000	5.6842
Total	**4.1000e-003**	**0.0445**	**0.0343**	**6.0000e-005**	**3.2100e-003**	**2.0000e-003**	**5.2100e-003**	**1.1800e-003**	**1.8400e-003**	**3.0200e-003**	**0.0000**	**5.6401**	**5.6401**	**1.7600e-003**	**0.0000**	**5.6842**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	6.0000e-005	5.9000e-004	0.0000	2.0000e-004	0.0000	2.0000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1756	0.1756	0.0000	0.0000	0.1757
Total	**9.0000e-005**	**6.0000e-005**	**5.9000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1756**	**0.1756**	**0.0000**	**0.0000**	**0.1757**

3.4 3 - Site and Road Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	2.3000e-003	0.0000	2.3000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0341	0.3901	0.2590	5.1000e-004		0.0168	0.0168		0.0154	0.0154	0.0000	44.9643	44.9643	0.0143	0.0000	45.3219
Total	**0.0341**	**0.3901**	**0.2590**	**5.1000e-004**	**0.0213**	**0.0168**	**0.0380**	**2.3000e-003**	**0.0154**	**0.0177**	**0.0000**	**44.9643**	**44.9643**	**0.0143**	**0.0000**	**45.3219**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-004	0.0201	5.8400e-003	5.0000e-005	1.1600e-003	7.0000e-005	1.2300e-003	3.2000e-004	6.0000e-005	3.8000e-004	0.0000	5.2721	5.2721	3.1000e-004	0.0000	5.2798
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.3000e-004	3.3100e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9836	0.9836	2.0000e-005	0.0000	0.9842
Total	**1.0800e-003**	**0.0205**	**9.1500e-003**	**6.0000e-005**	**2.2600e-003**	**8.0000e-005**	**2.3400e-003**	**6.1000e-004**	**7.0000e-005**	**6.8000e-004**	**0.0000**	**6.2557**	**6.2557**	**3.3000e-004**	**0.0000**	**6.2639**

3.4 3 - Site and Road Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	2.3000e-003	0.0000	2.3000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0341	0.3901	0.2590	5.1000e-004		0.0168	0.0168		0.0154	0.0154	0.0000	44.9642	44.9642	0.0143	0.0000	45.3218
Total	**0.0341**	**0.3901**	**0.2590**	**5.1000e-004**	**0.0213**	**0.0168**	**0.0380**	**2.3000e-003**	**0.0154**	**0.0177**	**0.0000**	**44.9642**	**44.9642**	**0.0143**	**0.0000**	**45.3218**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.9000e-004	0.0201	5.8400e-003	5.0000e-005	1.1600e-003	7.0000e-005	1.2300e-003	3.2000e-004	6.0000e-005	3.8000e-004	0.0000	5.2721	5.2721	3.1000e-004	0.0000	5.2798
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.9000e-004	3.3000e-004	3.3100e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9836	0.9836	2.0000e-005	0.0000	0.9842
Total	**1.0800e-003**	**0.0205**	**9.1500e-003**	**6.0000e-005**	**2.2600e-003**	**8.0000e-005**	**2.3400e-003**	**6.1000e-004**	**7.0000e-005**	**6.8000e-004**	**0.0000**	**6.2557**	**6.2557**	**3.3000e-004**	**0.0000**	**6.2639**

3.5 4 - Foundation Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0108	0.0927	0.0905	1.4000e-004		5.9000e-003	5.9000e-003		5.5400e-003	5.5400e-003	0.0000	11.7397	11.7397	3.0000e-003	0.0000	11.8148
Total	**0.0108**	**0.0927**	**0.0905**	**1.4000e-004**		**5.9000e-003**	**5.9000e-003**		**5.5400e-003**	**5.5400e-003**	**0.0000**	**11.7397**	**11.7397**	**3.0000e-003**	**0.0000**	**11.8148**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.1300e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6323	0.6323	1.0000e-005	0.0000	0.6327
Total	**3.1000e-004**	**2.2000e-004**	**2.1300e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.1000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6323**	**0.6323**	**1.0000e-005**	**0.0000**	**0.6327**

3.5 4 - Foundation Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0108	0.0927	0.0905	1.4000e-004		5.9000e-003	5.9000e-003		5.5400e-003	5.5400e-003	0.0000	11.7397	11.7397	3.0000e-003	0.0000	11.8148
Total	**0.0108**	**0.0927**	**0.0905**	**1.4000e-004**		**5.9000e-003**	**5.9000e-003**		**5.5400e-003**	**5.5400e-003**	**0.0000**	**11.7397**	**11.7397**	**3.0000e-003**	**0.0000**	**11.8148**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	2.1300e-003	1.0000e-005	7.1000e-004	0.0000	7.1000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6323	0.6323	1.0000e-005	0.0000	0.6327
Total	**3.1000e-004**	**2.2000e-004**	**2.1300e-003**	**1.0000e-005**	**7.1000e-004**	**0.0000**	**7.1000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6323**	**0.6323**	**1.0000e-005**	**0.0000**	**0.6327**

3.6 5 - Tank Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0683	0.4923	0.4913	7.8000e-004		0.0279	0.0279		0.0270	0.0270	0.0000	64.9987	64.9987	0.0116	0.0000	65.2890
Total	**0.0683**	**0.4923**	**0.4913**	**7.8000e-004**		**0.0279**	**0.0279**		**0.0270**	**0.0270**	**0.0000**	**64.9987**	**64.9987**	**0.0116**	**0.0000**	**65.2890**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	5.7000e-004	5.6700e-003	2.0000e-005	1.8900e-003	1.0000e-005	1.9000e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6861	1.6861	4.0000e-005	0.0000	1.6871
Total	**8.4000e-004**	**5.7000e-004**	**5.6700e-003**	**2.0000e-005**	**1.8900e-003**	**1.0000e-005**	**1.9000e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.6861**	**1.6861**	**4.0000e-005**	**0.0000**	**1.6871**

3.6 5 - Tank Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0683	0.4923	0.4913	7.8000e-004		0.0279	0.0279		0.0270	0.0270	0.0000	64.9986	64.9986	0.0116	0.0000	65.2889
Total	**0.0683**	**0.4923**	**0.4913**	**7.8000e-004**		**0.0279**	**0.0279**		**0.0270**	**0.0270**	**0.0000**	**64.9986**	**64.9986**	**0.0116**	**0.0000**	**65.2889**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.4000e-004	5.7000e-004	5.6700e-003	2.0000e-005	1.8900e-003	1.0000e-005	1.9000e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.6861	1.6861	4.0000e-005	0.0000	1.6871
Total	**8.4000e-004**	**5.7000e-004**	**5.6700e-003**	**2.0000e-005**	**1.8900e-003**	**1.0000e-005**	**1.9000e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.6861**	**1.6861**	**4.0000e-005**	**0.0000**	**1.6871**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.586103	0.042797	0.200835	0.113384	0.018054	0.005119	0.010148	0.010539	0.002013	0.003657	0.005892	0.000682	0.000777

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	**0.0000**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

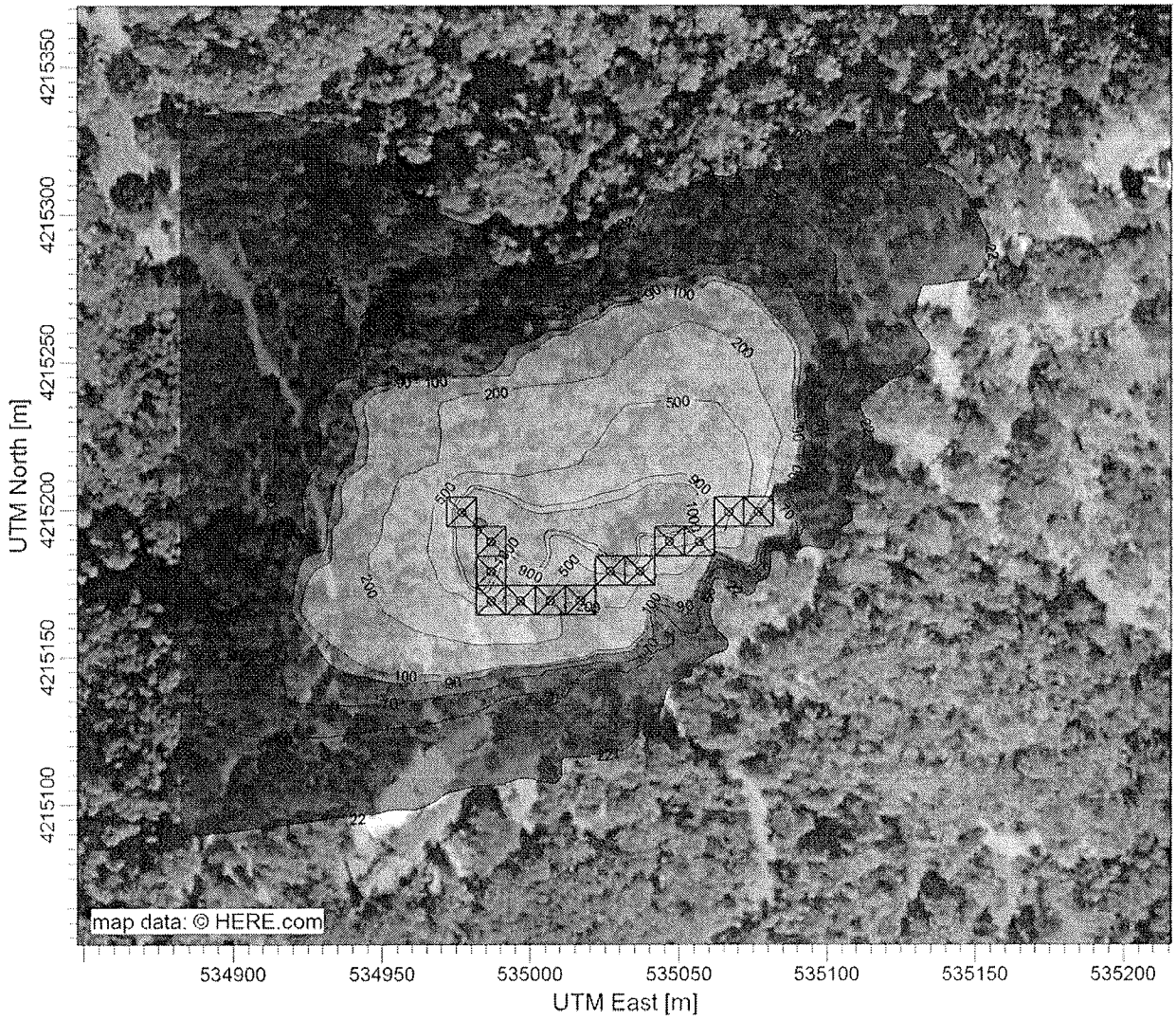
User Defined Equipment

Equipment Type	Number

11.0 Vegetation

PROJECT TITLE:

P:\Base\19217-00 ASC North Marin Water District Tank\AERMOD\AERMOD.i



PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL ug/m^3

Max: 2232 [ug/m^3] at (534982.19, 4215195.50)

22 50 70 90 100 200 500 900 1000 2000 2232

COMMENTS:	SOURCES: **13**	COMPANY NAME: **BASELINE Environmental Consulting**	
	RECEPTORS: **1681**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:2,316 0 0.05 km	
	MAX: **2232 ug/m^3**	DATE: **9/11/2019**	PROJECT NO.:

Summary of ISCST3 Model Parameters, Assumptions, and Results for DPM and $PM_{2.5}$ Emissions during Construction

ISCST3 Model Parameters and Assumptions				
Source Type	**Units**	**Value**	**Notes**	
Volume Source: Off-Road Equipment Exhaust for Construction				
Hours/Work Day	hours/day	9	Monday - Friday, 8 AM - 5 PM	
DPM Emission Rate	gram/second	0.01764	Exhaust PM_{10} from off-road equipment	
Number of Sources	count	13	SMAQMD, 2015	
Emission Rate/Source	gram/second	0.001357		
Release Height	meters	5.0	SMAQMD, 2015	
Length of Side	meters	10.0	SMAQMD, 2015	
Initial Lateral Dimension	meters	2.3	ISCST3 Calculator	
Initial Vertical Dimension	meters	1.0	SMAQMD, 2015	
ISCST3 Model Results				
Location Type	**Emissions Source**	**Pollutant**	**Annual Average Concentration**	**Notes**
Residential Receptor	Umitigated Construction	DPM ($\mu g/m^{3)}$	0.05	Offsite MEIR (Ground level residential receptor)
		$PM_{2.5}$ ($\mu g/m^{3)}$	0.05	Offsite MEIR (Ground level residential receptor)

Notes:

DPM = diesel particulate matter

PM_{10} = particulate matter with aerodynamic resistance diameters equal to or less than 10 microns

$PM_{2.5}$ = particulate matter with aerodynamic resistance diameters equal to or less than 2.5 microns

$\mu g/m^3$ = micrograms per cubic meter

Sacramento Metropolitan Air Quality Management District (SMAQMD), 2015. *Guide to Air Quality Assessment in Sacramento County* . June.

Health Risk Assessment for DPM Emissions during Construction

Inhalation Cancer Risk Assessment for DPM	Units	Age Group		Notes
		3rd Trimester	0-2 Years	
DPM Concentration (C)	$\mu g/m^3$	0.053	0.053	ISCST3 Annual Average
Daily Breathing Rate (DBR)	L/kg-day	361	1090	95th percentile (OEHHA, 2015)
Inhalation absorption factor (A)	unitless	1.0	1.0	OEHHA, 2015
Exposure Frequency (EF)	unitless	0.96	0.96	350 days/365 days in a year (OEHHA, 2015)
Dose Conversion Factor (CF_D)	$mg\text{-}m^3/\mu g\text{-}L$	0.000001	0.000001	Conversion of µg to mg and L to m^3
Dose (D)	mg/kg/day	0.000018	0.000055	$C*DBR*A*EF*CF_D$ (OEHHA, 2015)
Cancer Potency Factor (CPF)	$(mg/kg/day)^{-1}$	1.1	1.1	OEHHA, 2015
Age Sensitivity Factor (ASF)	unitless	10	10	OEHHA, 2015
Annual Exposure Duration (ED)	years	0.25	0.83	From spring 2020 to end of 2020
Averaging Time (AT)	years	70	70	70 years for residents (OEHHA, 2015)
Fraction of time at home (FAH)	unitless	0.85	0.85	OEHHA, 2015
Cancer Risk Conversion Factor (CF)	unitless	1000000	1000000	Chances per million (OEHHA, 2015)
Cancer Risk	per million	0.61	6.14	D*CPF*ASF*ED/AT*FAH*CF (OEHHA, 2015)
Total Cancer Risk	per million	6.8		At Offsite MEIR location

Hazard Index for DPM	Units	Value	Notes
Chronic REL	$\mu g/m^3$	5.0	OEHHA, 2015
Chronic Hazard Index	unitless	0.011	At Offsite MEIR location

Notes:

DPM = diesel particulate matter

REL = reference exposure level

$\mu g/m^3$ = micrograms per cubic meter

L/kg-day = liters per kilogram-day

m^3/L = cubic meters per liter

$(mg/kg/day)^{-1}$ = 1/milligrams per kilograms per day

MEIR = maximum exposed individual resident

Office of Environmental Health Hazard Assessment (OEHHA), 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. February.*

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION
Draft Initial Study/Mitigated Negative Declaration for
North Marin Water District Old Ranch Road Tank No. 2 Project

To: State Clearinghouse (15 usb drives)
Marin County Community Development Dept
Novato Fire Protection District
Old Ranch Road Property Owners

From: North Marin Water District
999 Rush Creek Place
Novato, CA 94945

Notice: Pursuant to CEQA Guidelines Section 15072, notice is hereby given that the North Marin Water District (NMWD), acting as Lead Agency under the California Environmental Quality Act (CEQA), intends to adopt a Mitigated Negative Declaration (MND) for the proposed project.

Project Location and Description: The project includes constructing a new water tank (referred to as "Tank No. 2") within an approximately 20,000-square-foot parcel that would be created by grant within the southern corner of Assessor's Parcel Number (APN) 146-310-05 (about 44 acres currently). The parcels involved in the project are APN 146-310-23 (owned by NMWD), APN 146-310-05 (Maiero Grant Deed and Easement), APN 146-310-44 (Wright Easement). The project site is within Marin County just outside the western boundary of the City of Novato.

The new tank would replace an existing tank also located off Old Ranch Road. The planned improvements also include constructing a new road to provide access to Tank No. 2 from Old Ranch Road. New pavement, surface drainage improvements, underground utilities, and other ancillary improvements are included as part of the project. A locked gate would be placed at the access road where it would connect to Old Ranch Road. The gate would be about 15 to 20 feet from the intersection of Old Ranch Road and the tank access road.

The new tank would be 28 feet in diameter and 26 feet tall (22 feet to overflow) and made of welded steel. It would have a storage capacity of approximately 100,000 gallons.

The proposed site for the replacement water tank and the access road would require grading. The disturbed area would encompass 0.62 acre, including 0.17 acre of the Maiero Grant Deed, 0.28 acre of the Maiero Easement, 0.16 acre of the Wright Easement, and 0.01 acre of the NMWD parcel. Site grading for the building pad would consist primarily of excavation. The tank pad would be constructed at elevation 516 feet, and cuts of up to 12 feet are anticipated to achieve finished grades at the tank site. The total estimated cut volume would be 1,911 cubic yards (CY), and the total estimated fill volume would be 1,281 CY, resulting in off-haul of about 630 CY of soil. Accounting for the "swell factor" of 1.25, the off-haul would be about 788 CY. The cut slopes would be no steeper than 1.5:1 and fill slopes would be 2:1.

To construct the new tank and access road, existing vegetation including trees would have to be cleared. It is estimated that the project would require removal of 71 trees (62 oaks, 4 madrones, and 5 California bay trees).

Potential Environmental Impacts: The proposed MND did not find any potential environmental impacts that could not be mitigated to a less-than-significant level.

Public Review Period: The public review period for the MND commences on **November 15, 2019** and ends on **December 16, 2019 (5:00 PM)**. Please address all comments in writing to Mr. Rocky Vogler, Chief Engineer, by email to rvogler@nmwd.com or by mail to 999 Rush Creek Place, Novato, CA, 94945. NMWD will only accept written comments during the comment period. If sending email, please use "Tank No. 2 IS Comments" in the subject line.

Location Where Documents Can Be Reviewed: The MND and all documents referenced therein are available for review at the NMWD offices located at 999 Rush Creek Place, Novato, CA, from the hours of 8:00 AM to 5:00 PM, Monday through Friday, excluding holidays, by contacting NMWD Engineering Secretary Eileen Mulliner at (415) 761-8913. The MND is also available for review at www.nmwd.com.

Public Hearing: NMWD will hold a public hearing to solicit public comments on the MND and the proposed project at the regular NMWD Board of Trustees Meeting of **January 7, 2020**, at 6PM at the NMWD offices located at 999 Rush Creek Place, Novato, CA. Additional information about the proposed project, including project plans, are available on the NMWD's website at the address listed above.

RESOLUTION NO. 20-xx

A RESOLUTION ADOPTING INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION FOR THE OLD RANCH ROAD TANK NO. 2 PROJECT, MITIGATION MONITORING AND REPORTING PROGRAM, MAKING FINDINGS AND DETERMINATIONS, AND APPROVING THE PROJECT

NORTH MARIN WATER DISTRICT (the "District")

WHEREAS, the North Marin Water District is proposing the construction of a new water tank and access road connected to Old Ranch Road; and

WHEREAS, the District is the lead agency for the Project, and the Board of Directors ("Board") is the decision-making body for the proposed Project; and

WHEREAS, prior to commencement of work on the Project, the District must comply with the California Environmental Quality Act of 1970, as amended, Public Resources Code sections 21000, et seq. ("CEQA"); and

WHEREAS, the District retained Amy Skewes-Cox, AICP, to prepare an Initial Study and a Mitigated Negative Declaration for the Project in accordance with the requirements of CEQA and the CEQA Guidelines (14 Cal. Code Regs. 15000, *et seq.*); and

WHEREAS, the scope of the Project analyzed under the Initial Study/Mitigated Negative Declaration is further described in the Initial Study/Mitigated Negative Declaration. A copy of the Initial Study/Mitigated Negative Declaration is attached hereto as **Attachment A** and incorporated herein by this reference; and

WHEREAS, the Initial Study/Mitigated Negative Declaration concludes that implementation of the Project will not result in a significant effect on the environment because the mitigation measures described in the Initial Study/Mitigated Negative Declaration and included in the Project will reduce potential impacts to a less than significant level; and

WHEREAS, pursuant to CEQA Guidelines section 15072 and Public Resources Code sections 21091 and 21092, the Initial Study/Mitigated Negative Declaration was sent via overnight mail to responsible agencies and requesting parties to start review on November 15, 2019. Likewise, on November 15, 2019, the District posted a Notice of Intent ("NOI") on the District's website. The NOI and a hard-copy of the Initial Study/Mitigated Negative Declaration was provided to the County Clerk for posting on November 15, 2019, 2019. A hard-copy of the Initial Study/Mitigated Negative Declaration was made available to the public at the District office during the public review period, which commenced on November 15, 2019, until December 16, 2019. A copy of the NOI is attached hereto as **Attachment B** and incorporated herein by this reference; and

WHEREAS, the Board has evaluated any comments received from the public or other interested agencies regarding the Initial Study/Mitigated Negative Declaration that were received by the District during the public review period; and

WHEREAS, the District held a properly noticed public hearing at the regular Board Meeting on January 7, 2020, to solicit public comments on the Initial Study/Mitigated Negative Declaration, during which hearing the Board head, received, and considered all oral and written testimony and evidence that was made, presented, or filed, and all persons present at the

meeting were given an opportunity to hear and be heard with respect to any matter related to the Initial Study/Mitigated Negative Declaration, Facts and Findings, proposed MMRP, and the Project; and

WHEREAS, in connection with the approval of a project involving an Initial Study/Mitigated Negative Declaration that identifies one or more potentially significant environmental effects, CEQA requires the decision making body of the lead agency to incorporate into the project feasible mitigation measures that would reduce those potentially significant environmental effects to a less-than-significant level; and

WHEREAS, whenever a lead agency approves a project requiring the implementation of measures to mitigate or avoid potentially significant effects on the environment, CEQA also requires a lead agency to adopt a mitigation monitoring and reporting program to ensure compliance with the mitigation measures during project implementation. A copy of the Mitigation Monitoring and Reporting Program ("MMRP") for the Project, which defines the measures which, if imposed on the Project, would fully mitigate or avoid potentially significant environmental impacts, is attached as Appendix A to **Attachment A** hereto, and as part of **Attachment A**, is incorporated herein by this reference; and

WHEREAS, the Board has carefully reviewed and considered the final Initial Study/Mitigated Negative Declaration for the Project, which includes, without limitation, the draft Mitigated Negative Declaration, the Initial Study, comments from the public and interested agencies and responses to the comments, together with the proposed mitigation measures, Mitigation Monitoring and Reporting Program for the Project, and has carefully reviewed and considered all other relevant information contained in the administrative record for the Project, including all comments received up to the date of adoption of this resolution, in preparation for and during its regularly scheduled Board Meeting on October 20, 2020; and

WHEREAS, based on the foregoing facts, the CEQA findings, mitigation measures, and other findings set forth in this Resolution, and based on staff's recommendations, and public and agency input, the evidence received, and all other evidence in the administrative record, the Board desires to adopt the Initial Study/Mitigated Negative Declaration and the MMRP; and

WHEREAS, the Board further desires to approve the Project; and

WHEREAS, all other legal prerequisites to the adoption of this Resolution and the approval of the Project have occurred.

