Date Posted: 11/1/2019

NORTH MARIN WATER DISTRICT

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

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| Est. Time | Item | Subject |
|---|---|---|
| 6:00 p.m. | | ***CALL TO ORDER*** |
| | 1. | ***APPROVE MINUTES FROM REGULAR MEETING***, October 15, 2019 |
| | 2. | ***GENERAL MANAGER'S REPORT*** |
| | 3. | ***OPEN TIME: (Please observe a three-minute time limit)*** |
| | | This section of the agenda is provided so that the public may express comments on any issues not listed on the agenda that are of interest to the public and within the jurisdiction of the North Marin Water District. When comments are made about matters not on the agenda, Board members can ask questions for clarification, respond to statements or questions from members of the public, refer a matter to staff, or direct staff to place a matter of business on a future agenda. The public may also express comments on agenda items at the time of Board consideration. |
| | 4. | ***STAFF/DIRECTORS REPORTS*** |
| | 5. | ***QUARTERLY FINANCIAL STATEMENT*** |
| | | ***ACTION CALENDAR*** |
| | 6. | ***Approve:*** Operator-in-Charge Side Letter with Employee Association |
| | 7. | ***Approve:*** Floating Holiday Side Letter with Employee Association |
| | 8. | ***Approve:*** Kennedy/Jenks Consultants – Consulting Engineering Services Agreement (Crest Pump Station) |
| | 9. | ***Approve:*** Plum Street Tank Property Exchange – Grant Deed Resolution |
| | 10. | ***Approve:*** Old Ranch Road Tank No. 2 – Request for Authorization to Conduct CEQA Public Review |
| | | ***INFORMATION*** |
| | 11. | PG&E October 26-30, 2019 Public Safety Shutdown Response (PSPS) Update |
| | 12. | ***MISCELLANEOUS***<br>Disbursements – Dated October 17, 2019<br>Disbursements – Dated October 24, 2019<br>Disbursements – Dated October 31, 2019<br>Comment Letter - Development of Water Loss Performance Standards<br>FY20 1st Quarter Labor Cost Report |

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

(Continued)

| Est. Time | Item | Subject |
|---|---|---|
| | | News Articles:<br>California finds widespread water contamination of 'forever chemicals'<br>Point Reyes wastewater feasibility study handed off<br>Annexing muddle prompts apology – Novato<br>Marin's big rainfall year fails to reduce fire risk<br>Housing for staff foiled by blooper – Housing – COLLEGE OF MARIN<br>Winter weather outlook: 'the probabilities tilt slightly toward warmer and drier than normal'<br>Discounts considered for water fee – MARIN MUNICIPAL<br>Interim director hired to oversee finance division – Novato<br>FCC finds broad failure of cellular sites in Marin County<br>PG&E restores power to approximately 99% of customers<br>Editorial – Cell towers need to work during outages |
| **7:30 p.m.** | 13. | ***ADJOURNMENT*** |

# 1

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

## *CALL TO ORDER*

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

District employees Tony Arendell (Construction/Maintenance Supervisor) and Robert Clark (Operations/Maintenance Supervisor) were also in attendance.

## *MINUTES*

On motion of Director Joly, seconded by Director Petterle the Board approved the minutes from the October 1, 2019 meeting by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

## *GENERAL MANAGER'S REPORT*

Huffman Ad Hoc Committee – October 2, 2019

Mr. McIntyre informed the Board that he recently attended his second Ad Hoc Committee meeting related to the Potter Valley Relicensing Project. He added the meeting focused on summarizing the results of the two working groups: Water Supply and Fish Passage. Mr. McIntyre noted the Planning Agreement Partners will have a consultant under contract soon to help with preparation of the feasibility study, and the working group studies will be important background data for the study.

Point Reyes Community Water Workshop #3 – October 3, 2019

Mr. McIntyre announced that he attended the third and final Point Reyes Community Water Workshop held by Marin County Environmental Health Department. He noted that these workshops have been similar to those he previously attended for the Dillon Beach Village

community. He reported that, contrary to the Dillon Beach Village outcome, there was no consensus at the Point Reyes Station workshop to move forward with a grant application to explore the feasibility of developing a community wastewater system. Mr. McIntyre noted he will have a summary available for the Board at a future meeting. Director Baker responded that he was surprised there were not a lot of community members who wanted to move this issue forward. Mr. McIntyre replied that the consensus was to focus on more bathrooms for visitors in downtown Point Reyes Station and that Supervisor Rodoni has already established a separate community group on this issue. Director Grossi commented that Supervisor Rodoni asked him to attend some of those meetings.

Special WAC Meeting – October 7, 2019

Mr. McIntyre stated at last week's Special WAC Meeting, the WAC approved a resolution in support of continued collaboration with Sonoma County Water Agency regarding the Potter Valley Project relicensing activities to stay both informed and engaged through the process.

Gallagher Well Testing

Mr. McIntyre reported that a test well was installed in the North Pasture at Gallagher Ranch and water production testing will occur over a seven day period starting October 22nd.

Water Supply Coordination Council (WSCC) Meeting

Mr. McIntyre announced that on October 21st he will be attending a WSCC meeting in Santa Rosa to develop the agenda for the November 4th WAC/TAC Meeting.

NBWRA Meeting

Mr. McIntyre reminded Director Baker that the next NBWRA meeting will be on October 28th at 9:30 a.m. at the Novato City Hall. Director Baker stated that he appreciated the reminder.

***OPEN TIME***

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

***STAFF/DIRECTORS REPORTS***

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

Mr. Clark apprised the Board on the October 3rd salinity intrusion notice in the Pt. Reyes Light. He stated it was due to Coast Guard well use and increasing salinity levels in the supply water. He noted that Well No. 4 has somewhat lower salinity levels than Coast Guard Well No. 2. He added that when the rains start we typically see a drop in the salinity levels at the Coast

Guard wells. Director Baker noted that they are predicting a small amount of rain tomorrow and asked if this would be enough to make a difference. Mr. Clark replied that it would not be enough.

Mr. Clark also informed the Board that we got lucky and we were outside of the Marin areas shut down during the recent October 8-10, Public Safety Power Shutdown (PSPS) event. He added areas in Southern Marin and further north in Sonoma County were without PG&E power. Mr. Clark also stated that staff did a great job to communicate and prepare equipment in the event we were shut down. Director Baker asked if Petaluma was affected. Mr. Arendell replied that the North East area of Petaluma was.

Mr. Vogler announced that Engineering hired a recent Mechanical Engineer graduate from UC Davis as an intern. He added that he assigned him the task to devise a strategy to determine which of the five to six hundred remaining Polybutylene (PB) plastic services should be replaced first. Director Baker asked if this will only prioritize and not speed up the replacement process. Mr. Vogler replied that this will help us verify where the most likely failure will occur first, and those will be on the top of the list. Director Baker asked if Mr. Vogler thought all the PB services will be replaced in five years. Mr. Vogler said it will be most likely from five to ten years.

Ms. Kehoe announced that the District Holiday Party is scheduled for December 14th at 6:00 p.m.

Director Joly asked about the items on the consent calendar. Director Joly asked why a budget action item with funding would be placed on the consent calendar. Director Baker replied historically Directors expressed that too much