NOW, THEREFORE, the Board of Directors of the North Marin Water District hereby finds, determines, declares, orders, and resolves as follows:

SECTION 1 – Recitals. That all of the recitals set forth above are true and correct and are incorporated herein by this reference.

SECTION 2 – Compliance with CEQA. That the Board has, to its satisfaction, independently reviewed and analyzed the Initial Study/Mitigated Negative Declaration and other information in the administrative record for the Project and has considered the information contained therein and all comments received up to the date of adoption of this resolution, prior to acting upon or approving the Project. Based on the foregoing and all evidence in the administrative record for the Project, the Board hereby makes the following specific findings:

(1) Finding 1: The Initial Study/Mitigated Negative Declaration prepared for the Project has been duly completed in compliance with CEQA and the CEQA Guidelines.

Evidence: The relevant documents used in the preparation of the Initial Study/Mitigated Negative Declaration were duly filed and are contained in the administrative record for the Project. The Initial Study/Mitigated Negative Declaration was sent via overnight mail to responsible agencies and requesting parties to start the 30-day review period on November 15, 2019. Likewise, on November 15, 2019, the District posted a Notice of Intent ("NOI") on the District's website. The NOI was provided to the Marin County Clerk for posting on November 15, 2019. A hard-copy of the Initial Study/Mitigated Negative Declaration was also made available to the public at the District office during the public review period, which commenced on Friday, November 15, 2019, and continued until close of business on Monday, December 16, 2019.

(2) Finding 2: The Initial Study/Mitigated Negative Declaration prepared for the Project contains a complete and accurate reporting of the environmental impacts associated with the Project.

Evidence: The Initial Study/Mitigated Negative Declaration describes the Project and evaluates potential environmental impacts of the Project across 20 environmental topics in accordance with the CEQA Guidelines.

(3) Finding 3: The Board has considered the Initial Study/Mitigated Negative Declaration, together with all comments received during the public review process, all comments received up to the date of adoption of this resolution, and all other relevant information contained in the administrative record for the Project.

Evidence: Public review of the Initial Study/Mitigated Negative Declaration was conducted from November 15, 2019 through December 16, 2019 (5:00 PM). Additionally, the District held a public hearing to solicit public comments on the Initial Study/Mitigated Negative Declaration and the proposed Project at its regular Board Meeting on January 7, 2020. At the January 7, 2020, Board Meeting, the Board considered all information provided in the Initial Study/Mitigated Negative Declaration and all other information in the administrative record, including comments from the public and interested agencies, and the District's response to comments, together with the proposed mitigation measures, the MMRP for the Project, and all other relevant information contained in the record for the Project. In further response to certain comments, additional field work was conducted after January 7, 2020 to address the potential for Northern Spotted Owl to be present at the project site; no new impacts were identified as the result of the field work or otherwise.

(4) Finding 4: The Initial Study/Mitigated Negative Declaration represents the independent judgment and analysis of the District as lead agency for the Project.

Evidence: The District, assisted by Amy Skewes Cox, AICP, a professional environmental consultant, prepared and circulated the Initial Study/Mitigated Negative Declaration. The District independently reviewed the Initial Study/Mitigated Negative Declaration, and exercised overall control and direction of the CEQA review process for the Project. The Board considered and reviewed the Initial Study/Mitigated Negative Declaration and considered all public comments and information received, prior to taking action on the Initial Study/Mitigated Negative Declaration. The Board, exercising its independent judgment and analysis, decided to adopt the Initial Study/Mitigated Negative Declaration.

(5) Finding 5: There is no substantial evidence in the administrative record that the project, mitigated as set forth in the Initial Study/Mitigated Negative Declaration and as

described above, may have a significant effect on the environment, and therefore, and based thereon, the Board, in the exercise of its independent judgment, hereby determines that the Project will not result in a significant effect upon the environment because the mitigation measures described in the MMRP have been added to the Project and will reduce all potential environmental effects to less than significant levels.

Evidence: After consideration of the Initial Study/Mitigated Negative Declaration, public comments received during the review period and comments received up to the date of adoption of this resolution, the MMRP, and other information in the administrative record for the Project, the Board has found that the proposed mitigation measures will reduce potential effects to less than significant and that no evidence has been presented to the Board to indicate that "new, avoidable significant effect[s have been] identified that require "mitigation measures or project revisions ... to reduce the effect to insignificance" or that the responses to the comments rise to the level of substantial revisions to the Initial Study/Mitigated Negative Declaration, but rather the "[n]ew information ... merely clarifies, amplifies, or makes insignificant modifications to the negative declaration." Further, no evidence has been presented to the Board to indicate that revisions to the proposed mitigation measures or the Project would reduce potentially significant effects to less than significant. Thus, the Initial Study/Mitigated Negative Declaration has not been substantially revised since public notice of its availability was provided, and no mitigation measures or Project revisions were added or required. In particular, the Board finds:

(a) *ENVIRONMENTAL EFFECTS OF THE PROJECT THAT DO NOT REQUIRE FINDINGS*

Environmental effects that the MND/IS found to be Less Than Significant without mitigation do not require findings under CEQA. These effects include the following:

- Project Impacts on Aesthetics
- Project Impacts on Agricultural and Forestry Resources
- Project Impacts on Greenhouse Gas Emissions
- Project Impacts on Land Use and Planning
- Project Impacts on Mineral Resources
- Project Impacts on Population and Housing
- Project Impacts on Public Services
- Project Impacts on Tribal Cultural Resources
- Project Impacts on Utilities and Service Systems
- Project Impacts on Energy
- Project Impacts on Transportation

(b) ENVIRONMENTAL EFFECTS OF THE PROJECT THAT REQUIRE FINDINGS

The environmental effects that were found by the MND/IS to be significant and/or potentially significant prior to the application of mitigation measures include the effects listed below. As required by CEQA, the Board must make findings with respect to each of these significant effects. The Board's findings, and the evidence in support of those findings, are detailed below:

Impact AIR-1: Fugitive dust emissions during project construction could result in a cumulatively considerable net increase in particulate matter concentrations for

which the region is non-attainment under federal and State of California ambient air quality standards. (PS)[1]

EFFECT: Project construction activities could result in a cumulatively considerable net increase in particulate matter for which the region is non-attainment under federal and state ambient air quality standards.

MITIGATION: Mitigation Measure AIR-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen temporary construction-related fugitive dust emissions during Project construction.

FINDING: Implementation of Mitigation Measure AIR-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen temporary construction-related fugitive dust emissions during Project construction impacts to a less-than-significant level (Initial Study page19).

Impact BIOLOGY-1: Removal of trees and other activities during project construction may result in the inadvertent loss of bird nests in active use unless appropriate precautions are followed. (PS)

EFFECT: Removal of trees could result in inadvertent loss of bird nests.

MITIGATION: Mitigation Measure BIOLOGY-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts of loss of bird nests and birds protected under the Migratory Bird Treaty Act during Project construction.

FINDING: Implementation of Mitigation Measure BIOLOGY-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts of tree removal and bird nest loss to a less-than-significant level (Initial Study page 29).

Impact CULTURAL-1: The project could unearth archaeological deposits, thereby causing a substantial adverse change in the significance of a historical resource as defined in California Environmental Quality Act (CEQA) Guidelines Section 15064.5. (PS)

EFFECT: Unearthing of archaeological deposits could change the significance of a historical resource.

MITIGATION: Mitigation Measure CULTURAL-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts of potentially unearthing archaeological deposits.

FINDING: Implementation of Mitigation Measure CULTURAL-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts of unearthing archaeological to a less-than-significant level (Initial Study page 35).

Impact CULTURAL-2: The project could unearth archaeological deposits, thereby causing a substantial adverse change in the significance of an archaeological

[1] PS: Potentially significant

resource as defined in California Environmental Quality Act (CEQA) Guidelines Section 15064.5. (PS)

EFFECT: Refer to Cultural 1.

MITIGATION: Refer to Cultural 1.

FINDING: Refer to Cultural 1.

Impact GEOLOGY-1: Strong seismic shaking could result in potential damage to structures and improvements. (PS)

EFFECT: Seismic shaking could damage structures and improvements.

MITIGATION: Mitigation Measure GEOLOGY-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts of seismic shaking.

FINDING: Implementation of Mitigation Measure GEOLOGY-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts of seismic shaking to a less-than-significant level (Initial Study page 40).

Impact GEOLOGY-2: Excavation, grading, and placement of new structural loads and fill could potentially increase slope instability and risk of landslides. (PS)

EFFECT: Excavation, grading, and placement of new structural loads and fill could potentially increase slope instability and risk of landslides.

MITIGATION: Mitigation Measure GEOLOGY-2 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to slope instability and risk of landslides.

FINDING: Implementation of Mitigation Measure GEOLOGY-2 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts of slope instability and landslides to a less-than-significant level (Initial Study page 42).

Impact GEOLOGY-3: Soil erosion and loss of topsoil could occur during project construction and operation.

EFFECT: Soil erosion and topsoil loss could occur during construction and operation.

MITIGATION: Mitigation Measure GEOLOGY-3 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to erosion and topsoil loss.

FINDING: Implementation of Mitigation Measure GEOLOGY-3 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts of soil erosion and topsoil loss to a less-than-significant level (Initial Study pages 42-43).

Impact GEOLOGY-4: Paleontological resources on the project site could be encountered and damaged during construction-related excavation and grading. (PS)

EFFECT: Paleontological resources could be damaged during excavation and grading.

MITIGATION: Mitigation Measure GEOLOGY-4 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to paleontological resources

FINDING: Implementation of Mitigation Measure GEOLOGY-4 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts on paleontological resources to a less-than-significant level (Initial Study page 45).

Impact HAZARDS-1: An accidental release of hazardous materials could occur during project construction. (PS)

EFFECT: During construction, an accidental release of hazardous materials could occur.

MITIGATION: Mitigation Measure HAZARDS-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to release of hazardous materials.

FINDING: Implementation of Mitigation Measure HAZARDS-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts related to the accidental release of hazardous materials to a less-than-significant level (Initial Study page 51).

Impact HAZARDS-2: The proposed project could increase the risk of wildfire during construction and operation due to equipment use that could generate sparks. (PS)

EFFECT: During construction and operation, the risk of wildfire could be increased by use of equipment that could generate sparks.

MITIGATION: Mitigation Measure HAZARDS-2a and 2b identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to wildfire risk.

FINDING: Implementation of Mitigation Measure HAZARDS-2a and 2b identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts related to wildfire risk to a less-than-significant level (Initial Study page 53).

Impact HYDROLOGY-1: Project construction activities could result in erosion and movement of sediments into creeks and the release of hazardous materials, which can degrade water quality. (PS)

EFFECT: Water quality could be degraded by construction activities.

MITIGATION: Mitigation Measure HYDROLOGY-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to water quality degradation.

FINDING: Implementation of Mitigation Measure HYDROLOGY-1 identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts related to wildfire risk to a less-than-significant level (Initial Study pages 55-56).

Impact NOISE-1: Project construction could result in significant increases in ambient noise levels. (PS)

EFFECT: Ambient noise levels could increase significantly during construction.

MITIGATION: Mitigation Measure NOISE-1 (a-c) identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to ambient noise levels during construction.

FINDING: Implementation of Mitigation Measure NOISE-1 (a-c) identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts related to ambient noise levels to a less-than-significant level (Initial Study pages 68-69).

Impact WILDFIRE-1: The proposed project could increase the risk of wildfire. (PS)

EFFECT: The project could increase the risk of wildfire.

MITIGATION: Mitigation Measure HAZARDS-2a and 2b identified in the Initial Study/Mitigated Negative Declaration will substantially lessen potential impacts related to wildfire risk.

FINDING: Implementation of Mitigation Measure HAZARDS-2a and 2b identified in the Initial Study/Mitigated Negative Declaration will substantially lessen impacts related to wildfire risk to a less-than-significant level (Initial Study page 81).

Section 3 - Location and Custodian of Records. The location and custodian of records with respect to all of the relevant documents and any other material which constitutes the administrative record for the Project and the Initial Study/Mitigated Negative Declaration are as follows:

Mr. Drew McIntyre
North Marin Water District
999 Rush Creek Place
Novato, CA 94945-2426

The Initial Study/Mitigated Negative Declaration and MMRP are and have since November 15, 2019 been: (1) on file in at the District Office and (2) available for inspection by any interested person during normal business hours.

Section 4 - Adoption of Initial Study/Mitigated Negative Declaration and MMRP. That the Board hereby adopts the Initial Study/Mitigated Negative Declaration and the MMRP, including all of the mitigation measures set forth in the MMRP.

Section 5 - Approval of Project. The Board hereby approves the Project as identified and evaluated in the Initial Study/Mitigated Negative Declaration and authorizes the District staff to take all steps necessary or appropriate to proceed with the Project.

Section 6 - Notice of Determination. That the Board hereby directs District staff to file, with the Marin County Clerk, the Notice of Determination, in the form attached hereto as **Attachment E** within five (5) working days after the Board's adoption of the Initial Study/Mitigated Negative Declaration.

* * *

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 20th day of October, 2020, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAINED:

(SEAL)

Theresa Kehoe, Secretary
North Marin Water District

MEMORANDUM

September 21, 2020

To: Carmela Chandrasekera, North Marin Water District

From: Amy Skewes-Cox, AICP

Re: **Responses to Comments on Initial Study for North Marin Water District (NMWD) Old Ranch Road Tank No. 2 Project**

INTRODUCTION

The Initial Study for the NMWD Old Ranch Road Tank No. 2 Project was distributed for public review from November 15, 2019 to December 16, 2019. The following people/agencies submitted comments:

- California Department of Fish and Wildlife
- R. Kraig Knowlton
- Tyna Jensen
- Nancy Moxie

The comments can be found in **Appendix A** of this memorandum. Comments made at the public hearing of January 7, 2020 are also addressed below.

COMMENTS BY CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

The comments from CDFW in their letter dated December 16, 2019 focused on the possible presence of the Northern spotted owl (a threatened species pursuant to the California Endangered Species Act and the Federal Endangered Species Act), sensitive natural communities and oak woodland, and special-status plants. The letter also summarizes the regulatory authority of CDFW, mentioned that any site-specific environmental data being provided to CDFW for their database, and the payment of applicable fees at the time of filing the Notice of Determination. NMWD is aware of the need to provide data and will also be paying the applicable fees at the time of filing the NOD with the Marin County Clerk.

To better understand the concerns of CDFW and review site conditions, a field visit was conducted on February 5, 2020 with staff from CDFW, the District and the Initial Study consulting biologist. This consisted of: Amanda Culpepper, Environmental Scientist, and Karen Weiss, Senior Environmental Scientist, from CDFW; Carmela Chandrasekera, Project Engineer with the District; and Jim Martin, Principal of Environmental Collaborative, the consulting biologist who prepared the Biological Resources section of the Initial Study. During the field visit, the proposed access road alignment and location of the replacement water tank were inspected. The issues raised in the CDFW comment letter were reviewed, information gathered to address those comments was shared, and further input was received by Ms. Culpepper and Ms. Weiss on what additional analysis or project measures they believed were necessary. This included further survey work on the potential for nesting by northern spotted owl and special-status plants, and further assessment of proposed tree removal and some type of compensatory measures to address impacts on woodland habitat.

The following are the responses to the CDFW comments, which include summaries of additional analysis performed since distribution of the Initial Study in November of 2019:

Northern Spotted Owl

Although northern spotted owl (*Strix occidentalis caurina*) was not specifically referred to in the Biological Resources section of the Initial Study, the potential for suitable habitat for this and other special-status species was considered during the field reconnaissance survey and habitat suitability analysis performed by the Initial Study biologist. Northern spotted owl is a State and federally-listed threatened species, which typically occurs in forest and dense woodland habitat along the Pacific coast from southern British Columbia to Marin County in northern California. It typically nests on platforms in large trees and will use abandoned stick nests of other bird species. In the southern part of its range through Marin County, dusky-footed woodrat tends to serve as the primary prey base for northern spotted owl.

Review of the Spotted Owl Observations Database maintained by the California Natural Diversity Database (CNDDB) indicates spotted owl occurrences in the surrounding area, but no records within a quarter-mile of the site. Because of its sensitivity, this data is not typically disclosed in environmental documents of public circulation and was therefore not included in Figure 6 on page 28 of the Initial Study.

According to the CNDDB records, reported northern spotted owl nest activity centers are located about a mile southeast and a little over a mile northwest of the site, respectively. According to records from the Spotted Owl Observations Database, an owl call response was heard during call surveys performed by Point Blue Conservation Science (Point Blue) in May and June of 2017 from the dense forest and woodland in the Indian Valley Open Space area about a half-mile to the southeast of the site. Similarly, call responses were heard during call surveys performed by Point Blue in the months of April, May, June and July of 2018 in a cluster of observations about a mile to the west of the site. A single observation about a half-mile to the north of the site was reportedly a dead bird found in December of 2014.

The site does not provide typical nesting or foraging habitat for northern spotted owl, as confirmed during the field reconnaissance surveys in August 2019. No woodrat nests, the primary prey base for northern spotted owl in Marin County, were observed in the open, grassland-covered understory of the entire site. No stick nests or evidence of any other raptor nesting activity (white wash, feathers, pellets) were observed in any of the trees on the site, and the open canopy of the largely deciduous woodland cover is not typically used for nesting by northern spotted owl. Call surveys have been conducted in the past by Point Blue for the open space and watershed lands to the southeast and southwest of the project vicinity, but not from the immediate site vicinity based on records from the Spotted Owl Observations Database. The reported observations to the southeast and northwest of the site are from dense forest and woodland cover characteristic of northern spotted owl habitat in Marin County, but these habitat conditions are not found on the site.

CDFW recommended that additional mitigation measures be implemented to reduce potential impacts on northern spotted owl to less-than-significant levels. These include 1) restrictions on any activities during the nesting season (February 1 to July 31) unless protocol surveys confirm absence of any breeding owls that could be affected by construction activities, and 2) providing compensatory mitigation at a 2:1 ratio for the 0.63 acres of habitat affected by the project. However, the need for construction restrictions, protocol surveys, and compensatory mitigation would only apply if essential habitat and known activity centers for northern spotted owl were affected by the project, which is not the case.

During the February 2020 field visit to the site, CDFW representatives continued to express concerns over potential impacts on northern spotted owl, in part because of the lack of past survey data for the immediate site vicinity. Point Blue was subsequently retained by the District to conduct protocol-level surveys of the site vicinity. Night-time call surveys were conducted from two locations (the proposed tank site and the proposed access point off of Old Ranch

Road) on April 9, May 11, 20, and 28, and on June 8 and 18, 2020. There was no detection of northern spotted owl on April 9, 2020. For the subsequent visits, each time a northern spotted owl was detected at night, compass bearings were taken and the approximate distance from the observer was mapped. The individual owl moved around each night during the course of the visit, so multiple compass bearings were taken and approximate locations mapped. Follow-up daytime surveys to search for individual owls and signs of nests were performed on May 12, 14, and 21, and June 9, 2020. Daytime searches focused on the areas where owl activity had been mapped the night before. The ability to conduct daytime follow-up surveys was limited because of a lack of access to one private property where most of the nighttime detections were located west of the tank location. A copy of the report of findings by Point Blue is contained in **Appendix B**.

During the six night-time surveys, only one northern spotted owl was ever detected on a given night. No spotted owls or nests were detected during the daytime follow-up surveys. Point Blue was able to determine the sex of the northern spotted owl as male on three of the five nights with detections. On the other two nights, the individual owl made calls that are not distinguishable between sexes. For the five nights with detections, the individual owl was detected primarily west (including bearings to the northwest and southwest) and south of the site. Detection distance estimates ranged from just over 1,000 feet from the proposed tank location to as close as about 100 feet for the closest detection. However, for the closest detection, that owl likely flew-in closer to the biologists in response to the playback of northern spotted owl recordings, since the individual owl was initially detected farther from the site on that visit.

Based on the results of the protocol surveys, the area to the southwest of the site was classified as occupied by a Resident Single male northern spotted owl in 2020. The activity center[1] for this individual was mapped about 700 feet southwest of the proposed tank site. No female northern spotted owl or evidence of nesting was observed at any point during the survey effort. Habitat immediately surrounding the proposed tank site was not typical of roosting or nesting habitat for northern spotted owl. All areas accessed during daytime surveys were relatively open and were predominately a mix of oak-bay forest. These areas appeared adequate for foraging and possibly roosting habitat but were more open than the hardwood forest typically used for nesting by northern spotted owl. No active nests of northern spotted owl were detected within a quarter-mile of the project site, consistent with previous data from the Spotted Owl Observations Database.

Mitigation Measure BIO-1 in the Initial Study calls for the conduct of preconstruction nesting surveys if vegetation removal and construction are initiated during the nesting season (February through August), and would serve to address the potential for any raptor nesting (including the remote instance of any nesting northern spotted owls if a pair chose to nest in atypical habitat). This is an even broader nesting window than that specified in the recommendation by CDFW (February through July) and would require consultation with CDFW in determining an appropriate nest setback zone if any active nests are encountered. No loss of nesting or foraging habitat for northern spotted owl is anticipated as a result of project implementation, there are no known nest activity centers within a mile or more of the project site, and no incidental take or significant impacts on northern spotted owl are anticipated. No additional mitigation is considered necessary, based on the results of the 2020 survey results, habitat conditions and distance between the project site and known nest activity centers for northern spotted owl.

[1] Activity centers are a location or point representing "the best of detections" such as nest stands, stands used by roosting pairs or territorial singles, or concentrated nighttime detections. According to survey protocols, each area with northern spotted owl detections is assigned an "Activity Center" for every year the area is surveyed. The Activity Center is a single location determined by biologists, based on detections during the survey period. The placement of an Activity Center is based on the location of the highest-ranking detection in a given area. For example, for a pair with a confirmed nest, the Activity Center would be placed at the nest site. In the absence of a confirmed nest, the hierarchy of detections to determine an Activity Center is: nest stand, daytime pair, daytime Resident Single, nighttime pair, and multiple nighttime single detections.

Sensitive Natural Communities and Oak Woodland

As described in the Biological Resources section of the Initial Study, no sensitive natural communities are present on the project site. As indicated in **Figure 1**, mapping prepared by the Marin County Open Space District shows the site is located in an area where several vegetation associations intergrade, dominated by coast live oak woodlands and lower elevation mixed broadleaf forest. The CDFW tracks the occurrences of sensitive plant communities that are either known or believed to be of high priority for inventory in the CNDDB. Natural communities are ranked using the NatureServe's Heritage Program methodology defined for Natural Community Conservation Ranks, with a global rank for the alliance's rarity and threat globally, and the state rank for its rarity and threat in California. A natural community association with a rank of 1 to 3 is considered a "sensitive natural community" type and should be addressed as part of the environmental review processes of CEQA. The CNDDB periodically updates alliance ranking in its *California Natural Community List.*[2]

Using the California Native Plant Society's on-line *A Manual of California Vegetation*[3] classification system, the site most closely meets the membership rules of the Quercus agrifolia Woodland Alliance (Coast live oak woodland) or the Quercus Forest Alliance (Mixed oak forest). Coast live oak woodland has a Global Rarity of G4 and State Rarity of S4, and mixed oak forest has a Global Rarity of G4 and a State Rarity of S4. Neither of these alliances has rarity rankings that indicate a high inventory priority with the CNDDB or is considered sensitive. While some oak associations do have a State Rarity of S3, the woodlands and open non-native grasslands on the site do not form distinct stands that could be assigned to one of these associations with a high inventory ranking.

With regard to the estimated tree loss associated with project implementation, a detailed discussion is provided under Criterion e of the Biological Resources section on pages 31 and 32 of the Initial Study. Of the estimated 66 trees to be removed based on the assessment performed in 2019, all but 12 have trunk diameters great than 10 inches (ranging from 12 to 18 inches), and none qualify as a "heritage" sized tree under the Marin County Code. The high density and successful establishment of young trees in this area is most likely due to the cessation of domestic grazing in the area, fire prevention, and absence of any vegetation management on the site. However, numerous trees had died by the time the field visit was conducted with CDFW in February 2020. A follow-up survey was performed on April 16, 2020 to provide a reassessment of which trees proposed for removal were still alive, and conduct a follow-up survey for special-status plant species that may not have been detected during the survey conducted on June 24, 2019. Based on the reassessment, only 33 live trees are to be removed to accommodate proposed grading and improvements.

As indicated in **Figure 2**, the site is located in the Wildland Urban Interface (WUI) where the threat of wildfire is considered a high risk. Fire Safe Marin and CalFire have developed guidelines for establishing and maintaining defensible space along roadways and structures. Planting more trees as replacement mitigation at ratios of from 3:1 to 15:1, as recommended in the comment letter from CDFW, would be in conflict with the vegetation management and defensible space guidelines in the WUI, and are not warranted for the project given the condition of the woodland on the site. These factors were reviewed with CDFW staff during the February 2020 field visit. However, some compensation for trees to be removed was still considered necessary by CDFW representatives. The option of providing a reduced tree replacement ratio on-site together with other habitat improvements such as invasive species removal was discussed briefly. French broom is beginning to spread through the woodland along the access road alignment and edge of Old Ranch Road, and will eventually form dense thickets compromising habitat values and shading out understory cover unless adequately controlled.

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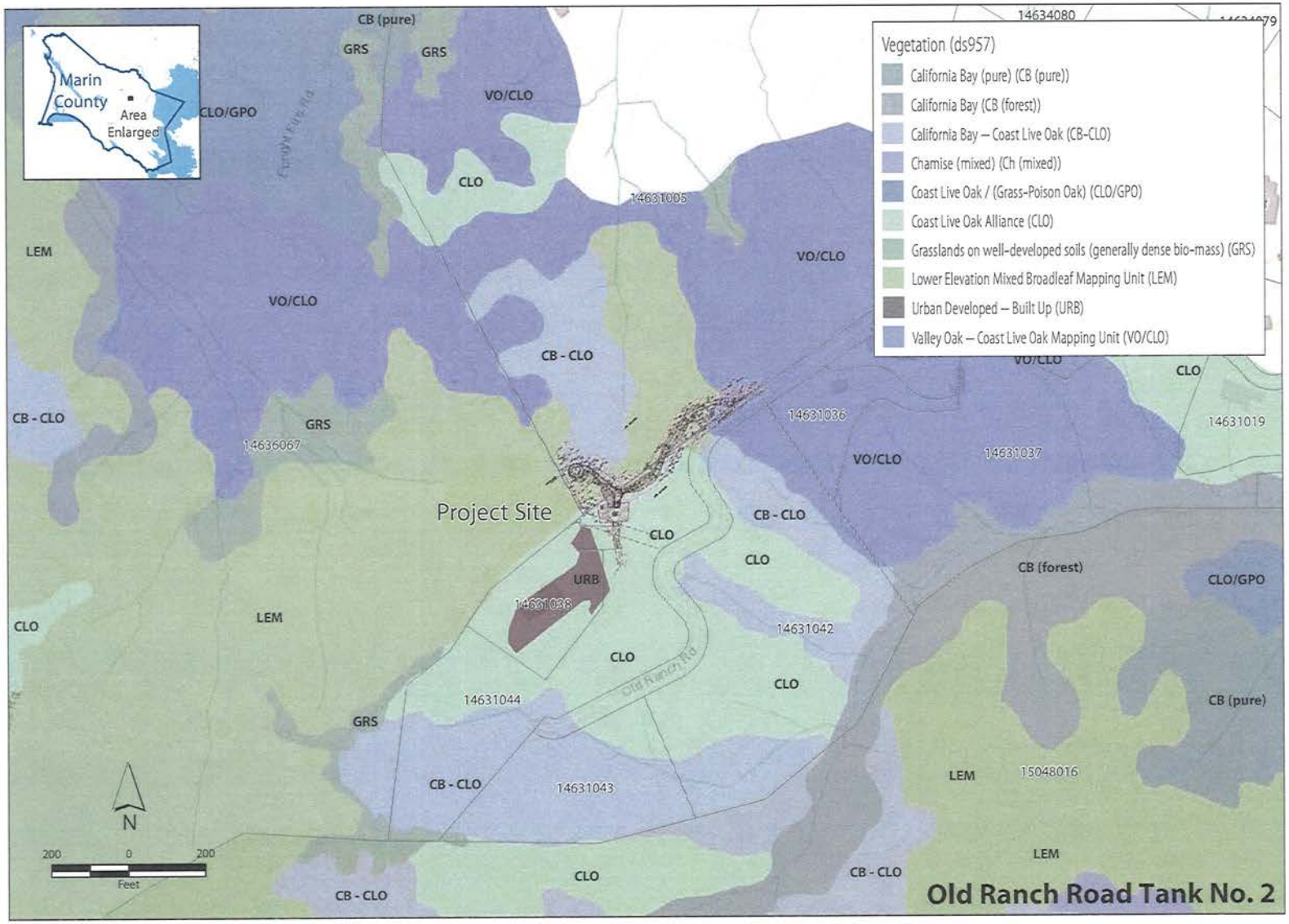
[2] California Department of Fish and Wildlife, 2019. California Natural Community. California Natural Diversity Data Base, Biogeographic Data Branch, November 8.

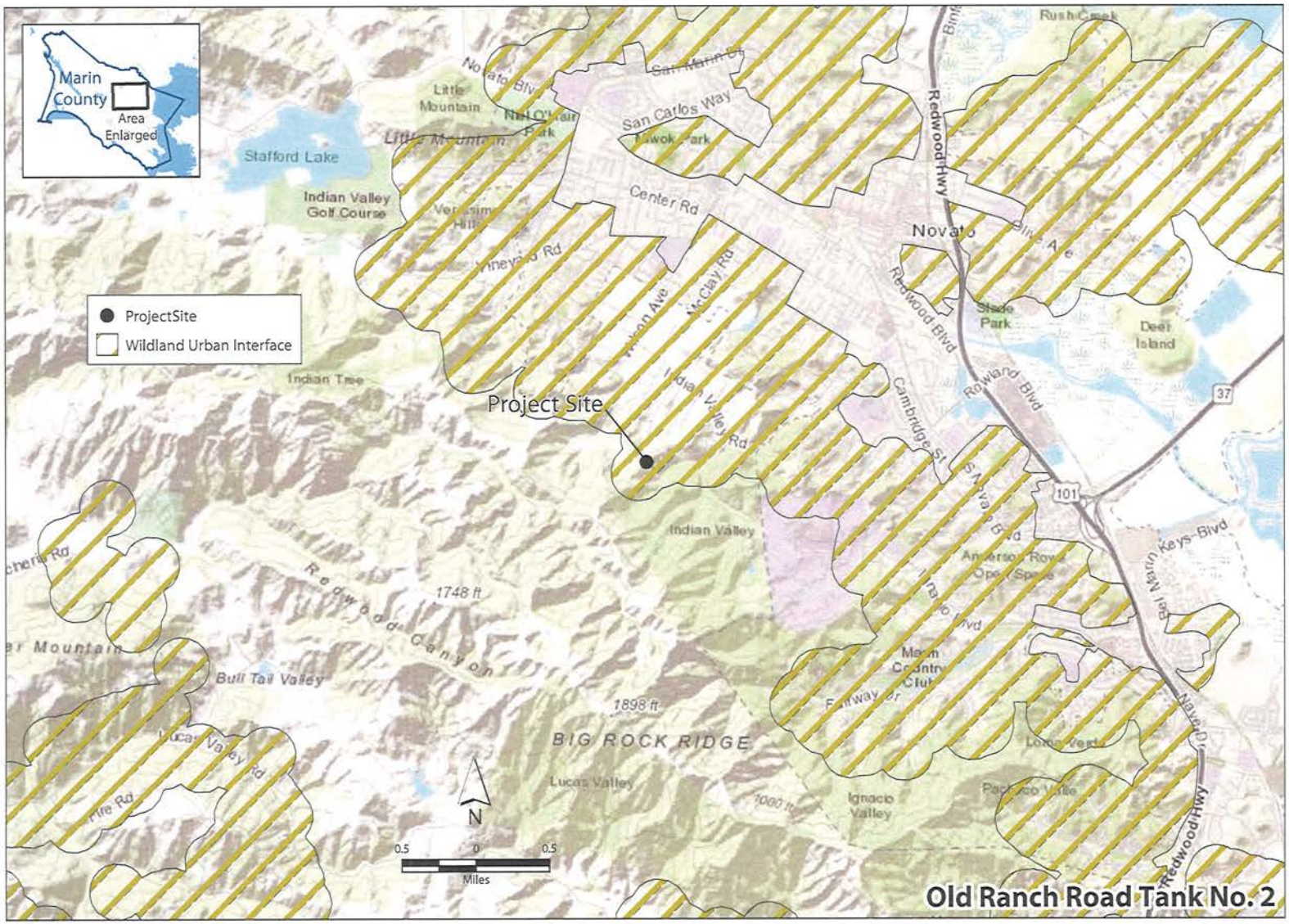
[3] Sawyer, J.O. and T. Keeler-Wolf, 1995. A Manual of California Vegetation. On-line version managed by California Native Plant Society.



SOURCES: DFG BIOS data (Vegetation - Marin County Open Space District [ds957]) accessed on December 28, 2019; USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 8/10/2020.

Figure 1

VEGETATION MAP



SOURCES: MarinMap accessed on December 28, 2019; USGS base map by ESRI and NGS.
Map produced by www.digitalmappingsolutions.com on 8/10/2020.

Figure 2

WILDLAND URBAN INTERFACE (WUI)

In response to the continued concerns of CDFW, the District authorized preparation of an Oak Woodland Mitigation Plan (OWMP) that will be implemented as part of the project. The OWMP is attached (Sheet M-1.0) in **Appendix C** and basically provides for a 1:1 replacement of native trees removed as part of the project, and removal of French broom and other invasive species within the easement lands that contain the proposed tank and access road off of Old Ranch Road. A total of 33 1-gallon sized oaks would be planted in the available canopy openings along the proposed access road. Plantings would be irrigated and maintained for a minimum of five years, and enclosed by deer protective fencing to allow the sapling trees grow without damage from browsing. An estimated 0.97 acres of easement lands would be treated for invasive species removal, allowing native grassland and forb plantings on graded slopes to become established and preventing French broom and other invasive species from further compromising the habitat values of the site vicinity. Implementation of the OWMP would adequately address the tree removal required to accommodate this critical infrastructure project.

As discussed under "Criterion e" in the Biological Resources section of the Initial Study, as a public water district, NMWD is not subject to the provisions of the Marin County Code, although it typically strives to comply with the intent of these regulations. In this case regarding proposed tree removal, potential conflict with the Marin County Code is considered less than significant for the following reasons. First, the proposed alignment for the new road and location of the new tank have generally been sited to minimize tree removal. Providing replacement plantings for trees to be removed at ratios of from 3:1 to 15:1 as recommended by CDFW in their comment letter would contribute to further densification of the existing conditions in the woodlands on the site, and it is unlikely these trees would thrive. Providing replacement plantings at these ratios would also create overcrowded conditions that may compromise the health of the existing established trees in the area. In addition to the 1:1 replacement plantings to be implemented as part of the OWMP, natural regeneration will continue at the site, as is currently taking place, and additional new trees will eventually become established along the margins of the new maintenance road where their survival is possible under natural conditions. For these reasons, no major conflicts with the intent of the Marin County Code are anticipated; the impact would be considered less than significant, and no mitigation is necessary.

SPECIAL-STATUS PLANTS

As concluded under the discussion in "Criterion a" on page 26 of the Biological Resources section of the Initial Study, a number of special-status plant species are known from open woodlands and grasslands of eastern Marin County, but none were detected during the systematic survey of the site or are believed to be present. All of the special-status species reported by the CNDDB in the surrounding area of Novato as indicated in Figure 5 on page 27 of the Initial Study would have been identifiable and distinguishable during the June and August surveys conducted during preparation of the Initial Study. However, there is a remote possibility that early flowering special-status plant species known from eastern Marin County, such as Marin checker lily (*Fritillaria lanceolate* var. *tristulis*) or fragrant fritillary (*Fritillaria liliaceae*), could have been present on the site. Although conditions on the site are not ideal for either of these species, and their fruiting bodies tend to be relatively conspicuous even after the flowers have dried, it was considered possible that there was a remote potential for presence in the site vicinity for these and other early flowering herbaceous special-status plant species.

To address the concerns of CDFW and confirm absence of any special-status plant species, a third systematic survey of the site was conducted on April 16, 2020. As with the systematic surveys conducted in June and August 2019, all species were identified to the level necessary to determine rarity. A list of plant species observed during the systematic surveys for special-status plants is contained in **Appendix D**. No special-status plant species were encountered during the subsequent survey or are believe to be present on the site and no additional mitigation is considered necessary.

Comments by R. Kraig Knowlton

Mr. Knowlton comments on the likely visibility of the proposed water tank and the need to break up the visual shape of the tank on the ridge. Pages 11 and 12 of the Initial Study address potential aesthetic impacts of the project, using established significance criteria of the California Environmental Quality Act. NMWD plans to paint the tank a dark green color that would blend with the surrounding woodlands. The tank size and shape have been designed to be the most economical way to provide the needed water storage, and breaking up the visual shape of the tank would not significantly change the visibility of the tank.

Comments by Tyna Jensen

Ms. Jensen spoke with Carmela Chandrasekera of NMWD to more clearly understand the location of her property as related to the proposed project. Ms. Chandrasekera provided a map of the area and answered her questions about the location of tree removal.

Comments by Nancy Moxie

Ms. Moxie spoke with Mr. Vogler at NMWD about the concern of nesting owls, erosion control, the legal right of Maiero to use Old Ranch Road, and falling oak trees being the responsibility of NMWD due to getting too much water. Nesting owls (northern spotted owl) have been addressed in the response to CDFW comments above and in the discussion on pages 26 through 30 of the Initial Study. Erosion impacts and a recommended mitigation measure are included on page 55 of the Initial Study. The legal use of Old Ranch Road is not related to the Initial Study impact analysis. Any oak trees that posed a danger on NMWD property would be the responsibility of NMWD.

Comments from Public Hearing Held January 7, 2020

A public hearing was held by the Board of Directors of the North Marin Water District on January 7, 2020 at the NMWD offices in Novato. Three members of the public testified, followed by comments from individual Directors. These are summarized below and responses are provided.

Dave Jones: Discussed how neighbors are planning to resurface Old Ranch Road and want to delay this until after construction. The road is quite narrow and construction vehicles may prevent two vehicles from passing, requiring long backups to pullout locations. He would like to work with NMWD to get bids for "pre-construction" conditions of the road and get bids again after construction to determine if damage is done by NMWD construction vehicles. He would request that NMWD pay for any increased damage.

Response: This issue is not related to the Initial Study or significance criteria of the California Environmental Quality Act (CEQA). At the end of the meeting, Mr. Drew McIntyre, General Manager of NMWD, explained that it is standard District practice to repair any roads damaged by NMWD construction.

Nancy Moxie: Concerned about the use of Old Ranch Road and tree removal. Mentioned that road used to go to Nicasio and there may be old water lines under the road. Also concerned about owls and other wildlife as she knows of many owls using the area. Suggested biologist visit the site at night.

Response: Refer to responses to California Department of Fish and Wildlife comments. Issue of water line is not related to CEQA significance criteria, but NMWD took note of this concern.

Darren Fix: Discussed concerns about impacts to Old Ranch Road and the water main that may have been constructed about 1955. Suggested getting new water main at time of construction. Old Ranch Road is too narrow for trucks to pass cars going in opposite direction.

Response: See response above for comment by Dave Jones.

Public hearing closed.

Directors' Comments

The following comments were made by some of the NMWD Directors. These comments did not specifically address shortcomings of the Initial Study but are included herein to provide a record of what was discussed. No changes to the Initial Study were found necessary based on comments provided.

Director Petterle: Noted that public comments are important and NMWD needs to consider costs, environmental issues and other issues all together. Purpose of CEQA is to be a public disclosure document and NMWD needs to acknowledge concerns and possible need to revise the project should it be warranted.

Director Joly: Agrees that CEQA is very important for being a public disclosure document.

Director Grossi: Requested to know where the private road began and Mr. Rocky Vogler showed on a map. Asked about the Mitigation Monitoring and Reporting Program (MMRP) (found in appendix of Initial Study) and how owls would be monitored. Amy Skewes-Cox explained that surveys would be done as needed prior to construction for nesting birds and this is part of the MMRP. Mr. Grossi also expressed concern about the road condition. Mr. Vogler explained that construction contract will address road conditions and NMWD will pay to bring road to pre-project conditions if any damage takes place. There will also be some road improvements prior to construction where large potholes currently exist

Director Fraites: Concerned about owl issues. Mentioned another project where owls were of concern but the owls remained without being dislocated. Wants to minimize flora and fauna damage from project.

APPENDIX A
Comments on Initial Study

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534
(707) 428-2002
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 16, 2019

Mr. Rocky Vogler, Chief Engineer
North Marin Water District
99 Rush Creek Place
Novato, CA 94945

Subject: Old Ranch Road Tank No. 2, Initial Study/Mitigated Negative Declaration, SCH #2019119046, City of Novato, Marin County

Dear Mr. Vogler:

The California Department of Fish and Wildlife (CDFW) received a Notice of Completion of an Initial Study/Mitigated Negative Declaration (IS/MND) from the North Marin Water District (NMWD) for the Old Ranch Road Tank No. 2 (Project) pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is a Trustee Agency pursuant to CEQA Section 15386 and has authority to comment on projects that could impact fish, plant or wildlife resources. CDFW is also considered a Responsible Agency under CEQA Section 15381 if a project requires discretionary approval, such as permits issued under the California Endangered Species Act (CESA), Lake and Streambed Alteration (LSA) Program, and other provisions of the Fish and Game Code that afford protection to the State's fish and wildlife trust resources.

REGULATORY REQUIREMENTS

California Endangered Species Act

CESA prohibits unauthorized take of candidate, threatened, and endangered species. Therefore, if take[1] of northern spotted owl (*Strix occidentalis caurina*) or any species listed under CESA cannot be avoided either during Project activities or over the life of the Project, a CESA Incidental Take Permit (ITP) must be obtained (pursuant to Fish and Game Code Section 2080 *et seq.*). Issuance of a CESA ITP is subject to CEQA documentation; therefore, the CEQA document should specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the proposed Project will impact any CESA-listed species, early

[1] Fish and Game Code §86: "Take" means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

consultation is encouraged, as significant modification to the Project and mitigation measures may be required to obtain a CESA ITP. More information on the CESA permitting process can be found on the CDFW website at https://www.wildlife.ca.gov/Conservation/CESA.

Lake and Streambed Alteration

CDFW requires an LSA Notification, pursuant to Fish and Game Code section1600 et. seq., for project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW will consider the CEQA document for the Project and may issue an LSA Agreement. CDFW may not execute the final LSA Agreement (or ITP) until it has complied with CEQA as a Responsible Agency.

Migratory Birds and Raptors

CDFW also has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Fish and Game Code sections protecting birds, their eggs, and nests include 3503 (regarding unlawful take, possession or needless destruction of the nests or eggs of any bird), 3503.5 (regarding the take, possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful take of any migratory nongame bird). Fully protected species may not be taken or possessed at any time (Fish and Game Code Section 3511). Migratory raptors are also protected under the federal Migratory Bird Treaty Act.

PROJECT DESCRIPTION SUMMARY

Proponent: North Marin Water District (NMWD)

Objective: The Project would construct a 100,000-gallon water tank on a new building pad and a new paved access road, with a total footprint of 0.63 acres. The Project will remove 71 trees: 62 oaks (*Quercus* spp.), 4 madrones (*Arbutus menziesii*), and 5 California bay trees (*Umbellularia californica*).

Location: The Project is located off Old Ranch Road near the City of Novato, Marin County. The Project site occurs near Latitude 38° 5' 1.83" N, Longitude 122° 36' 2.64" W, Assessor's Parcel Numbers 146-310-05, 146-310-23, and146-310-44.

COMMENTS AND RECOMMENDATIONS

CDFW offers the following comments and recommendations below to assist NMWD in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions may also be included to improve the document.

Northern Spotted Owl

The IS/MND does not disclose northern spotted owl (*Strix occidentalis caurina;* NSO) as a potential sensitive species in the Project area and currently does not discuss the Project's potential impacts to NSO; no Mitigation Measures or pre-construction surveys are proposed. Northern spotted owl is a threatened species pursuant to CESA and the federal Endangered Species Act and is known to occur in the vicinity of the Project. A recent search of the Spotted Owl Observations Database[2] returned positive detections of an individual NSO within approximately 0.5 miles of the Project, as well as an NSO site (MRN0104) less than one mile from the Project. In addition, the *Northern Spotted Owl Connectivity Modeling for the California Bay Area Linkage Network*[3] identifies the Project area as potential nesting/roosting habitat for NSO. Due to the classification of the area as potential breeding habitat and the proximity of these occurrences to the Project, the Project has the potential to significantly adversely impact NSO.

CDFW recommends including the following Mitigation Measures to reduce potential impacts to NSO to less-than-significant:

1. No Project activities shall occur during NSO nesting season (February 1 to July 31), except as provided in number 2 below. If Project activities must occur during NSO nesting season, a CESA Incidental Take Permit (ITP) may be warranted. CDFW recommends applying for a CESA ITP at least six months prior to the commencement of Project activities.

2. Prior to Project activities, a Qualified Biologist shall conduct NSO surveys following the U.S. Fish and Wildlife Service's (USFWS) *Protocol for Surveying Proposed Management Activities that May Impact Northern Spotted Owls* (2012) within 1.3 miles of the Project area. This may entail two years of six-visit surveys. If breeding NSO are detected during surveys, a Qualified Biologist should prepare an avoidance and minimization plan in consultation with CDFW that includes suitable buffer distances from all active nest sites. If suitable buffer distances from Project activities cannot be established in order to avoid disturbance, the Project should either wait until August 1 or until a Qualified Biologist has determined 1) NSO young have fledged or 2) the nest is no longer active, whichever comes first. Alternatively, the Project proponent can get a CESA ITP from CDFW prior to the start of Project activities.

   A Qualified Biologist should be familiar with NSO ecology, have proven success identifying NSO aurally and visually, and have at least two seasons of experience surveying for NSO using the USFWS protocol.

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[2]The Spotted Owl Observations Database is governed by the California Natural Diversity Database (CNDDB) license agreement, but is maintained as a separate database. Reviewing CNDDB alone excludes all NSO data. More information is available online: www.wildlife.ca.gov/Data/CNDDB/Spotted-Owl-Info

[3]California Bay Area Linkage Network layers are available on CDFW's Biogeographic Information and Observation System online mapping tool (https://www.wildlife.ca.gov/Data/BIOS). More information about these layers are available in the report *Critical Linkages: Bay Area and Beyond* (http://www.scwildlands.org/reports/CriticalLinkages_BayAreaAndBeyond.pdf).

3. The Project shall mitigate for the 0.63 acres of permanently removed habitat by preserving like habitat of equal or greater habitat value at a ratio of 2:1. If the mitigation lands will be on-site, the draft MND should include a detailed map showing the preserved land and it should specify that the preserved land area will be protected in perpetuity under a conservation easement or deed restriction.

Sensitive Natural Communities and Oak Woodland

The IS/MND states that "sensitive natural community types are absent from the site and vicinity of proposed construction" and therefore does not anticipate significant impacts and does not propose mitigation (page 30). CDFW maintains a list of Sensitive Natural Communities with over 1,500 vegetation associations identified as sensitive (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=153609&inline). This includes over 200 associations involving oak species. CDFW recommends that NMWD revise the analysis of potential impacts to sensitive natural communities, including providing a map of the sensitive communities at the Project site. The Marin County Open Space District undertook a vegetation mapping exercise in 2008 which is available as a layer titled *Vegetation – Marin County Open Space District* on CDFW's BIOS mapping tool. This may provide an initial identification of natural communities on the Project site that should then be field verified.

Regardless of the specific vegetation association, the Project site appears to be composed of oak woodland that will be removed by Project activities. The IS/MND identifies 62 oaks, 4 madrones, and 5 California bay trees that will be removed without any mitigation. Removal of old-growth oak trees, i.e., native oak trees that are greater than 15 inches in diameter, is a significant impact. Old-growth oaks and other hardwoods provide food and shelter for a variety of native species; and because the trees will be removed for a permanent access road and tank building pad, this is a permanent loss of habitat.

CDFW recommends including the following Mitigation Measures to reduce potential impacts to oak woodland to less-than-significant:

1. Mitigate for removed trees at the following replacement ratios:
    a. 3:1 replacement for trees 5-10 inches diameter at breast height (DBH)
    b. 5:1 replacement for trees 10-15 inches DBH
    c. 15:1 replacement for trees greater than 15" DBH

    Replacement plantings shall consist of 5-gallon saplings and locally-collected seeds, stakes, or other suitable nursery stock as appropriate, and shall be native species to the area adapted to the lighting, soil, and hydrological conditions at the replanting site. If acorns are used for replanting, each planting will include a minimum of three acorns planted at an approximately 2-inch depth to minimize predation risk. Large acorns shall be selected for plantings. Replacement oaks shall come from nursery stock grown from locally-sourced acorns, or from acorns gathered locally, preferably from the same watershed in which they are planted. Planted trees shall be irrigated for at least the first two years either via hand-watering or drip irrigation.

The NMWD shall monitor and maintain, as necessary, all plants for a minimum of five years to ensure successful revegetation. Planted trees and other vegetation shall each have a minimum of 80 percent survival at the end of five years. If revegetation survival and/or cover requirements do not meet established goals, NMWD is responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for five years after planting.

Some portion of native trees could be planted on-site at the staging area after Project activities are complete.

2. Submit a Restoration and Mitigation Plan to CDFW for review and acceptance. This plan will identify the specific locations for tree planting and verify the aforementioned Mitigation Measure.

Special-status Plants

The IS/MND states that a "systematic survey for rare plants was conducted on June 24, 2019, and a follow-up field reconnaissance survey was conducted…on August 29, 2019." (page 24). A partial list of identified plant species is included on page 25. Because the systematic survey was conducted in late June, it may have occurred outside of the blooming period for special-status plants that have the potential to occur on-site.

CDFW recommends including the following Mitigation Measures to reduce potential impacts to special-status plants to less-than-significant:

1. A Qualified Biologist shall conduct a survey during the appropriate blooming period for all special-status plants that have the potential to occur on the Project site prior to the start of construction. Surveys should be conducted following *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Natural Communities*, prepared by CDFW, dated March 20, 2018. The protocol can be found here: https://www.wildlife.ca.gov/Conservation/Survey-Protocols#377281280-plants. If special-status plants are found during surveys, the IS/MND should outline how the Project would be re-designed to avoid impacts to special-status plants to the greatest extent feasible. If impacts to special-status plants cannot be avoided completely during construction, the IS/MND should outline mitigation if impacts may still occur.

   A Qualified Biologist in this context should be knowledgeable about plant taxonomy, familiar with plants of the region, and have experience conducting botanical field surveys according to vetted protocols.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. [Pub. Resources Code, § 21003, subd. (e)].

Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data. The completed form can be submitted online or emailed to CNDDB at the following email address: cnddb@wildlife.ca.gov. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish and Game Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the IS/MND to assist NMWD in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Ms. Amanda Culpepper, Environmental Scientist, at (707) 428-2075 or amanda.culpepper@wildlife.ca.gov; or Ms. Karen Weiss, Senior Environmental Scientist (Supervisory), at karen.weiss@wildlife.ca.gov.

Sincerely,

Gregg Erickson

Gregg Erickson
Regional Manager
Bay Delta Region

cc: State Clearinghouse (SCH #2019119046)

Subject: Tank No 2 IS Comments
From: "R. Craig Knowlton" <c.knowlton@comcast.net>
Date: 12/16/2019 1:42 PM
To: Rocky Vogler <rvogler@nmwd.com>
CC: 'Jonell O'Day' <jonell@odayappraisal.com>

Mr Vogler,

In reviewing the proposed MND for the Old Ranch Road Tank #2, the section addressing "scenic vista" appears to contain errors. The project site is within a heavily wooded area in the western (not eastern) portion of Novato. The same section states the site is not visible from many locations however, it seems a large portion of Indian Valley can see the project site, which appears to be right on the ridge. It goes further and claims the project site is "not visible from public viewing locations", but it appears this was only accessed from the Old Ranch Road side of the project. A large metal tank jutting off the ridge many of us look at will be very visible.

While the full impact will not be apparent until after the trees are removed, NMWD should use story poles or something that will show the mass and visibility of the tank and consider camouflaging the tank with dark or natural colors once constructed. Consideration should also be made to break up the visual shape of the tank on the ridge.

I understand the need for the tank, but hope that the visual impact will be minimized.

Regards,
R. Craig Knowlton
Lillegård Stables LLC
15 Wildwood Lane
Novato, CA 94947
c.knowlton@comcast.net
ph: (415) 328-4480

Subject: 1.6207.20 -Old Ranch Road - CEQA
From: Carmela Chandrasekera <cchandra@nmwd.com>
Date: 11/18/2019 12:04 PM
To: Rocky Vogler <rvogler@nmwd.com>
CC: 'Amy Skewes-Cox' <amysc@rtasc.com>, Eileen Mulliner <emulliner@nmwd.com>

Rocky,

Tyna Jensen (1777 Indian Valley Road) came in and inquired about the project. She has received the NOI but she was not sure where her property is in reference to the project. I provided the attached map which shows her property in reference to the project location, a full size drawing of the site plan (similar to Figure 2) and where to find the CEQA document on our web site.

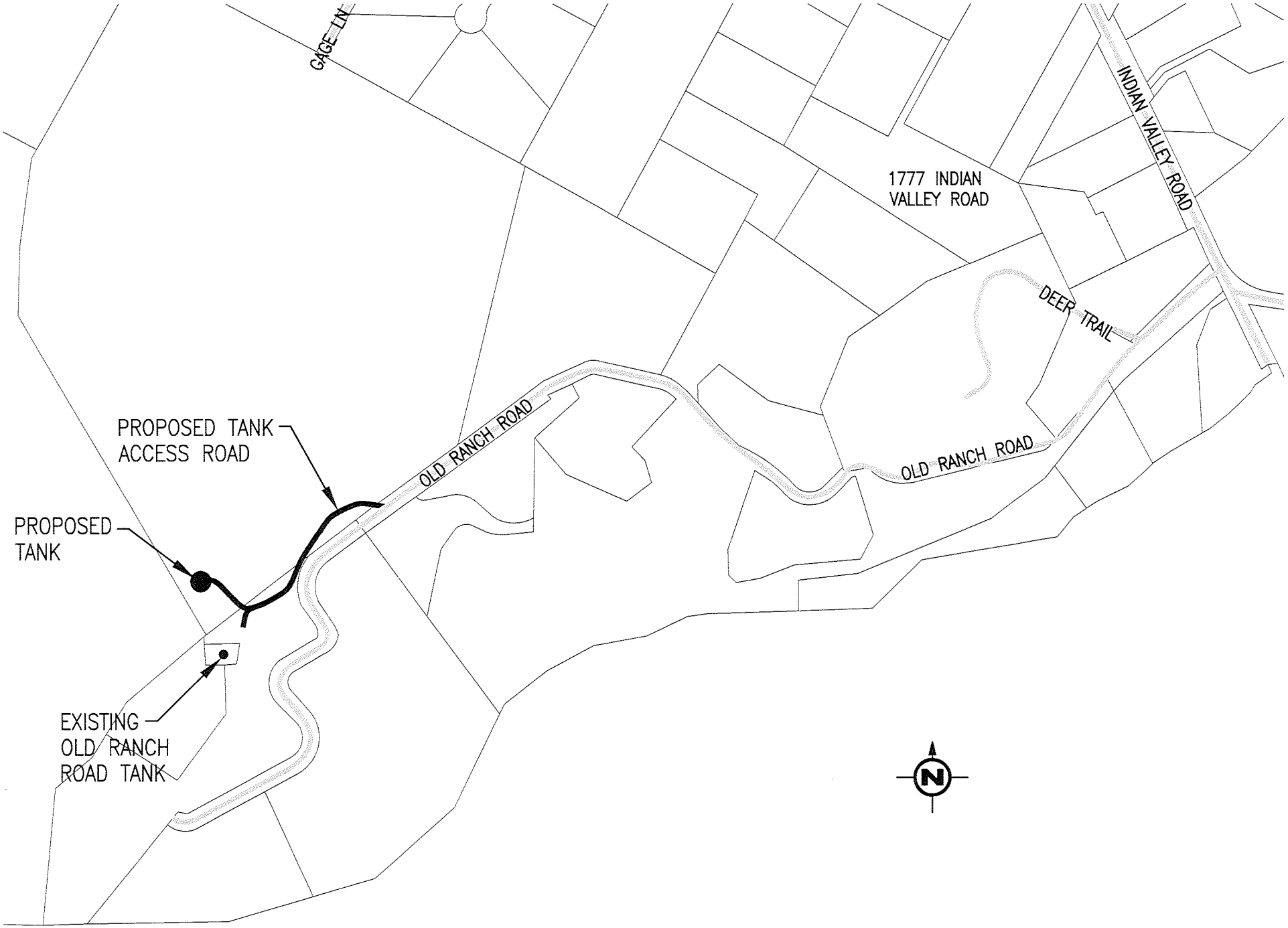
She was also asking where the tree removal is and I told her it is all along where the new access road is constructed.

Carmela

Carmela Chandrasekera, P.E.
North Marin Water District
999 Rush Creek Place
Novato, CA 94945
Direct Phone: 415-761-8903
Office: 415-897-4133 ext. 8903
Fax: 415 878-2049

Attachments:

ORR Neighborhood Map_1777 IVR.PDF	39.5 KB


GAGE LN
INDIAN VALLEY ROAD
1777 INDIAN VALLEY ROAD
DEER TRAIL
OLD RANCH ROAD
OLD RANCH ROAD
PROPOSED TANK ACCESS ROAD
PROPOSED TANK
EXISTING OLD RANCH ROAD TANK
N

R.Vogler

12/13/19 Telephone call with Nancy Moxie – resident at 85 Old Ranch Road

Nancy called to express concern regarding the project to construct a new tank on Old Ranch Road. Specifically, her concerns fell into following categories:

- Nesting owls
- Erosion control
- Maiero (405 Gage Lane) doesn't have legal right to use Old Ranch Road
- Falling oak trees are NMWD responsibility since they are getting too much water

NMWD BOARD OF DIRECTORS MEETING

DATE: 1/7/2020

SIGN IN (VOLUNTARY)*

Name	Address	Telephone No. / E-Mail
Amy Skewes-Cox	PO Box 472 Ross CA 94957	415-203-6454 / amyscoxinc.com
DARREN FOX	40 OLD RANCH Rd	707/228-0785
Dave Jones	50 Old Ranch Rd.	davidpricejones5@gmail.com

*No member of the public wishing to attend may be required to register his or her name, provide other information, complete a questionnaire, or otherwise fulfill any other requirement as a condition to his or her attendance. (Gov't Code Section 54953.3)

APPENDIX B
Northern Spotted Owl Survey Results

Point Blue
Conservation
Science

3820 Cypress Drive #11, Petaluma, CA 94954
T 707.781.2555 | F 707.765.1685

July 22, 2020

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

RE: 2020 Northern Spotted Owl survey results, Old Ranch Road Tank No. 2 Project, Novato, California.

Dear Mr. McIntyre,

This letter is in regards to proposed work by the North Marin Water District (NMWD) to construct a new water tank on Old Ranch Road in Novato, California (see map page 5).

I am a researcher at Point Blue Conservation Science (Point Blue) and have been studying Northern Spotted Owls (NSO; *Strix occidentalis caurina*) since 2006. The NSO was listed as a federally Threatened species by the U. S. Fish and Wildlife Service (USFWS) in 1990, and was state listed as Threatened in California in 2016.

USFWS Regulations. Because the proposed project will involve noise disturbance only and no habitat will be modified, it is only necessary to consider a 0.25 mile radius around the project area (USFWS 2012). For nesting pairs of NSO, the USFWS recommends a 0.25 mile (1,320 feet) noise disturbance buffer placed around the nest. The USFWS survey protocol (USFWS 2011) states: "Projects consisting of noise disturbance-only and that are within 0.25 mile of unsurveyed suitable nesting/roosting habitat, within 0.25 mile of known activity centers where nesting has been determined, or is unknown, can restrict operations from February 1-July 9."

Area Surveyed. Because of the federal regulations and the nature of the project, I used the tank location as the center of the 0.25 mile search radius. Additionally, I considered that trucks entering the work area would cause additional noise on Old Ranch Road, so in addition to the call point at the location of the new tank, I added a second call point on Old Ranch Road (see map on page 5). There were no known NSO sites in the vicinity of the work area. The nearest NSO site is California Natural Diversity Database (CNDDB) identification code MRN104, and was determined to be a non-nesting pair in 2020, and their activity center was approximately 0.84 miles (1.35km) from the tank location.

Activity Center. The USFWS (2012) defines an Activity Center for NSO in this way: "*Spotted owls have been characterized as central-place foragers, where individuals forage over a wide area and subsequently return to a nest or roost location that is often centrally-located within the home range (Rosenberg and McKelvey 1999). Activity centers are a location or point representing "the best of detections" such as nest stands, stands used by roosting pairs or territorial singles, or concentrated nighttime detections. Activity centers are within the core use area and are represented by this central location.*"

Each area with NSO detections is assigned an Activity Center for every year the area is surveyed that NSO are detected. The Activity Center is a single location determined by biologists, based on NSO detections during the survey period. The placement of an Activity Center is based on the location of the highest-ranking detection in a given area (CDFW 2019). For example, for a pair with a confirmed nest, the Activity Center would be placed at the nest site. In the absence of a nest site, the hierarchy of detections to determine an Activity Center when NSO are detected is: nest stand, daytime pair, daytime Resident Single, nighttime pair, multiple nighttime single (CDFW 2019).

USFWS Protocol. Surveys were conducted according to USFWS (2012) protocols. We conducted six night surveys over the course of the season. Each time we detected a NSO at night, we took compass bearings to the NSO, and mapped the approximate location(s), approximate distance from the observer, and the time of each call; the NSO moved around each night, so there are multiple compass bearings for each visit. If NSO were detected at night, we returned to the area the following day, to attempt to locate the NSO (see property access section below for exceptions to this protocol). For each survey date with a NSO detection, we selected one location that best represented the NSO location for that survey (often where we first detected the owl). For the entire season, we determined one location (Activity Center) that best represented the NSO location throughout the season. According to the USFWS protocol (USFWS 2012), a site is considered occupied by a Resident Single NSO if a single owl responds in the same general area on 3 or more occasions within the breeding season, with no response by an owl of the opposite sex after a complete survey; see protocol (USFWS 2012) for additional status designations and details. Because NSO are sensitive to disturbance, the exact locations and survey maps are not presented in this public document; however, all survey data including maps for each visit and the Activity Center designation have been submitted to NMWD.

Survey Results. Surveys were conducted by Point Blue biologists, Danaé Mouton, Caroline Provost, and me. A single NSO was detected on five of the six night surveys; we did not detect any NSO during daytime follow-up visits (Table 1). We were able to determine the sex of the NSO as male on the three of the five nights with detections; on the other two nights, the NSO made calls that are not distinguishable between sexes. We did not confirm more than one NSO on any survey, nor did we detect any female NSO, or evidence of nesting (Table 1). For the five nights with detections, the NSO was detected primarily west (including bearings to the northwest and southwest) and south of the tank site; the detection distance estimates ranged from just over 1,000 ft (~300 m) from the tank, to as close as about 100 ft (~30 m); for the closest detections, the owl likely flew-in closer to the biologists in response to the playback of NSO recordings by biologists, since the owl was initially detected farther from the biologist on that visit.

See Property Access section below for details on limited daytime survey availability. Because we only detected single NSO at night, we took the average of our 5 nighttime detection locations to determine the Activity Center. All survey data, including data sheets and maps for every survey, and a summary map showing NSO locations for each visit with a detection, and the 2020 Activity Center have been provided to NMWD.

Property access. Our ability to conduct daytime follow-up surveys was limited because of lack of access to one private property where most of the nighttime detections were located, west of the tank location. On May 14, I was able to access that property, accompanied by the landowner, and conduct a partial

follow-up survey from the nighttime detection on May 11. The daytime follow-up on May 21 only covered some of the areas where the male NSO had been detected the previous night (the NSO had moved around during the night survey, and some bearings were on public land to the south, that were accessible the following day). We did not conduct a follow-up visit for the May 28 and June 18 nighttime detections, because the NSO from each night was only detected on the property we could not access (Table 1).

Habitat. While I was not able to search through all habitat within 0.25 miles of the new tank location, I searched much of the habitat immediately around the tank, and to the west, south, and southeast of the tank, where a NSO was detected at night (shown on survey maps for surveys on May 12, 14 and 21, 2020 in the supporting information provided to the NMWD). The habitat immediately surrounding the new tank location was relatively open, surrounded by scrub and small trees, and not typical of roosting or nesting habitat for NSO. For the areas where we detected NSO at night, all of the habitat that we accessed during daytime surveys was relatively open compared to my experience with other NSO nesting habitat in Marin County, and was predominately a mix of oak-bay forest; it appeared adequate for foraging, and possibly roosting habitat. While NSO in Marin County have been found nesting in hardwood forests dominated by California Bay (*Umbellularia californica*) and oaks (*Quercus* sp.; Stralberg et al. 2009), the areas that I visited during surveys were generally more open than the hardwood forests I have observed of other nesting NSO in Marin County.

Table 1. Survey dates, time of day, and results for Northern Spotted Owl (NSO) surveys conducted by Point Blue Conservation Science in 2020 at the Old Ranch Road Tank Project area in Novato, California.

Survey Date	Day/Night	Result
April 9	Night	No NSO detected
May 11	Night	Single NSO detected (unknown sex)
May 12	Daytime Follow-up	No NSO detected (partial follow-up on May 11 detection)[1]
May 14	Daytime Follow-up	No NSO detected (partial follow-up on May 11 detection)[1]
May 20	Night	Single NSO detected (male)
May 21	Daytime Follow-up	No NSO detected[2]
May 28	Night	Single NSO detected (male)[3]
June 8	Night	Single NSO detected (male)
June 9	Daytime Follow-up	No NSO detected
June 18	Night	Single NSO detected (unknown sex)[3]

[1] Follow-up surveys for the May 11 detection occurred over two days due to timing of access to two private properties

[2] Follow-up survey only covered partial area where NSO was detected on previous night, due to lack of access to private property

[3] No daytime follow-up surveys occurred due to lack of access to private property where NSO was detected on previous night

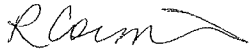
Summary: While we were not always able to follow-up during the day on all of our nighttime detection areas, we conducted 6 night visits and only ever detected one NSO on any given survey (confirmed as male on 3 visits, and unknown sex on 2 visits). We did not detect any female NSO or evidence of nesting. Based on USFWS protocols, this area should be classified as occupied by a Resident Single male NSO in 2020. Due to the extenuating circumstances with property access constraints, I also consulted with Robert Carey, the Supervisory Fish and Wildlife Biologist for USFWS in the Yreka office to

Point Blue

determine the best approach for surveys, and whether or not we should consider additional night surveys in 2020. Mr. Carey agreed that additional surveys in the 2020 season would likely not help us learn new information about this site, and recommended that we forego additional visits for the 2020 season.

Please contact me if you need additional information.

Sincerely,



Renée Cormier
415.868.0655 ext. 416
rcormier@pointblue.org

Literature Cited

California Department of Fish and Wildlife (CDFW). 2019. Spotted Owl Observations Database Management Framework. California Department of Fish and Wildlife. Sacramento, CA. http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=166159

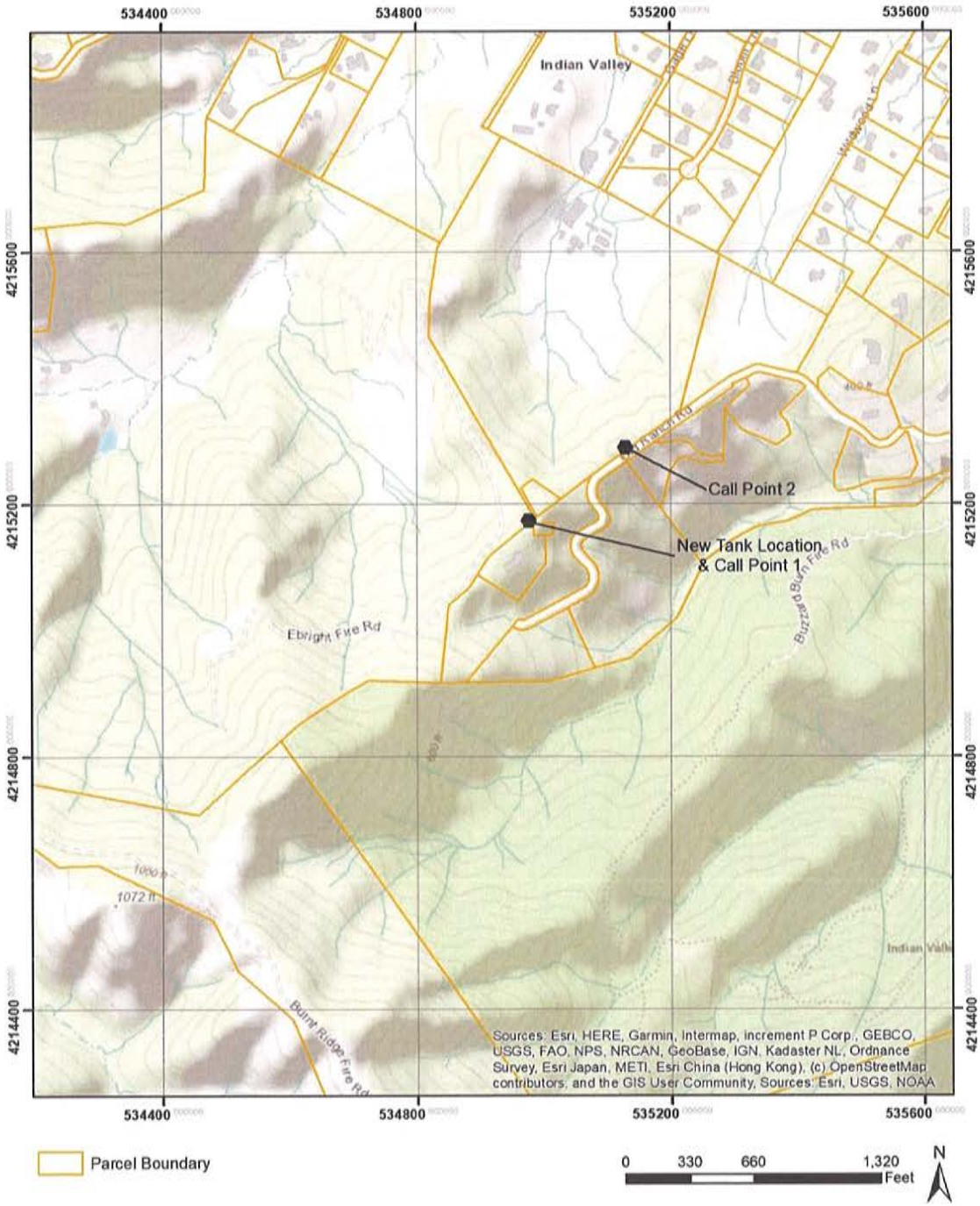
Rosenberg, D. K. and K. S. McKelvey. 1999. Estimation of habitat selection for central-place foraging animals. Journal of Wildlife Management 63: 1028–1038.

Stralberg, D., K. E. Fehring, L. A. Pomara, N. Nur, D. B. Adams, D. Hatch, G. R. Geupel, and S. Allen. 2009. Modeling nest-site occurrence for the Northern Spotted Owl at its southern range limit in central California. Landscape and Urban Planning 90:76–85.

U. S. Fish and Wildlife Service. 2011. Protocol for surveying proposed management activities that may impact Northern Spotted Owls. http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Documents/2011NSOCalSurProt.pdf

U. S. Fish and Wildlife Service. 2012. Protocol for surveying proposed management activities that may impact Northern Spotted Owls. http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Documents/2012RevisedNSOprotocol.2.15.12.pdf

Old Ranch Road NSO Call Points 2020



APPENDIX C
Oak Woodland Mitigation Plan

OAK WOODLAND MITIGATION PLAN

The loss of 33 native oaks, California bay, and madrone trees to be removed to accommodate the water tank and access road will be mitigated through 1) establishment of replacement tree plantings and 2) by protecting and enhancing the existing habitat value of the woodlands through invasive species removal and control. This Plan provides details on how the replacement tree plantings and invasive species treatments are to be accomplished by North Marin Water District as part of the project and future maintenance of the Water Tank site.

Tree Replacement Plantings – A total of 33 trees will be planted along the access road as indicated in this Plan to provide a 1:1 replacement ratio for trees removed to accommodate the access road and water tank. Native species used in the replacement plantings consist of valley oak (*Quercus lobata*), coast live oak (*Q. agrifolia*) and black oak (*Q. kelloggii*) to be installed in openings as indicated on the Plan. Plantings will be irrigated for a minimum of two years to ensure establishment, protected from browsing by deer and other wildlife, and replaced on an annual basis if they die within a five year monitoring period. The following provide details on the tree replacement program:

1 All tree plantings are to be installed in wells and irrigated for a minimum of two years during the dry season (April through November) to promote tree establishment, see detail "PLAN" for layout. Temporary irrigation may be cut back after the second year following planting, but will be stopped by the fourth year to ensure successful establishment without supplemental watering.

2. Deer protection to be provided to all planted trees, see detail "DEER PROTECTION" for material and installation.

3. All planting soil mixtures, plant operations and plants must follow decontamination protocols, BMPs and testing requirements to reduce the possible spread of Sudden Oak Death (SOD), an air borne disease caused by infections with *Phytophthora ramon*.

4. Optimal time for tree pruning and removal operations to minimize risk of spread of SOD is between late spring, after rains have stopped and the surface solid has dried out and before start of fall rains.

5. Timing of tree removal, work on infected and susceptible vegetation, and grading in areas of risk of SOD will be restricted to the dry season (May-October), or during dry spells if adherence to this schedule is not feasible.

6. Certification and/or testing will be used to document that nursery stock used in plantings is free of Phytophthora species.

7. No California bay will be planted as replacement trees because this species serves as a primary host for SOD.

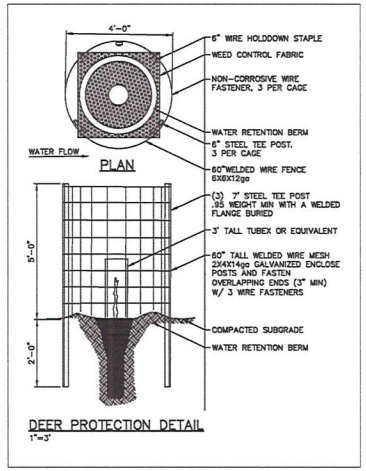
Invasive Species Treatment – Invasive species contribute to fire fuel loads and pose a significant threat to natural habitat values of the woodland. Target invasive species will be routinely removed as part of scheduled annual maintenance activities. Target invasive species include: French broom (*Genista monspessulana*), sweet fennel (*Foeniculum vulgare*), yellow star thistle (*Centaurea solstitialis*), and cotoneaster (*Cotoneaster pannosus*). The list of target species shall be adjusted as additional invasive species may become established and problematic, but shall include any species listed as having a "high" rating for "Invasive Non-Native Plants that Threaten Wildlands in California" according to the electronic Inventory of the California Invasive Species Council (Cal IPC). Invasive species removal shall be accomplished according to the following procedures:

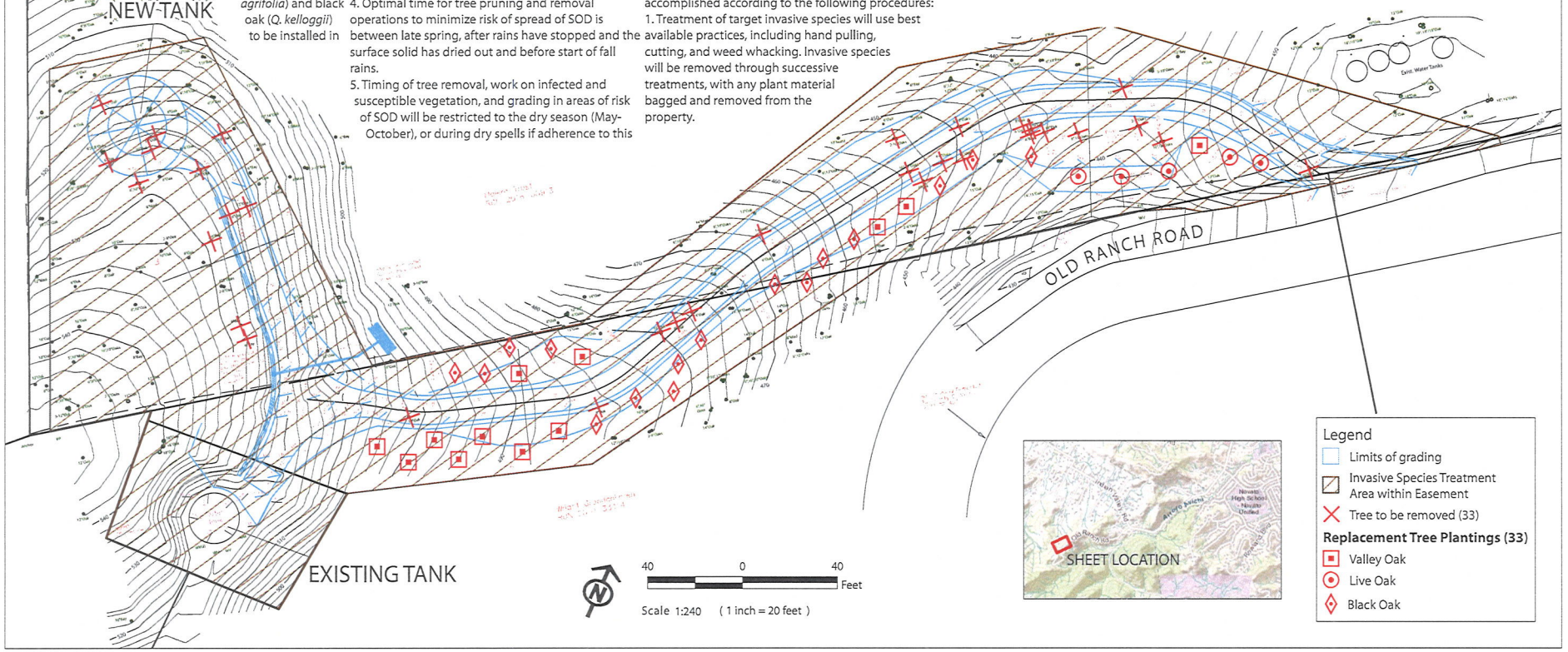
1. Treatment of target invasive species will use best available practices, including hand pulling, cutting, and weed whacking. Invasive species will be removed through successive treatments, with any plant material bagged and removed from the property.

2. Successive invasive treatment will be performed until the target species have been effectively controlled from the treatment area and comprise less than five percent of the absolute cover.

3. Additional treatment for invasive plant species will be applied to the treatment area whenever the target species collectively comprise more than five percent of the absolute cover.

Plan Monitoring – Annual monitoring will be provided to ensure property maintenance, condition of plantings and need for follow-up invasive treatment. All plantings will be evaluated for successful establishment and any replacement or maintenance needs. Presence of any invasive species will be noted and recommendations for supplemental treatment identified. A report of findings will be prepared describing the results of the annual monitoring and any recommendations for maintenance. The report will be completed by December 31st of each year for five years following Plan implementation, and submitted to representatives of the California Department of Fish and Wildlife as a means of demonstrating success.





Legend

- Limits of grading
- Invasive Species Treatment Area within Easement
- Tree to be removed (33)

Replacement Tree Plantings (33)

- Valley Oak
- Live Oak
- Black Oak

Source data:
Drawing linework provided by White & Prescott Civil Engineers & Land Surveyors in July, 2020.
Topographic base map by ESRI and NGS.

ENVIRONMENTAL COLLABORATIVE
Consultation • Documentation • Restoration
41 Jeanette Court • Walnut Creek, CA 94596
Phone 510-393-0770 • beach127@aol.com

OLD RANCH ROAD
TANK AND ACCESS ROAD
TREE LOCATIONS
NOVATO, MARIN COUNTY, CALIFORNIA APN: 146-310-05

OAK WOODLAND MITIGATION PLAN

DATE: 9/15/2020
SCALE: 1 inch = 20 feet
DRAWN BY: Petronila Mandeno
SHEET NO: M-1.0
1 OF 1 SHEETS

APPENDIX D
Plant Species Observed on Site

List of Plant Species Observed During Botanical Surveys
Old Ranch Road Tank Replacement Site

Scientific name	Common name	Native
Achillea millefolium	Yarrow	yes
Acmispon parviflorus	Hill lotus	yes
Agoseris grandiflora	Mountain dandelion	yes
Agrostis pallens	Leafy bent grass	yes
Aira caryophyllea	Silver hairgrass	no
Arbutus menziesii	Madrone	yes
Arctostaphylos manzanita ssp. *manzanita*	Green leaved manzanita	yes
Avena barbata	Slender wild oats	no
Avena barbata	Wild oats	no
Baccharis pilularis ssp. *consanguinea*	Coyote brush	yes
Brachypodium distachyon	False brome	no
Briza maxima	Rattlesnake grass	no
Briza minor	Little quacking frass	no
Brodiaea elegans	Harvest brodiaea	yes
Bromus carinatus var. *carinatus*	California brome	yes
Bromus diandrus	Ripgut brome	no
Bromus laevipes	Woodland brome	yes
Bromus pseudolaevipes	Coast Range brome	yes
Carduus pycnocephalus	Italian thistle	no
Carex globosa	Round-fruit sedge	yes
Chlorogalum pomeridianum	Soap plant	yes
Cirsium occidentale	Western thistle	yes
Claytonia perfoliata	Miner's lettuce	yes
Cynosurus echinatus	Annual dlogtail	no
Cyperus eragrostis	Tall flatsedge	yes
Danthonia californica	California oat grass	yes
Diplacus aurantiacus	Common monkeyflower	yes
Elymus glaucus	Blue wild rye	yes
Erodium cicutarium	Red stemmed filaree	no
Erodium moschatum	Whitestem filaree	no
Eurybia radulina	Roughleaf aster	yes
Galium aparine	Common bedstraw	yes
Galium californicum	California bedstraw	yes
Galium porrigens	Climbing bedstraw	yes
Genista monspessulana	Franch broom	no
Geranium dissectum	Cut-leaf geranium	no
Geranium molle	Woodland geranium	no
Grevillea sp. (ornamental)	Grevillea	no
Heteromeles arbutifolia	Toyan	yes
Hordeum murinum ssp. *leporinum*	Hare barley	no
Hypochaeris glabra	Smooth cat's ears	no
Hypochaeris radicata	Rough cat's ears	no
Iris douglasia	Iris	yes
Juncus patens	Common rush	yes

List of Plant Species Observed During Botanical Surveys
Old Ranch Road Tank Replacement Site

Lathyrus vestitus	Pacific pea vine	yes
Lonicera hispidula	Pink honeysuckle	yes
Lysimachia arvensis	Scarlet pimpernel	no
Madia gracilis	Slender tarweed	yesyes
Marah fabaceus	Manroot	yes
Melica californica	California melic	yes
Melica torreyana	Torrey melic	yes
Monardella villosa ssp. franciscana	San Francisco coyote mint	yesyes
Osmorhiza berteroi	Sweet cicely	yes
Pentagramma triangularis	Goldenback fern	yes
Plantago lanceolata	English Plantain	no
Polycarpon tetraphyllum	Four leaved all seed	no
Pseudognaphalium luteoalbum	Jersey cudweed	no
Quercus agrifolia	Coast live oak	yes
Quercus kelloggii	Black oak	yes
Quercus lobata	Valley oak	yes
Rumex acetosella	Sheep sorrel	no
Rumex crispus	Curly dock	no
Sanicula crassicaulis	Gamble weed	yes
Silene gallica	Windmill pink	no
Sonchus asper ssp. *asper*	Prickly sow thistle	no
Spartium junceum	Spanish broom	no
Stachys rigida var. *quercetorum*	Rough hedgenettle	yes
Torilis arvensis	Field hedge parsley	no
Toxicodendron diversilobum	Poison oak	yes
Trifolium dubium	Shamrock clover	no
Umbellularia californica	California bay	yes
Vicia sativa ssp. *sativa*	Common vetch	no
Wyethia glabra	Smooth mule's ears	yes

Surveys on 6/24 and 8/28/19 and 2/5 and 4/16/20 by Zoya Akulova-Barlow and/or James Martin

Nomenclature according to Jepson eFlora.

Print Form

Notice of Determination

Appendix D

To:

☒ Office of Planning and Research

U.S. Mail: P.O. Box 3044, Sacramento, CA 95812-3044

Street Address: 1400 Tenth St., Rm 113, Sacramento, CA 95814

☒ County Clerk
County of: Marin
Address: 3501 Civic Center Drive, Room 247
San Rafael, CA 94903

From:

Public Agency: North Marin Water District
Address: 999 Rush Creek Place
Novato, CA 94945-2426
Contact: Mr. Drew McInyre, General Manager
Phone: (415) 761-8912

Lead Agency (if different from above):

Address:

Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2019119046

Project Title: Old Ranch Road Tank No. 2 Project

Project Applicant: North Marin Water District

Project Location (include county): Old Ranch Road, Marin County (west of City of Novato)

Project Description:
The new tank would replace an existing tank also located off Old Ranch Road. The planned improvements also include constructing a new road to provide access to Tank No. 2 from Old Ranch Road. New pavement, surface drainage improvements, underground utilities, and other ancillary improvements are included as part of the project. A locked gate would be placed at the access road where it would connect to Old Ranch Road. The new 100,000-gallon tank would be 28 feet in diameter and 26 feet tall (22 feet to overflow) and made of welded steel.

This is to advise that the North Marin Water District (☒ Lead Agency or ☐ Responsible Agency) has approved the above described project on October 20, 2020 (date) and has made the following determinations regarding the above described project.

1. The project [☒ will ☐ will not] have a significant effect on the environment.
2. ☐ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   ☒ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:
http://www.nmwd.com

Signature (Public Agency): _____ Title: _____

Date: _____ Date Received for filing at OPR: _____

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2011

ATTACHMENT E

8

MEMORANDUM

To: Board of Directors

From: Drew McIntyre, General Manager

October 16, 2020

Subject: Renew Declaration of Local Emergency Related to COVID-19 Pandemic

t:\gm\bod misc 2020\renew covid emergency declaration #13 10_20_20.doc

RECOMMENDED ACTION: Approve continuation of the local emergency resulting from the COVID-19 pandemic as declared in District Resolution No. 20-07

FINANCIAL IMPACT: ~$79,000 to-date (total fiscal impacts are currently unknown)

On March 4, 2020, the Governor of the State of California declared a State of Emergency as a result of the coronavirus (COVID-19) pandemic. On March 13, 2020, the President of the United States declared a National Emergency as a result of the threat of COVID-19.

On March 16, 2020, the County of Marin by Order of the Health Officer issued a Shelter in Place Order limiting the travel of all county residents and ordering county businesses to cease all non-essential activities and to take further actions as described in said Order through April 7, 2020. The order limits activity, travel and business functions to most essential needs.

On March 16, 2020 the General Manger, as the District's Emergency Manager activated the District's Emergency Operations Plan.

On March 19, 2020, Governor Newson issued Executive Order N-33-20 ordering all individuals living in California to stay home at their place of residence, with certain exceptions for critical services and other qualifying exceptions. This shelter-in-place order has no specified termination date.

On March 31, 2020, the County of Marin by Order of the Health Officer issued an extended Shelter in Place Order through May 3, 2020 that is more restrictive than the original order. The new order continues to provide an exception for the operations and maintenance of "Essential Infrastructure," which includes, but is not limited to, water, wastewater, and recycled water service. Exemptions are also in place for Essential Government Functions, for certain "Minimum Basic Operations," for emergency management functions, for certain narrowly prescribed "Essential Business" functions, and for certain qualifying private construction, such as housing projects meeting low-income needs.

On April 29, 2020, Marin County and the other six Bay Area Public Health Officers issued a new order effective May 4, 2020 through May 31, 2020. Marin's public health order concerning use of face coverings does not have an end date and will remain in place until further notice. Under the May 4th Shelter-In-Place order, construction activities, certain businesses that operate primarily

outdoors, and some outdoor activities will be allowed to resume with specific conditions.

On May 15, 2020, Marin County issued a new order allowing a limited number of additional businesses and activities to resume operations subject to specified conditions. In particular, office spaces were allowed to resume operation on June 1, 2020 subject to strict compliance with specific Marin County requirements. This new order has no end date and is to remain in effect until rescinded or superseded.

On July 13, 2020 Governor Newson issued a statewide order to dial back on recent loosening of restrictions due to a significant increase in the number of confirmed cases. As a result, various activities in Marin County were once again closed down, including: office space for non-essential operations, indoor malls, hair salons/barbershops and indoor seating at restaurants.

On September 15, 2020, Marin County successfully appealed to the California Department of Public Health (CDPH) to move into Tier 2 in the state's COVID-19 response framework. Moving from Tier 1, or "widespread" COVID-19 community risk (or purple) status, to the Tier 2 "substantial" (or red) status risk category allowing more businesses to reopen. The primary changes allowed under Tier 2 include: (1) Retail establishments are allowed to open indoors at 50% capacity, (2) Personal care services are allowed to open indoors, (3) Places of worship are allowed to open with 25% capacity or 100 people, whichever is fewer, (4) Movie theaters are allowed to open indoors with 25% capacity or 100 people, whichever is fewer, (5) Gyms are allowed to open indoors with 10% capacity and (6) Restaurants are allowed to open indoors with 25% capacity or 100 people, whichever is fewer. Per state regulations, Tier 2 counties that maintain Tier 2 data for at least two consecutive weeks may reopen schools to classroom-based learning, with modification.

On April 7th, the Board of Directors approved Resolution No. 20-07 proclaiming the existence of a local emergency, granting the General Manager to take actions necessary for emergency response due to the COVID-19 pandemic until the State of Emergency is terminated.

Since April 21, 2020, the Board of Directors has, at every regular meeting, approved continuation of the local emergency resulting from the COVID-19 pandemic as declared in District Resolution No. 20-07.

District emergency planning has been aggressively implemented since March 16, 2020. Initially approximately 50% of the District's staff were physically separated as much as possible by rotating shifts and having some employees work from home, but all critical operations needed to maintain essential services continue. Relocation of additional staff back to the District buildings, and certain other projects and activities has occurred and the District is now operating with 85% of staff on-site or in the field. Walk-in customer service is still suspended. A summary of key emergency actions taken and current estimated costs is provided in Attachment 1.

As the COVID-19 emergency continues in our service area, Staff is requesting the Board find

that there still exists a need to continue the State of Emergency reflected by Resolution No. 20-07.

RECOMMENDED ACTION:

Approve continuation of the local emergency resulting from the COVID-19 pandemic as declared in District Resolution No. 20-07.

Emergency Actions Summary

Emergency Operations Team Actions

- Water treatment plants have been closed to all non-essential staff and the public; expanded social distancing and safety measures for essential plant staff.
- Public lobby in the District Administration building has been closed and customers have been provided with alternative methods for communicating with District staff.
- Developed guidelines for social distancing in the office and in the field; distributed guidance to all employees and posted social distancing protocol at facility entrances.
- Developed an initial rotational schedule for operations and maintenance staff to reduce staffing density on-site and minimize the number of employees on duty while completing essential work. (This approach reduced productivity, but improved the likelihood of healthy backup staff.)
- During initial response, shifted ~50 percent of employees to rotating schedule and/or rotating work currently ~15% of employees are on full or partial temporary telework assignments.
- Procured additional District cell phones for field staff to have better access to District communications and direct contact with supervisors.
- Disinfected District vehicles and reconfigured vehicle assignments to accommodate single occupancy to allow for social distancing, including re-deployment of vehicles scheduled for auction
- Suspended discretional water service turn-offs for the duration of the emergency declaration.
- Continuing coordination with local agency, county and state contracts to share information and implement best practices.
- Participating in weekly multi agency coordination calls through Marin County Office of Emergency Services (OES).
- Updating public website, messaging and social media posts as necessary including messages on suspension of walk-in services and water safety and reliability.
- Spring 2020 Waterline newsletter, direct mailed to all customers, included COVID-19 messaging with information on water safety and reliability.
- Posted magnetic signage on vehicles to inform public to respect distancing around crews.
- Issued guidance on face coverings in compliance with Centers for Disease Control and Prevention and County recommendations; revised to address April 29 County order generally requiring members of the public and workers to wear face coverings.
- Developed and rolled out an employee self-assessment screening questionnaire for use by any District employee or vendor prior to entering a District workspace; self-assessment questions are reviewed and updated as needed.
- Continue to procure necessary face coverings and personal protective equipment, including disposable masks, face covering and N95 equivalent masks.
- Tracking customer delinquency and comparing to last year to asses potential revenue impacts.

- Developing a living "lessons learned" document.
- Installed hand disinfecting stations at District facilities.
- Expanded use of District's on-call requirements to ensure construction crew staff maintain their work "bubbles" to ensure adequate back-up staff availability.
- Increased janitorial services to include disinfection of frequently touched areas (door handles, knobs, etc.).
- Modified work spaces to improve physical separation between staff.
- Developed a COVID-19 Preparedness and Response Plan and provided training.
- Implemented a daily self-assessment reporting program for all staff reporting to work.
- **Modifying District office front lobby in preparation of re-opening walk-in services (Date to be determined.).**
- **Installed "No Touch" drinking fountains in both Administration Building and Construction Building.**

General Manager Authorizations

- Extended vacation accrual maximums from July 1, 2020 to September 30, 2020.
- Extended FY 2019/20 vision insurance reimbursement eligibility from July 1 to August 31, 2020.

COVID Cost Summary

PROCUREMENT EXPENSES

Vendor Purchases	Procurement Type	Total Purchase Order Amount	Date
Durkin Signs & Graphics	Magnetic "Social Distance" Signs	$1,077	4/14/2020
Winzer Corporation	Surgical Masks (2,000)	$3,751	4/15/2020
Boucher Law	COVID Protection Plan	$3,250	5/26/2020
JCA Construction	Misc. Office Social Distancing Modifications	$12,427	6/30/2020
Winzer Corporation	Surgical Masks (2,000)	$1,573	7/6/2020
Novato Glass	Plexiglass	$3,969	6/9/2020
Total Procurement Amount To-Date		**$26,047**	

Internal Labor Expenses

Increased on-call labor costs: ~$39,000 thru September 30, 2020
(~$2,100/week)

Families First Coronavirus Response Act (FFCRA)
Allows employees to take time off for COVID
medical reasons and/or childcare. ~$14,000 thru September 30, 2020.

Water Bill Delinquency Impacts

Delinquency Rate 8% for August, 2020
(vs. 4% for August, 2019)

9

MEMORANDUM

To: Board of Directors

From: Drew McIntyre, General Manager

October 16, 2020

Subject: Strategic Plan Progress Report - Year 2 Review (FY 2019-20)
t:\gm\strategic plan\2019\annual strategic plan review memo 10.16.20.doc

Recommended Action: Information
Financial Impact: None

At the June 19, 2018 meeting, the Board approved the five-year Strategic Plan through FY2022-23 and implementation schedule which included annual updates and a commitment to review and update the Strategic Plan every five years. The Strategic Plan included updated mission and vision statements and identified five key values of the organization: accountability, integrity, teamwork, honesty and respect. Six major, strategic goals were also identified along with 43 associated objectives (i.e. action items).

This status report focuses on the second-year review of the five-year Strategic Plan for the 2019-20 fiscal year. A tabulation for each of the six major goals is attached summarizing which objectives are: (1) Completed, (2) In Progress or (3) Future Activities. All of the objectives scheduled for the first two years FY 2018-19 and FY 2019-20 have been completed or are in progress with the exception of the following objectives.

Objective 1.2.1 Conduct a Local Water Supply Enhancement Study to identify new sources of local water supply. (Timing: FY 2019-20)	The timing of this Study is delayed until SCWA completion of the Regional Water Supply Resiliency Project.
Objective 4.2.2 – Expand Participation in Supervisor Training offered by Sonoma County. (Timing: FY 2018-19)	This objective has been delayed due to Sonoma County halting this training at the present time.
Objective 4.2.3 Conduct an Employee Engagement Survey and implement recommendations as appropriate to improve employee satisfaction. (Timing: FY 2019-20)	This objective is behind schedule and will be implemented this fiscal year.
Objective 5.3.2 Consider fee-for-service options, such as identifying and fixing leaks, promoting a third-party insurance program for water lines, and transferring commercial fire service and backflow testing to customers, etc. (Timing: FY 2019-20)	This objective is behind schedule.

Goal No. 1 - Water Supply, Quality, and Reliability. Increase local control and the long-term reliability of the water supply.

Completed	In Progress	Future Activities
1.3.1 Complete the District's Advanced Meter Infrastructure (AMI) project. (Timing: FY2018-19)	1.1.1 Continue involvement with SCWA's and PG&E's Potter Valley Project Relicensing process. Existing PG&E PVP license expires in 2022. (Timing: FY 2022-23)	
1.1.3 Consider participation in a North Bay Drought Contingency Plan (Marin/Sonoma/Napa). (Timing: FY 2020-21)	1.1.2 Participate in SCWA's Regional Water Supply Resiliency Project to make the region more resilient to future water shortages. (Timing: FY 2019-20)	1.1.4 Update the Urban Water Management Plan. (Timing: FY 2020 -21)
	1.1.5 Keep the Water Conservation Program (including incentives/rebates) current with market and plumbing code trends. (Timing: ongoing)	1.2.1 Conduct a Local Water Supply Enhancement Study to identify new sources of local water supply. The timing of this Study is impacted by initial work on the SCWA Regional Water Supply Resiliency Project. (Timing: FY 2019-20)
	1.4.1 Meet or exceed all regulatory standards. (Timing: ongoing)	1.2.2 Continue to work with Novato Sanitary and Las Gallinas Valley Sanitary Districts to explore additional recycled water opportunities. (Timing: ongoing)
	1.4.2 Work to control undesirable taste and odors. (Timing: ongoing)	1.3.3 Update the District's Water Conservation Plan (Timing: FY 2020-21)
	1.4.3 Conduct all required water quality monitoring. (Timing: ongoing)	
	1.4.4 Monitor proposed new water quality regulations and plan in advance for necessary changes to District procedures. (Timing: ongoing)	

GOAL NO. 2. Customer Engagement and Service. Increase communication with customers and ensure quality service.

Completed	In Progress	Future Activities
2.1.2 Continue to use third-party support for preparing public outreach materials as required. (Timing: FY 2018-19)		
2.1.1 Develop an annual public outreach plan and program, including a strategy for more effective social media outreach and information about how District spending supports the local community. (Timing: FY 2018-19 and beyond)		
2.3.1 Support customers on the new website portal for tracking water use when using AMI meters (Timing: FY 2018-19)	2.3.2 Continue to monitor and track customer feedback through ongoing survey questionnaires. (Timing: ongoing)	

Goal 3. Operations, Asset Management, and Infrastructure. Provide proactive and cost-efficient asset management and operations.

Completed	In Progress	Future Activities
3.1.1 Develop and implement a comprehensive Novato Asset Management Plan. (Timing: FY 2019-20)		3.1.2 Update West Marin Master Plan every 10 years. (Timing: FY 2023-24)
3.3.1 Continue to utilize On-Call Services contracts for select local contractors to improve District's ability to respond to emergencies and improve small contract efficiency. (Timing ongoing)		3.1.3 Update the Oceana Marin Master Plan every 10 years. (Timing: FY 2024-25)
3.1.1 Consider using an extended CIP planning horizon beyond 5 years after completion of the Novato Water Master Plan. Maintain cost control, avoid rate shocks, solve problems before they occur, and ensure long-term reliability and stability of service. (Timing: FY 2019-20		3.3.2 Evaluate the feasibility of implementing a Sewer Lateral Replacement program for Oceana Marin. (Timing: FY 2020-21)

Goal 4. People, Technology and Equipment. Retain a high quality, motivated, and efficient workforce with excellent workforce programs and investments in equipment, technology and training.

Completed	In Progress	Future Activities
4.2.4 Update the District's Employee Safety Manual. (Timing: FY 2019-20)	4.1.1 Continue to support staff's involvement in local, regional, and national water industry organizations including payment of subscription dues and attendance at conferences. (Timing: ongoing)	
4.3.1 Conduct a Compensation Survey in advance of negotiation of a new MOU with the Employees Association. (Timing: FY 2018-19)	4.1.2 Evaluate if staff is structured correctly for future challenges, for example in technology, asset management, and emergency management. (Timing: FY 2020-21)	4.2.2 Expand participation in supervisor training classes offered by Sonoma County. (Timing: FY 2018-19)
4.1.3 Evaluate and implement replacement of proprietary software systems. (Timing: FY 2019-20)	**4.2.1 Move forward with the design phase of the Office Remodel Project. (Timing: FY 2019-20)**	4.2.3 Conduct an Employee Engagement Survey and implement recommendations as appropriate to improve employee satisfaction. (Timing: FY 2019-20)

Goal 5. Rates and Finance. Extend the budgeting and financial planning horizon to ensure long-term stability, financial security and ratepayer value.

Completed	In Progress	Future Activities
5.1.1 Prepare a Cost of Service Study with peer review. (Timing: 2018)	**5.2.1 Evaluate benefits of transferring District-owned fire services to commercial customers. (Timing: FY 2019-20)**	
5.4.1 Continue to hire an outside auditor for preparing annual Comprehensive Financial Reports. (Timing: ongoing)		
5.4.2 Continue to apply for the Certificate of Achievement for Excellence in Reporting Award. (Timing: ongoing)	5.3.4 Sell District surplus property that no longer serves District needs. (Timing: FY 2020-21)	5.3.2 Consider fee-for-service options, such as identifying and fixing leaks, promoting a third-party insurance program for water lines, and transferring commercial fire service and backflow testing to customers, etc. (Timing: FY 2019-20)
5.3.1 Increase income from lease fees. (e.g., grazing, cellular towers). (Timing: ongoing)	5.5.1 Re-evaluate, report on, and update as appropriate reserve goals for Novato, West Marin, and Oceana Marin. (Timing: yearly)	
5.3.3 Consider cooperative agreements for additional solar projects on District-owned land. (Timing: FY 2019-20)		

Goal 6. EMERGENCY PLANNING AND RESILIENCE. Increase preparedness for emergencies as well as long-term challenges such as drought and climate change.

Completed	In Progress	Future Activities
6.1.1 Participate in Marin County Multi-Jurisdictional Local Hazard Mitigation Plan. (Timing: FY 2018-19)		
6.1.2 Hire third-party consultant(s) experienced in developing and implementing Tabletop emergency training exercises. (Timing: FY 2019-20)		
6.1.3 Update the District's Emergency Operations Plan. (Timing FY 2020-21)		

10

MEMORANDUM

To: Board of Directors

October 16, 2020

From: Julie Blue, Auditor-Controller JB

Subj: Accounts Receivable Analysis
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RECOMMENDED ACTION: Information

FINANCIAL IMPACT: Approximately $6,000 for Collection Efforts

Background

In January 2020 the Board approved revisions to the Late Charge and Shut-Off Policy No. 6. to comply with Senate Bill 998 (aka "The Water Shutoff Protection Act") which adjusted the manner and steps required for the District to disconnect a customer's water service. SB998 was passed in 2018 and requires all public water systems to have a written policy on water service discontinuation for non-payment which must also be available in seven languages. In order to comply with the new policy, customer shut-offs of water service for non-payment were discontinued during implementation.

On June 12, 2020 the Board approved additional revisions to Policy No. 6 as a result of Executive Order N-42-20 signed by CA Governor Newson on April 2, 2020 and to address potential financial impacts to customers due to the COVID-19 pandemic. The Executive Order suspended disconnection of water services for non-payment with an undetermined end date. The changes to the District policy included: (1) an extension of 90 days to the suspension of disconnections, once the end date of the order has been established, (2) extension of the duration of payment plans to 24 months from the current 12 months as outlined in the policy (offered for the next 180 days) and (3) extension of the District's current forbearance of customer late fees for a 180-day duration.

Due to the changes to the policy and the overall state of the economy due to the COVID-19 pandemic there has been an increase in delinquent customer accounts.

Accounts Receivable Analysis - Customer Impacts Due to Policy Changes and COVID-19

The accounts receivable (AR) aging is made up of customers with current and outstanding balances owed to the District for water use and fixed charges. There are many variables that make up the AR aging balance including water use, the number of connections in the water system, and the number of customers billed in a billing cycle. On the following page two tables are shown which provide detailed changes in the Novato Water AR balance over the period of

August 2019 through August 2020. The extended period is shown to include seasonal impacts, changes to the shut-off policy, and the assumed impacts of COVID-19 on the economy and our customers. The total balance due for August 2020 was $1.4M of which 8.1% or $115,848 is past due. Compared to a year ago this is an increase to past due accounts of $70,145 or 4%.

Accounts Receivable Analysis Tables (Novato):

Month	Current	>30 Days Late	>60 Days Late	>90 Days Late	Total AR Balance
08/2019	$ 1,073,475	$ 42,569	$ 2,670	$ 464	$ 1,119,178
11/2019	$ 1,988,954	$ 50,374	$ 2,317	$ 503	$ 2,042,148
02/2020	$ 821,543	$ 52,052	$ 2,741	$ 538	$ 876,874
05/2020	$ 1,288,443	$ 75,376	$ 10,003	$ 892	$ 1,374,714
08/2020	$ 1,316,652	$ 91,133	$ 15,804	$ 8,911	$ 1,432,500

Month	Current	>30 Days Late	>60 Days Late	>90 Days Late	% Past Due
08/2019	95.9%	3.8%	0.2%	0.0%	4.1%
11/2019	97.4%	2.5%	0.1%	0.0%	2.6%
02/2020	93.7%	5.9%	0.3%	0.1%	6.3%
05/2020	93.7%	5.5%	0.7%	0.1%	6.3%
08/2020	91.9%	6.4%	1.1%	0.6%	8.1%

In reviewing the District wide analysis, for all service areas, it was determined that the increase in delinquent customer bills is only occurring in the Novato Water service area. The data shows that Recycled Water and West Marin Water do not have similar issues with delinquent bills.

Accounts Receivable Collection Efforts

Changes to the Late Charge and Shut-Off Policy and the current Executive Order, prohibiting the disconnection of water service due to non-payment, have reduced the collection capabilities of the District on balances of outstanding customer accounts. In order to increase collections on these accounts a temporary employee has been hired to focus solely on collection efforts. She is contacting customers in an effort to collect payments and set-up payment plans. With the assistance of legal counsel a formal payment plan agreement has been developed and a process to implement payment plans through the billing system is underway. The costs associated with collection efforts are related to focused collection efforts, staff time by full time District staff, and legal costs associated with payment plans and policy compliance.

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DISBURSEMENTS - DATED OCTOBER 8, 2020

Date Prepared 10/6/20

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 9/30/20	$156,026.74
90320*	Internal Revenue Service	Federal & FICA Taxes PPE 9/30/20	68,398.62
90321*	State of California	State Taxes & SDI PPE 9/30/20	15,263.83
90322*	CalPERS	Pension Contribution PPE 9/30/20	38,680.68
90319*	US Bank Card	48 Pallet Case of Bottled Water ($486), Refrigerator Repair (Lab) ($324), Zoom for Board Meetings ($13), US Pipe-Flange Coating for Trumbull Pump Station ($225), Retirement Book (Chandrasekera) ($49), CPA Renewal (Blue) ($250) & Govt Finance Officers Assoc Renewal Fees ($160)	1,507.24
1	Allied Heating & Air Conditioning	Perform Air Intake Evaluation at Front Office & STP	410.00
2	All Star Rents	Compressor Rental for Hydro Tank Maintenance	148.04
3	Alpha Analytical	Lab Testing	450.00
4	AT&T	Sept Internet Connection	96.30
5	AT&T	Telephone ($65), Fax ($84), Leased Lines ($140) & Data ($280)	569.92
6	Bales, Suzanne	Novato "Toilet Rebate" Program	200.00
7	Buck's Saw Service	Trimmer Line	18.43
8	Corda, Jeff	Exp Reimb: Towing Cable for STP	58.44
9	DataTree	Sept Subscription to Parcel Data Info	100.00
10	Diesel Direct West	Diesel (350 gal) & Gasoline (501 gal)	2,511.76
11	Direct Line	Oct Telephone Answering Service	264.38

*Prepaid

Seq	Payable To	For	Amount
12	Dixon Marine Services	Prog Pymt#4: Gallagher Ranch Streambank Stabilization Project-Release of Retention	20,435.66
13	Environmental Express	Filters (100) (Lab)	188.73
14	Fisher Scientific	pH Electrode Storage Solution (Lab)	74.22
15	Grainger	Pressure Washer (STP) ($299), Wire Connectors for Pump Motors ($189) Dollies for Small Generators (7) ($295), Fan (Lab) ($264), Tool Boxes (2) ($293) & Misc Maintenance Parts & Supplies ($189)	1,529.03
16	Hamilton Cottages	Refund Overpayment on Closed Account	70.61
17	Idexx Laboratories	Comparators for Micro Analysis (2,000) (Lab)	38.80
18	Lincoln Life	Deferred Compensation PPE 9/30/20	8,476.99
19	Marin Community College District	Refund Excess Advance for Construction Over Actual Job Cost-College of Marin-Organic Farm	4,561.62
20	Maricich, Stephen	Refund Security Deposit on Hydrant Meter Less Final Bill	665.62
21	McLellan, WK	Misc Paving	247.28
22	McMaster-Carr Supply	Parts for Black Point Regulator ($117) & High Tension Ratchet Load Binders (2) ('07 Trailmax Equipment Trailer) ($324)	440.65
23	Nationwide Retirement Solution	Deferred Compensation PPE 9/30/20	920.00
24	Novato, City of	Surcharge & Encroachment Permit Fee ($439) (Novato Public Library)	482.55
25	O'Reilly Auto Parts	Cleaning & Maintenance Products for Fleet/Equipment	578.48
26	Pace Supply	Rubber Gaskets (500) ($186) & Flange (W.M. Pump Station) ($156)	342.14
27	Pearlman, Avram	Exp Reimb: Mileage	123.28
28	Recology Sonoma Marin	Sept Trash Removal	510.80
29	Township Building Services	Janitorial Supplies	289.42
30	The Transmitter Shop	San Antonio Tank Level Transmitter Repair	620.63

Seq	Payable To	For	Amount
31	Univar	Sodium Hypochlorite (800 gal) (Deer Island RWF)	885.08
32	VWR International	Flask & Caps (Lab)	155.86
33	Waste Management	Pump Station Green Waste Disposal	945.83
		TOTAL DISBURSEMENTS	**$327,287.66**

The foregoing payroll and accounts payable vouchers totaling $327,287.66 are hereby approved and authorized for payment.

Julie Blue 10/05/2020

Auditor-Controller Date

10/05/2020

General Manager Date

DISBURSEMENTS - DATED OCTOBER 15, 2020

Date Prepared 10/13/20

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

Seq	Payable To	For	Amount
1	Able Tire & Brake	Tires (6) ('15 JD Loader -$286, '19 Generator-$169, Generator-$145, '14 Light Tower-$119, Water Tank w/Trailer-$170 & Generator & Trailer-$160)	$1,050.08
2	ACWA	Annual Dues (McIntyre) (1/21-12/21) (Budget $21,000)	23,240.00
3	Alpha Analytical Labs	Lab Testing	35.00
4	Alphagraphics Marin	West Marin Waterline Newsletter (820)	1,528.73
5	Arrow Benefits Group	September Dental Expense	7,196.47
6	Athens Administrators	June & July Bill Review Fees	29.60
7	Automation Direct	Pressure Sensor & Wiring for Pump Stations ($263) & Analog Input Cards for PRTP (2) ($621)	883.19
8	Building Supply Center	Tools & Plugs (2) (STP)	25.71
9	Carrera, Edmund A.	Novato "Cash for Grass" Rebate Program	400.00
9	Cilia, Joseph	Retiree Exp Reimb (Oct Health Ins)	334.00
11	Enterprise FM Trust	Monthly Leases for Chevy Colorado, F250'S (2), Nissan Rouges (2), Nissan Frontier & F150's (4)	5,040.54
12	Environmental Express	Sample Bottles	199.66
13	Environmental Science Assoc	Prog Pymt#10: Gallagher EWP Stream Channel Repair & Restoration (Balance Remaining on Contract $1,624)	2,080.60
14	Evoqua Water Technologies	Service on Deionization System (Lab)	355.98
15	Fedak & Brown	Sept Progress Billing - FY20 Financial Audit (Balance Remaining on Contract $6,125)	4,125.00
16	Fishman Supply	Brief Relief Urine Bags (100)	259.32

Seq	Payable To	For	Amount
17	Fisher Scientific	Petri Dishes (500) (Lab)	51.43
18	Grainger	Batteries (12), Cable for Programmable Logic Controllers ($860), Tool Box ('17 F350) ($365), Soap & Dispenser for Maintenance Department ($121), Ear Muffs (2), Bottle Filling Station (Front Office) ($2,101) & 20' Chain for Equipment ($196)	3,708.88
19	Holton, Nancy	Exp Reimb: Office Supplies for Working Remotely	611.79
20	Jackson, David	Retiree Exp Reimb (Oct Health Ins)	987.21
21	Jordan, Joan	Novato "Toilet Rebate" Program	100.00
22	JW Mobile	Hydraulic Hose ('09 JD Backhoe)	251.52
23	Kennedy Jenks	Prog Pymt#2: Consulting Services for Crest Pump Station (Balance Remaining on Contract $9,420)	3,286.63
24	Latanyszyn, Roman	Retiree Exp Reimb (Oct Health Ins)	334.00
25	Lemos, Kerry	Retiree Exp Reimb (Oct Health Ins)	987.21
26	Manzoni, Alicia	Retiree Exp Reimb (Oct Health Ins)	987.21
27	Marin County Ford	Seat Cover ('15 Ford Escape) ($276) & Wiper Sprayer	287.35
28	McMaster-Carr Supply	Binders for Equipment (2)	329.82
29	Micro Technology	Annual Testing & Certification of Fume Hood (Lab)	514.37
30		Vision Reimbursement	321.94
31	North Marin Auto Parts	Tubing, Brake Fluid, Power Steering Fluid, Jumper Box for Auto Shop ($326), Lamps & Battery ('08 F250) ($278), Anti-Freeze for Fleet ($69), Trailer Plug Sockets (4), Service Parts ('08 F250-$149, '03 Dodge Dakota-$123, '09 Peterbilt Crew Truck-$52), Rags for Const/Maintenance (10 lbs) ($212), Paint for Auto Shop & Safety Gloves	1,386.82
32	Novato Builders Supply	Concrete Nails (2 lbs), Concrete (2 yds) ($549), Drywall Patch, Decking Material & Lumber	654.82

Seq	Payable To	For	Amount
33	PG&E	Energy Bill for District Apartment ($16) & Power: Bldgs/Yard ($5,456), Other ($167), Pumping ($51,025), Rect/Controls ($521) & Treatment ($159)	57,344.59
34	R & B	Clamp ($250), Plugs (5), Meter Stops (40) ($842), Couplings (48) ($6,366) & Valve ($1,465)	8,930.10
35	Darlene D. Rhodes	HR Consulting (7/26-9/25/20)	2,843.75
36	Safeguard	Bank Deposit Slips (600) (Front Office)	144.79
37	SCP Science	Standards (Lab)	422.52
38	Sjoblom, Jeff	Exp Reimb: Safety Boots	200.00
39	Staples Business Credit	Laser Printer (Billing) ($423) & Office Supplies ($624)	1,047.05
40	Thomas Scientific	Phosphate Buffer (Lab)	133.30
41	Verizon Wireless	Cellular Charges: Data ($1,008), Airtime ($209), iPads for Asset Management ($200) & Equipment ($126)	1,543.15
42	Verizon Wireless	SCADA ($167), AMI Collectors ($650) & CIMIS Station	849.03
43	VWR International	Potassium Nitrate (Lab)	55.01
44	Water Components & Bldg Supply	Plumbing Supplies (Const)	34.13
		TOTAL DISBURSEMENTS	**$135,132.30**

The foregoing payroll and accounts payable vouchers totaling $135,132.30 are hereby approved and authorized for payment.

Julie Blue 10/13/2020

Auditor-Controller Date

10/13/2020

General Manager Date

Notice:

Salinity intrusion into the Point Reyes well supply serving the West Marin communities of Point Reyes, Olema, Inverness Park, and Paradise Ranch Estates has occurred and has caused sodium levels to increase from background levels of 15-30 milligrams per Liter (mg/L). While there is no direct health concern from the salt for most people at this concentration, it does affect the taste. Customers that are on sodium restricted diets should consult their physicians to see if the additional sodium is a concern for them. The table below lists the most recent concentrations for sodium in the West Marin water supply:

Date	Sodium	Chloride	Units
9/1/20	172	496	mg/L
9/8/20	264	785	mg/L
9/15/20	222	660	mg/L
9/22/20	71.7	202	mg/L

*milligrams per liter

Notice:

Salinity intrusion into the Point Reyes well supply serving the West Marin communities of Point Reyes, Olema, Inverness Park, and Paradise Ranch Estates has occurred and has caused sodium levels to increase from background levels of 15-30 milligrams per Liter (mg/L). While there is no direct health concern from the salt for most people at this concentration, it does affect the taste. Customers that are on sodium restricted diets should consult their physicians to see if the additional sodium is a concern for them. The table below lists the most recent concentrations for sodium in the West Marin water supply:

Date	Sodium	Chloride	Units
9/22/20	71.7	202	mg/L
9/29/20	228	711	mg/L

*milligrams per liter

MMWD board candidates see funding, climate as top issues

ELECTIONS

Marin Independent Journal

By Will Houston

whouston@marinij.com

Three first-time candidates and a 16-year incumbent are vying for two seats on the Marin Municipal Water District board in the November election. Mark Lubamersky and Monty Schmitt are competing for the Division 2 seat vacated by Armando Quintero. Gov. Gavin Newsom appointed Quintero to state parks director in September.

Lubamersky, a San Rafael planning commissioner and high school teacher, said MMWD is a well-run utility, but it has transparency issues and fractured priorities among board members. He also said the district passes substantial rate increases rather than working within its means.

"I think it seems like they take their needs list and then they adjust the water rates to fill the needs of their desired programs," Lubamersky said. "Maybe if they looked at their rate structure and seeing how much money they had in their budget and tailored their programs to that, it might be a little more helpful."

Schmitt, a longtime watershed scientist and water project director with the Nature Conservancy, said he has a scientific background that is missing from the board, especially as the district faces drought, wildfire risk and climate change impacts.

"There is an urgency to what we're doing, and we can't have another decade of talking about the problem and identifying the problem or developing the plans about the problem,"Schmitt said. "We need to be doing all of those things but really need to be taking some very direct action quickly, in particular with respect to wildfire."

Both candidates say the district's wildfire resiliency plan must be completed, though Lubamersky argues it requires more specific actions. The district must have the "political will" to enact measures such as prescribed

Water falls down a spillway as it overflows from Lake Lagunitas to Bon Tempe Lake last year near Fairfax. The Marin Municipal Water District is facing the dual threats of drought and wildfires.

ALAN DEP — MARIN INDEPENDENT JOURNAL

burns, Lubamersky said, and get residents who abut the district's 22,000 acres of watershed land to create defensible space around their properties.

To prepare for future droughts, the district can't rely on Sonoma Water purchases for the long term, Lubamersky said. Instead, the district should explore raising the height of dams at its reservoirs and promoting greater conservation, such as through the expansion of recycled water systems.

Coordination with other agencies and land managers is vital to successful fire prevention, Schmitt said. He said controlled burns in the watershed could be dangerous, considering the number of residences nearby. Other methods, such as forest thinning and vegetation control by goat grazing, could be implemented to take out invasive species, he said.

Reducing irrigation of outdoor landscaping and expanding recycled water, while expensive, will be critical to ensure the district maintains water supply during more frequent drought periods, Schmitt said.

Last year, MMWD approved controversial rate increases and a new capital maintenance fee to make cash payments rather than using bonds to pay for replacing aging pipes, storage tanks, treatment facilities and fund fire prevention efforts.

Lubamersky argues the district must approve its transparency with the public including holding longer nightly meetings rather than holding committee meetings during morning hours. With

interest rates being so low, Lubamersky said it would be worth reevaluating the fee and instead potentially issuing new bonds to pay for projects.

"It seems like now might be the time to get some of those bonds and refinance some of those bonds," he said.

On district staffing levels, Lubamersky said the district's administrative staff seems "top-heavy" and that some positions "superfluous to the charge of supplying water" to ratepayers should be reassessed.

Greater conservation by residents and drought periods result in less water being sold, Schmitt said, and therefore less revenue to pay for needed repairs, replacement projects and staffing. The new fee works to address those revenue fluctuations, he said.

"The intent is to create some stability in the revenue that can allow for long-term planning, and I think that is good business," Schmitt said.

Schmitt said he would be uncomfortable with adding more bond debt that would be passed on to future generations, but it shouldn't be ruled out entirely because of the low interest rates. As for staffing, Schmitt said the question is whether the district is putting enough resources into the most important priorities.

"I think that our resource needs are going to shift," Schmitt said, "and at the same time I think honestly that we probably are understaffed and not resourced correctly to really address things like wildfire and preparing for the drought."

The district is also exploring allowing electronic bicycles on fire roads in the watershed. Lubamersky said he would support that proposal.

The board should continue broad outreach and use science to drive its decision, Schmitt said, especially as it relates to issues such as erosion which can impact water quality.

In the race for the Division 5 seat to represent Corte Madera, Larkspur, San Quentin, Strawberry, Tiburon and Belvedere, Chris Hobbs is challenging incumbent Larry Russell.

Hobbs, chief operating officer of Pet Hospice, said the board needs more of a ratepayers' voice. The public backlash to the board's rate increases and new capital maintenance fee in 2019 shows the board is not paying enough attention to the customers who are funding them, he said.

"The board is supposed to be that voice," Hobbs said. "Staff are naturally inclined to want to do more, spend more; that's properly their motivation.

And the board basically should balance that."

Russell, a longtime water quality engineer who has been on the board since 2004, said he provides critical technical expertise to the board that other members cannot.

"I like to think of myself as the people's engineer," Russell said. "I don't come in with any preconceptions except for one, which is to produce the highest quality water at the lowest possible price."

To address the watershed's fire risks, Hobbs said the district must be more aggressive with funding fire prevention measures such as tree thinning and cutting fire breaks on the watershed.

"The district has a fire mitigation program but I believe it is not nearly as aggressive enough given that it sits next door to most of Marin's population," Hobbs said.

On droughts, Hobbs said MMWD should promoting greater conservation, artificial turf programs and utilizing modern meters for customers to provide real-time feedback on their water usage.

Russell said he supports undergrounding electrical lines on watershed lands. The district's purchase of portable generators and a generator at its San Geronimo treatment plant will allow the district to continue delivering water during fires, power shutoffs and other major emergencies.

"I think we have our arms around it as well as we're going to," Russell said on the district's fire prevention efforts. "The biggest problem with fire is the wildland-urban interface. The key there is they need to do their own policing and keep the vegetation away from their structures."

The board has been proactive in its including earlier purchases water from Sonoma Water this year in anticipation of a potentially poor rainy season, Russell said.

While Hobbs said he understands the board adopted the capital maintenance fee to be fiscally prudent, he said its timing and methods were flawed, especially in regards to transparency.

"I don't think there was enough consultation with and consideration of the ratepayers for how they chose to do it," Hobbs said.

Cutting rates is not something Hobbs said he is promising as part of his campaign. The challenges facing the district, from fires to climate change impacts, are more complex, Hobbs said, but the board can redirect resources.

"I would like the district to see that additional work without additional spending," Hobbs said.

The board has adopted low-income rate programs and delayed the recent rate and fee increases to January in light of the coronavirus pandemic, Russell said. He said he would be willing to extend the delay as needed, but acknowledged the increase in delinquent payments could begin to affect the district's operating and project budgets.

"We worked really hard on the board to get district on sound financial standing and we have achieved that," Russell said. "Our credit rating continues to improve and that, of course, is critical when we issue bonds."

The new fee stops the district from relying on bonds solely for repair and replacement projects, which also come with debt that could be used for other improvements.

The district's staffing levels are in "fine shape," Russell said, and could be larger, especially in hiring more rangers to manage the watershed.

As for whether to allow e-bikes on fire roads, Russell said to "stay tuned," as the board is still awaiting a staff report and recommendations following several community meetings.

Hobbs said he supports allowing e-bikes on fire roads as it provides access to people who might no longer be able to use traditional bicycles or hike.

Monday, 10/05/2020 Page .A03

Housing mandate estimate balloons

THE COUNTY

Planners might seek 14K homes in Marin

Marin Independent Journal

By Richard Halstead

rhalstead@marinij.com

Marin County and its 11 municipalities will be required to adjust their zoning to allow much more housing, particularly for low-income residents, if policies in the works at the Association of Bay Area Governments are adopted.

The association, a regional planning agency governed by representatives from the Bay Area's nine counties and 101 cities and towns, approved a final blueprint last month for Plan Bay Area 2050.

Updated every four years, Plan Bay Area integrates transportation, land use and housing to meet

greenhouse gas reduction targets set by the California Air Resources Board. In an effort to address concerns about racial equity, the latest iteration of the plan also identifies "high resource areas" near public transit where it recommends that increased housing development should be promoted.

Areas within Novato, San Anselmo, Corte Madera and unincorporated parts of Marin fall into this category. Discussion regarding possible policies to implement this strategy have not begun.

"We're not at that point yet," said Matt Maloney, director of regional planning for the Metropolitan Transportation Commission. "We will likely be taking that up next year."

In the meantime, however, ABAG's housing methodology committee approved a plan last week for deciding how many homes counties and municipalities should be required to plan for from 2023 to 2031.

Every eight years, the state Department of Housing and Community Development projects how much new housing will be needed in the Bay Area to accommodate expected population and job growth. ABAG then decides how many of those homes to assign to each county and municipality in the Bay Area. Local jurisdictions are required to adjust their zoning laws to help make the creation of that amount of housing possible.

The methodology approved by the committee last week is aligned with the high resource area strategy contained in the Plan Bay Area 2050 blueprint. It would assign more of the very low-

and low-income homes to counties and municipalities containing higher concentrations of "high opportunity areas."

"Those are essentially the high resource areas," Maloney said. "It's synonymous with that term."

"That includes most of Marin," said Novato Councilwoman Pat Eklund, one of the few ABAG board members to vote against the methodology.

According to an ABAG staff report, the "high opportunity area" methodology approach seeks to "affirmatively further fair housing by increasing access to opportunity and replacing segregated living patterns." A committee convened by the California Department of Housing and Community Development and the California Tax Credit Allocation Committee developed the map of high resource/opportunity areas in use. The designated areas contain amenities associated with childhood development and economic mobility such as low poverty rates and high educational attainment, employment rates, home values and school test scores.

Marin's share of the housing assignments amounts to only 1%. Under the new methodology, however, that share would triple to 3%, while Alameda County's share would be reduced from 23% to 19%, and Contra Costa County's share would drop from 11% to 10%.

Eklund said the impact of the percentage increase is magnified because the assignment total is more than doubling. In the current 2015-2023 cycle, the nine Bay Area counties had to plan for 187,990 residences. In the 2023-31 cycle, they will have to adjust their policies to accommodate 441,176 residences.

If the allocation procedure approved last week is adopted by the ABAG executive board later this month, Marin could see the number of residences assigned to them increase from 2,298 in the 2015-2023 cycle to 14,210 in the 2023-31 cycle.

For example, Belvedere would be required to plan for 160 new residences, half of which would have to be affordable for people with low-income status. In the current cycle, Belvedere had to plan for 16 residences.

Eklund said she disagrees with the ABAG committee's decision to include the number of existing households in a jurisdiction, together with the number of households expected to be added over the next several decades, when projecting the need for new housing.

"To be straightforward, the legal requirements for housing elements have changed a lot since the last cycle," said Daniel Saver, MTC's assistant director for housing and local planning. "It is going to be much harder for local jurisdictions to adopt compliant housing elements this time around."

Failure to do so, however, could prove costly. Assembly Bill 101, which became effective at the end of July 2019, authorizes the state attorney general to sue jurisdictions and fines ranging from $10,000 to $600,000 per month.

Supervisor Damon Connolly, Marin County's representative on MTC, wrote in an email that he is concerned about the methodology and will work with local ABAG representatives to "push back and raise areas of concern."

"For example, the 22x

increase in the allocation for unincorporated Marin is startling," Connolly wrote. "The methodology appears to emphasize 'high resource areas' without regard to proximity to jobs or high-quality transit or other constraints."

Supervisor Dennis Rodoni, who represents Marin County on the ABAG board, wrote in an email that the county needs to make sure that "unincorporated areas without infrastructure and good transit do not get over allocated, forcing density to outside city boundaries and more suburban areas." "This will be a challenge," Rodoni added, "as most of the Bay Area is currently embracing the methodology for these allocations and many of our local opinions are in the minority."

Saver said the path that ABAG is following is dictated by state law. For example, he said the 441,176-assignment total came from the state's Department of Housing and Community Development.

Saver said the big increase in the number of units assigned is due to state Sen. Scott Wiener's Senate Bill 828, passed in 2018. The law allows the state to take into account existing housing needs as well as projected future need when determining the number of housing assignments.

In 2016, management consultant McKinsey and Co. projected that California needed to create 3.5 million more homes by the middle of the next decade.

Saver said the incorporation of "high resource/ opportunity areas" into Plan Bay Area's equation is required because of Assembly Bill 686, which mandated that counties and cities implement the Obama-era policy of "affirmatively furthering fair housing."

For decades, housing in the United States was segregated by race. The Federal Housing Administration financed the building of suburban subdivisions during the 1930s, 1940s and 1950s, but lent the money to builders on the condition that they not sell any of the new houses to African-Americans.

Saver said the state law remains in effect despite the fact that the Department of Housing and Urban Development, under the direction of Trump appointee Ben Carson, scrapped the policy at the federal level earlier this summer.

Saver said the state has allocated millions of dollars to help local jurisdictions comply with the loftier planning goals.

"We certainly hope that all of our local jurisdictions are able to adopt compliant housing elements, and we're going to put resources into helping them get there," he said. "It will be a big lift."

The Association of Bay Area Governments might seek to increase Marin County's share of new housing in the region from 1% to 3%. Above, the Atherton Place construction site in Novato in April.

ALAN DEP — MARIN INDEPENDENT JOURNAL

Tuesday, 10/06/2020 Page .A01

Water district ready to deliver amid threats of fire, drought

Marin Voice

Marin Independent Journal

By Jack Gibson

With record-breaking temperatures, an increasing number of wildfires and drought conditions in most parts of the state, the water district's ability to be ready and resilient is critical.

As Marin County's largest water provider, it is the Marin Municipal Water District's responsibility to provide customers with a safe, reliable supply of water, even under these challenging conditions. Emergency preparedness, a strategically managed water supply and the creation of water conservation programs to help customers use water wisely are all part of that effort.

To address the increasing potential for wildfires, the district has plans and safeguards in place. Our extensive integrated plan for biodiversity, fire and fuels expands vegetation management on the Mount Tamalpais watershed and takes an adaptive approach that benefits from the latest science and research.

That plan includes collaborating with fire officials on prescribed burns to reduce potential fuel for fires, as well as the removal of invasive broom in fuel breaks. It also includes vegetation management that encourages a healthier ecosystem. Protecting the watershed from wildfires is a critical part of preserving our reservoirs and our core water supply.

Wildfire season also means readily adapting to the strain of Pacific Gas and Electric Co.'s public safety power shutoffs — treatment plants and pump stations rely on electricity to keep your water flowing.

As it did last year, the district has again prepared a fleet of portable generators to deploy to pumping stations and facilities throughout Marin in the event of a power shutoff. It has invested in a large-scale, permanent generator for the San Geronimo treatment plant. As with any emergency, plans are in place to secure the fuel and other supplies needed to provide water service, uninterrupted, during these shutoffs. We are ready. The pattern of increasingly hot, dry weather is also creating drought conditions for California. The district closely monitors its water supply and is gearing up now for drier periods ahead. The watershed accounts for 75% of our water supply and the remaining 25% comes from neighboring Sonoma Water's Russian River water system.

As we plan for longer stretches of dry periods, the district has strategically increased the amount of water purchased from Sonoma Water to supplement its watershed supply. Supplementing our supply now will better position us to withstand drought conditions, should reservoir levels drop below our comfort level.

Another byproduct of the warming temperatures may affect the taste and odor of your water. Occasionally, during the warmer months, some customers experience a different taste or odor in their drinking water. This is the result of naturally occurring compounds produced by algae in our lakes during the warm summer months. These slight changes do not affect the safety of your water, and it is important to know that your water meets or exceeds all state and federal requirements. For those who are more sensitive to these changes, chilling the water during these periods will help reduce the temporary change in taste or odor.

Perhaps the best tool in successfully building resilience to drought conditions is conservation. Using water efficiently and wisely preserves our water supply and carries us through these challenging times.

Steps include trading in your thirsty lawn for more water- efficient landscaping; installing and maintaining "smart" irrigation controllers that self-adjust to deliver just the right amount of water your plants need; and greywater systems that reuse water for irrigation are all great options.

Marin Water offers rebates and money-saving incentives for these and other conservation programs, and you can learn more about these programs on the district's website, at MarinWater.org/rebates.

The challenges we face brought on by our changing climate are substantial.

The best solutions will involve a healthy mix of planning, preparedness and community collaboration to ensure we have an ample water supply to carry us through whatever lies ahead. We are always stronger, together.

Jack Gibson, of San Anselmo, is president of the Marin Municipal Water District board of directors.

Perhaps the best tool in successfully building resilience to drought conditions is conservation.

POINT REYES LIGHT

Relief on the horizon for dramatically salty Point Reyes water

By Bra
10/07/2020

The water in Point Reyes Station is cloudy, thick and salty. For many, it's undrinkable, and for some, it's harmful.

An unprecedented intrusion of salt into the water system is stressing the region's water supply, as residents scramble for water bottles or fill up jugs elsewhere, while the North Marin Water District bores another well away from the influence of Tomales Bay.

For decades, salt has infiltrated the wells in Point Reyes Station during late summer, but this year the intrusion is higher than ever due to a confluence of factors. Sea-level rise brings bay water closer to freshwater aquifers, and a National Park Service project to remove a series of dikes and dams by Lagunitas Creek in 2008 stripped the watershed of protection from high tides. Two bulk users, a construction company and firefighters, consumed more water this year. The increased demand comes with decreased supply, with less than two feet of rainfall this winter leading the district to declare a water shortage emergency.

Sodium levels in the well water peaked at 414 milligrams per liter this year, an increase of more than 300 percent from 2017.

"An area that is vulnerable to salinity intrusion has been pushed over the edge," said Pablo Ramudo, the water quality supervisor for the district.

At the Palace Market, the shelves were emptied of bottled water for two weeks in August, so the grocery store imposed a two-gallon limit to be able to meet demand. Peggy Day, a resident of Walnut Place, fills and hauls jugs from her daughter's private well in Inverness Park. Ms. Day

has a kidney issue that requires her to drink plenty of water to stay healthy; recently, she began feeling nauseous after drinking her tap water, and it became tough to gulp down. She added more and more lemon juice, but she still couldn't drink enough.

A barista at Brickmaiden Breads, Miguel Kuntz, also could not stomach the water, so he's been filling a six-gallon jug in Inverness every few days. At work, a technician came in to test the water for dissolved solids after the espresso machine was extracting unevenly. As the technician told the staff a story about the hardest water he had ever encountered, his titration device quickly showed Brickmaiden's water surpassing that level. It was the hardest water the technician had seen in years of testing espresso machines. The bakery has since purchased a reverse osmosis filter, the only kind of filter that strips water of salt.

Around 1,700 residents are affected by the salty water, which is extracted from an aquifer accessed by two wells at the former Coast Guard site. The well water becomes especially salty in late summer, when creek flows are low and after ocean tides are high.

Following seven years of steady levels of sodium fluctuating between 30 and 50 milligrams per liter at the two wells, the salinity intrusion worsened in 2017, when the level peaked at 93 milligrams per liter. Sodium content continued to rise the next two years, to 140 and 174, then skyrocketed this year, peaking at 414 milligrams per liter.

To mitigate impacts from the intrusion, North Marin mixes the water it pulls at the Coast Guard site with water from a third well, on the Gallagher Ranch a few miles down Point Reyes-Petaluma Road and 15 feet above sea level. The freshwater well, which was connected to the system in 2014, provides clean water but only enough to meet about 40 percent of Point Reyes Station's demand. The less water the town uses, the more that comes from the Gallagher well, and the less salty the tap water is.

Not everyone tastes the salt, but for some, it's a health risk. At its saltiest, drinking two liters of the tap water would mean consuming over 400 milligrams of sodium. The recommended daily intake is 2,300 milligrams a day, but for low-sodium diets, the recommendation can be below 1,000 milligrams. People with high blood pressure, kidney disease or heart disease are often prescribed these diets.

Residents are not the only ones buying water from the North Marin Water District. Ghilotti Construction, the company rebuilding Sir Francis Drake Boulevard in the Point Reyes National Seashore, purchased about 3 percent of the town's water supply from July 2 to Sept. 14, using it to compact the soil on the roadbed.

The water district ended the sale last month after residents observed water trucks pulling from a hydrant at the fire station and questioned why. Although the district's policies allow it to sell water to a construction company during a water shortage, unless it is for dust control, the district recognized it had made a mistake.

"It's a gray area, but given the sensitivity of our water system, I had them remove [the meter]," general manager Drew McIntyre said.

Fire engines have also been using well water to fight the Woodward Fire, although how much is unknown. While the construction company used one metered hydrant, firefighters took from multiple hydrants, free of charge.

Other water users include Pardini Water Trucks, which delivers potable water to remote properties and businesses across West Marin, and ranchers in the service area whose own wells need to be supplemented.

North Marin knows the saltwater intruding on its drinking water comes from Tomales Bay, but where exactly it enters the freshwater system is unknown, as the area's hydrology and geology are complex. When Lagunitas Creek flows higher in the winter, the intrusion subsides.

The creek also has less protection from tidal influence than it used to. In 2008, the National Park Service converted a 550-acre dairy pasture back into a marsh, now known as the Giacomini Wetlands. The property, formerly owned by Waldo Giacomini, had been diked since 1946, and the creek was dammed each summer to accommodate agricultural operations.

When the park service bought the property in 2000, it found the ranch was polluting the water, degrading wildlife habitat and taking away wetlands, an ecosystem in decline. It proposed removing the culverts, dikes and dams to reconnect Lagunitas Creek and its tributaries with their flood plain.

At the time, the water district worried that saltwater would back up to its wells at the Coast Guard station more often. The park studied the issue in an environmental impact statement but reached no firm conclusions.

"While there has been a considerable amount of study into the salinity intrusion problem, the exact cause or mechanism by which salinities become elevated is still not totally understood," the report states. The park service pledged that it would continue to work with the water district to characterize the factors affecting salinity intrusion in the aquifer.

The wetlands restoration went forward with success, but not before the water district strongly urged the park service to fund a pipeline from the well on the Gallagher Ranch to the treatment plant. The park service did not fulfill the request, and the project sat shovel-ready for years until a state grant paid for construction in 2014.

"[The park service] never followed through," Mr. McIntyre said. "I don't think they were convinced that we were going to continue to have a salinity problem from their project."

Now, the district is looking to build a second well on the Gallagher Ranch, so even less water is needed from the Coast Guard wells. The district board raised rates in 2016 to help pay for its construction, and after boring three test wells that didn't pump enough water, crews found a productive location on the pasture.

North Marin hired a permitting consultant on Tuesday and is moving forward with design and easement acquisitions. After the California Department of Fish and Wildlife, State Water Resources Control Board and the California Coastal Commission approve the project, construction should take about two months.

Mr. McIntyre said the goal is to complete the well by mid-summer. "It is imperative we move posthaste," he said.

WEST MARIN

Fire fully contained in national seashore

In your town

Marin Independent Journal

The 4,929-acre Woodward fire in the Point Reyes National Seashore is 100% contained, meaning the perimeter of the burn zone is under control, fire officials said Sunday.

The fire burning 3 miles southwest of Olema was sparked by lightning during a rare thunderstorm in August that ignited several blazes across the state.

The fire is continuing to smolder within the heavy and dense shrub, but firefighters do not anticipate any flare-ups that would threaten the containment lines, officials said.

Information is at bit.ly/370dsOK.

Lubamersky a good pick for water board

Editorial

Marin Independent Journal

Facing issues of infrastructure costs, transparency and recreational land use, as well as threats of wildfire and drought, the Marin Municipal Water District is under the microscope again. With seats open in Area 2 (San Rafael) and Area 5 (Larkspur, Corte Madera and the Tiburon Peninsula), voters are being asked to elect members to a board of directors often accused of being myopic.

The IJ editorial board recommends teacher Mark Lubamersky for the open Area 2 seat and, reluctantly, incumbent Larry Russell, a water engineer professional, for Area 5.

As a coach, teacher and administrator, as well as in his work with the San Rafael Planning Commission and the Parks and Rec Commission, Lubamersky is connected with the community in a way his opponent, water scientist Monty Schmitt, is not.

There is no question that Schmitt, who has worked with state agencies throughout his career to improve water quality and the environment, has the kind of expertise we appreciate for the board. But, considering the challenges MMWD faces right now, Lubamersky's track record of transparency and consensus building fills a need.

As a member of the board since 2004, Russell calls himself "the technical link" on the panel. Despite a past campaign disclosure violation and the board's foot-dragging on broadcasting its daytime meetings (they should be changed to night), Russell's knowledge of the challenges is better than his opponent's.

As chief operating officer of PetHospice, Chris Hobbs, Russell's challenger for the Area 5 seat, knows how to budget, invest and maximize MMWD's nest egg. In saying he "speaks for the ratepayer," Hobbs is focused on a perceived lack of long-range planning by the MMWD board.

"They are starting to talk about doing long-term planning now, finally," Hobbs said. "It needs to continue. (Russell) has been on this board for 16 years. ... I don't think he's targeted (planning) nearly enough."

Russell makes it clear that he thinks "watersheds are for providing water." Hobbs said Russell's view is an example of the board "looking inward." He said he is proud to call MMWD land a "recreational resource" for the county.

Tamalpais CSD Charged with providing wastewater sanitation and waste disposal, as well as parks and recreation services for the more than 7,000 residents in the unincorporated Tamalpais Valley community of Southern Marin, the Tam CSD board has a race for three seats among four candidates.

Incumbents Steffen Bartschat, Steven Levine and Matthew McMahon bring experience in managing the $8.5 million budget. All have been involved in recent deals and upcoming capital improvement plans.

Newcomer Mark Tarpey-Schwed is running on the platform of bringing greater transparency to how the district is governed. Each of the incumbents listed ways the board tries to communicate with residents. Tarpey-Schwed said it is "difficult for the public to be involved in any of the important decisions."

Maintaining a balanced budget, working to fix and rebuild the district's 60-plusyear- old sewer system and restarting the popular parks and recreation programs amid the coronavirus pandemic are all priorities for the incumbents.

Bartschat, Levine and Mc-Mahon all noted ongoing measures to keep Tam CSD updated with disaster preparation norms. Batschat said part of that involves being an advocate for residents with countywide agencies. McMahon, the board president, stressed saving money on behalf of community members while carefully choosing projects to benefit residents. Levine said the board must continue to "provide the forum" for resident education — particularly in disaster preparedness.

Facing important decisions around spending, improvements and the challenge of reviving parks and rec amid the pandemic, Tam CSD needs the experienced voices who helped put the district in the enviable position it is today.

With that in mind, the IJ recommends Steffen Bartschat, Steven Levine and Matthew McMahon.

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Below-normal rain forecast increases fire fears in Marin

WINTER MONTHS

State lacks the precipitation to recover from drought era

Marin Independent Journal

By Will Houston

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After an already dry year marked by unrelenting fires, the Bay Area might not be getting the rain relief it needs this winter.

"The three-month outlook for January, February and March has most of California above normal for temperature but below normal for precipitation, and that would also include Marin for below-normal chances for precipitation," said meteorologist Matt Mehle of the National Weather Service.

The agency is forecasting an 85% chance of La Niña conditions to continue this winter, which tend toward wetter weather in the Pacific Northwest and drier conditions farther south. The Bay Area is somewhere in the middle, Mehle said, but the outlook is drier this year. While the agency's main weather gauge at the Marin County Civic Center in San Rafael is still out of service because of construction, an unofficial Kentfield gauge recorded 27.7 inches of rain between the start of the water year on Oct. 1, 2019, through Sept. 30, 2020, Mehle said. The prior year was about 58 inches. A 30-year average for that gauge was unavailable Mehle said.

"The moral of the story there is, last year was pretty dry," Mehle said.

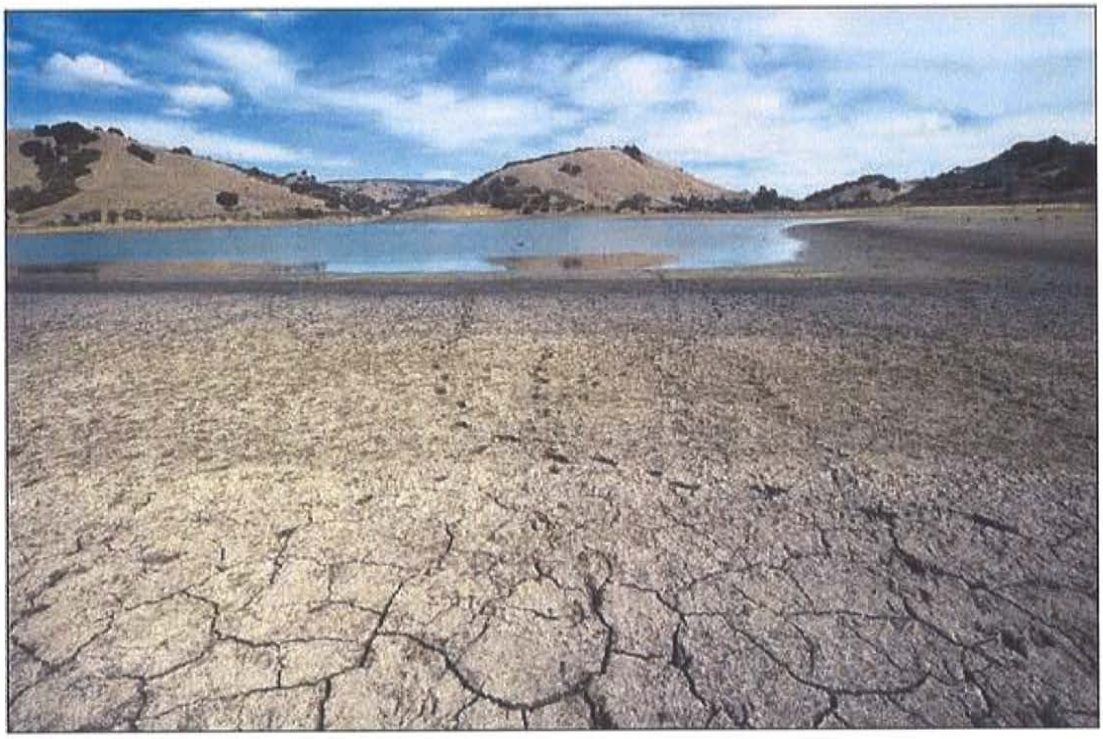
At Lake Lagunitas, the Marin Municipal Water District recorded 35.3 inches of rain during the water year. That is 67.6% of the average rainfall of 52.2 inches.

Amid the driest February on record for the Bay Area, the district recorded a hundredth of an inch of rain. That was the driest since 1953, when no rain was recorded.

The U.S. Drought Monitor at the University of Nebraska-Lincoln shows close to 85% of the state experiencing dry conditions, with 36%, including Marin, showing severe drought conditions. Last year at this time, 95% of the state was showing drought-free conditions.

California has yet to get the rainfall it needs to recover from the 2011-2017 drought, said Marin County fire Chief Jason Weber.

Another dry winter could further worsen future fire conditions following a record-setting year in which 4 million acres have burned already. This is more than double of the previous record of 1.67 million acres in 2018.



The waterline recedes at Stafford Lake in Novato on Friday. The lake, which is the main reservoir for the North Marin Water District, was at 31% capacity as of Oct. 1.

SHERRY LAVARS — MARIN INDEPENDENT JOURNAL

Redwood Creek runs through Muir Woods National Monument in January. Weather forecasters are expecting another winter of below-average rainfall this year.

ALAN DEP — MARIN INDEPENDENT JOURNAL

"The damage was done with that drought, and when we see that fire season or our dry season is 80 days longer than it was in the 70s, that has long-term and substantial chronic impacts on our fuels," Weber said.

An example of this, Weber has said, was the unusual coastal fire, largely driven by dry fuels, in the Point Reyes National Seashore starting in August. The so-called Woodward fire burned close to 5,000 acres before being contained in September.

Moisture levels in live plants have reached a "critical threshold" of 60% in October on Mount Tamalpais, Weber said. For comparison, a 30% moisture level is considered a dead plant.

These drier fuels, combined with the protracted drought and high winds, create a "trifecta" of conditions that can lead to massive fires in October, Weber said.

In anticipation of another potentially dry winter, the Marin Municipal Water District has been frontloading purchases of imported water from Sonoma Water rather than drawing on its seven reservoirs.

"It allows us to stretch our local supply of water when we do that," said Paul Sellier, the district's operations director. "If all goes well and what we hope is a rainy season we can draw less on that Sonoma Water if it really starts raining."

The district's reservoirs were at 66% capacity as of the end of the water year on Sept. 30, which is 96% average capacity for that date. Last year at this time, the reservoirs were at 121% of average capacity.

The district purchased 4,962 acre-feet of water from Sonoma Water between January and Sept. 30. Last year over the same period, the district purchased 4,706 acre-feet. The district has been authorized by its board of directors to take as much as 9,900 acre-feet. Typically the district only purchases 5,300 acre-feet in a year, which Sellier said the district plans to take by January — six months earlier than it normally would import that amount.

However, Sellier said conservation by customers has a sizeable role to play in stretching the district's water supply. Between 2013 and 2015, Sellier said, customers were able to reduce water use by 20%.

"Customers have shown their willingness to change their habits and work to provide that best solution," Sellier said.

The county's second-largest water district, North Marin Water District, reported its main reservoir at Stafford Lake is at 31% capacity as of Oct. 1, which is down from the average 42% capacity on that date. The district receives about 75% of its water supply from Sonoma Water. Sonoma Water's two main reservoirs, Lake Sonoma and Lake Mendocino, were at 73% and 62% capacity respectively as of Oct. 7.

Earlier this week, there were hopeful forecasts of two rain systems moving into the Bay Area for the weekend, providing the first few inches of rain to the region and some badly needed relief to fire crews. However, those systems are expected to remain over the ocean, Mehle said.

"We don't typically see our first most notable rainfall until the end of the month or into November," he said.

Still, more humidity and cooler temperatures are expected to provide some relief, Mehle said. Dry weather is expected to follow into next week including some offshore northeast winds, he said.

A bridge spans a dried up waterway at Stafford Lake Park in Novato on Friday. The North Marin Water District is preparing for a potentially dry winter by bolstering its supply from Sonoma water.

SHERRY LAVARS — MARIN INDEPENDENT JOURNAL

Lawson's Landing gets state approval for major upgrades

WEST MARIN

Coastal panel gives resort OK for sewage, buildings

Marin Independent Journal

By Will Houston

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After 14 often contentious years, an endeavor to bring the Lawson's Landing campground and resort in West Marin into compliance with state coastal laws appears to be nearing an end.

The California Coastal Commission voted unanimously during an online meeting on Friday to allow the resort to install a new wastewater system along with several new buildings, including an office building, campground bathrooms, equipment sheds and a 5,400-squarefoot barn, among other changes.

"We're hopeful that today's hearing will finally provide for the public and the environment what we have been working to achieve for the last several years: a superior functioning wastewater system," co-owner Michael Lawson told the commission before its vote on Friday. "This system will allow us to finally provide our customers with real restrooms and showers. It will also reduce the need to truck sewage offsite to far-away treatment facilities. It will also allow our campground to remain open to provide valuable, low-cost, short-term coastal access."

The wastewater treatment upgrade was one of the remaining major conditions the campground owners had to complete as part of a 2011 coastal development permit it received from the commission. In 2017, the commission rejected the company's application for the wastewater system and the new buildings because of concerns about endangered red-legged frogs and sensitive habitat at the site.

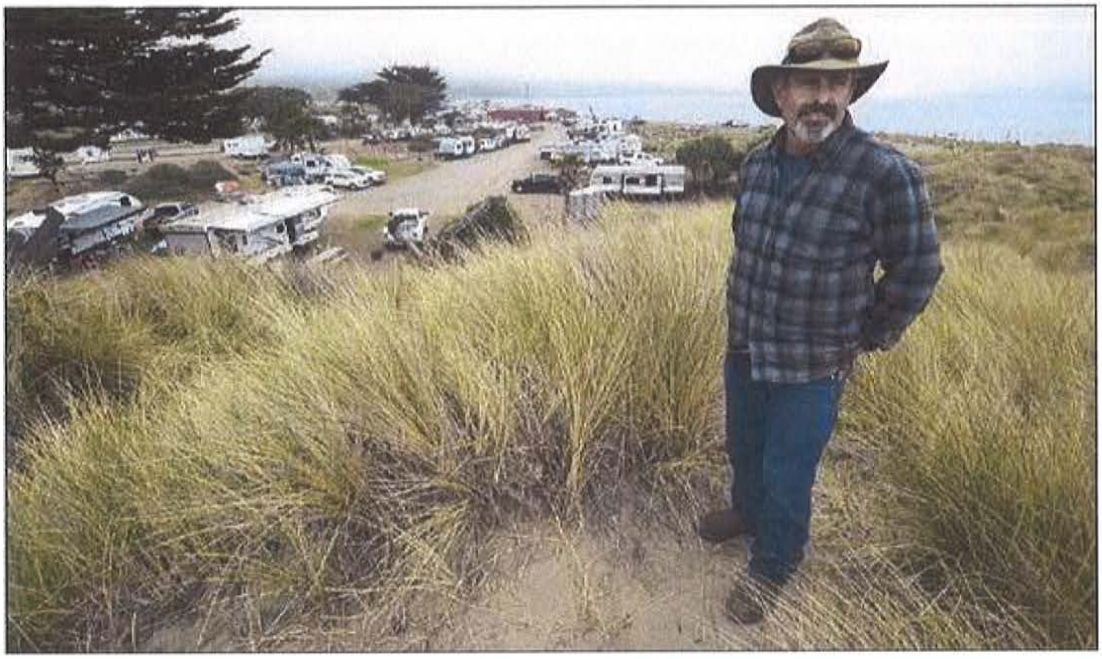
Vowing to come back with a passable project, the Lawsons and Voglers followed through almost three years later with Friday's approval. It was vital to the campground's survival.

"If we failed, it would have been an eventuality that we would have had to close down," Lawson said after the vote. "We're only allowed so much time and basically we had a decade to get something finalized, and it fortunately only took nine years."

Just days before the hearing, Lawson was still working out the details with the state and county, eventually relinquishing his preferred plan. It would have not required the removal of certain buildings, among other changes.

Lawson said he settled because he feared the company would have faced a lawsuit from the Environmental Action Committee of West Marin. He said the commission "did the right thing and we're going to move forward."

"This is progress," he said.



Lawson's Landing co-owner Mike Lawson looks out to the ocean from a bluff at Lawson's Landing in Dillon Beach. The California Coastal Commission approved a wastewater system permit for the privately owned seaside resort at the mouth of Tomales Bay.

PHOTOS BY SHERRY LAVARS — MARIN INDEPENDENT JOURNAL

Campers pass by the marina at Lawson's Landing in Dillon Beach.

The wastewater project alone is expected to cost about $4 million, according to Lawson. Catherine Caufield of the Environmental Action Committee of West Marin, which has acted as a check on the project over the past decade, said the organization has been calling for the resort to have a sewage disposal system since 1975.

"So we are delighted to think that 45 short years later a wastewater system that finally protects Tomales Bay will be installed," Caufield told the commission in support of the project.

The group's attorney, Ralph Faust, a former 20year lawyer for the commission, said he was prepared to make a legal argument at the meeting.

"But it sounds like everyone is in agreement on the solution that staff came up with," he said.

Under an amended permit, the company will be able to construct a wastewater system north of the campground and remove the existing septic leach fields and holding tanks.

In addition, the commission allowed the company to build facilities to support a mobile food trailer near the campground and an emergency boat storage area. It also gave after-the-fact approval to remove the dilapidated fishing pier.

The 5,400-square-foot barn will support the nearly 420 acres of cattle grazing and agricultural operations on the property.

The permit also requires Lawson's Landing to remove a truck shed, an adjacent storage area and an oil shed that it deemed unpermitted, and to restore those areas.

The 960-acre resort just south of Dillon Beach has been owned by the Lawson family — later co-owned with the Vogler family — since 1928. The family opened the property to the public in 1957 as a camping, fishing and boating destination.

The permitting issues began in 2006 when the coastal commission issued a cease and- desist order to the company and called for a coastal development permit to be acquired. The commission approved the permit in 2011. It included the establishment of a 465-acre natural resource conservation area and other changes.

Before making a motion to approve the wastewater permit, Marin County Supervisor Katie Rice, a member of the commission, commended the Lawsons' and Voglers' work on the project. "It's a much different place than it was 50 years ago: more beautiful, cleaner, restored in so many ways," Rice said. "What our approval today will allow will just take it that much further. It's a spectacular place."

The seawall is lined with motor homes and campers at Lawson's Landing in Dillon Beach. The California Coastal Commission approved a wastewater system permit for the privately-owned seaside resort at the mouth of Tomales Bay.

SHERRY LAVARS — MARIN INDEPENDENT JOURNAL

NORTH COAST

POINT REYES LIGHT

Inverness and Bolinas step up water restrictions, warn of rationing

David Briggs

By A
10/07/2020

Residents of Bolinas and Inverness must take further steps to reduce their water consumption to stave off rationing. Both the Inverness and Bolinas Community Public Utility Districts lack significant water storage capacity in their systems; recently, they put increased pressure on their customers to cut water use and warned of mandatory restrictions should they fail to comply. At a public meeting last week, BCPUD's general manager, Jennifer Blackman, was optimistic about voluntary reductions. "Unlike these other events we are experiencing, like the pandemic and wildfires, reducing water use really is in our control," she said. "The BCPUD is here to help all our customers. We can do this." It was exceptionally dry this year, with only 23 inches of rain from last October to June, compared to the average 33 inches in Bolinas and 38 inches in Inverness. Hot, sunny days have not helped. Compared to the 100,000 gallons currently used each day in Bolinas, the Arroyo Hondo Creek is supplying no more than 65,000 gallons a day. The district has been supplementing with emergency supplies from its two modest reservoirs since May, though it's not typical to start doing so until September. After BCPUD issued a heightened water conservation alert in June, water use in town dropped around 20 percent. Yet the reductions plateaued in September, as water availability continued to dwindle. Ms. Blackman said the majority of customers are meeting the district's target of 150 gallons per day per water connection—in fact, many are well below it. Still, 38 percent, or 226 customers, remain above the target; almost all of those customers are single-family residences. "Who are the high users?" she explained last week. "They are long-term Bolinas residents, short-term Bolinas residents, they are businesses, part-time residents, full-time residents, property owners, renters, visitors, people sheltering in place, people with gardens, people without gardens—in other words, it's everybody that you know and love." BCPUD staff is working with the high users and offering water audits and help teaching customers how to read their own meters. Should everyone follow the 150-gallon per day limit, Ms. Blackman said there would be enough water until the rains replenish supply—which her staff does not expect to happen until February. If customers do not reduce their consumption, the board could decide to ration water by setting new allotments and penalties. The ultimate penalty would be to cut off a customer's water. The district has rationed only once before, in 2009. Further north, Inverness is facing the possibility of rationing for the first time in history. On Sept. 30, the IPUD board moved into the second of four stages of a water shortage emergency declaration made in July. Stage

two established a new outdoor watering schedule: odd addresses may water outside on Mondays, Wednesdays and Saturdays, while even addresses may water on the other days and no one may water on Fridays. Stage three would cut off all outdoor watering, and stage four would be rationing. IPUD, which uses water from streams and creeks that descend from the Inverness Ridge, has particularly limited storage capacity: its tanks turn over the water they contain every three days. The town saw an immediate reduction in water use after the emergency declaration this summer, though there was a slight trend upward at the end of August, which administrator Shelley Redding said could be thanks to the resumption of short-term rentals. IPUD will step up its monitoring of individual meters in the coming weeks, in preparation for the scenario in which it has to ration.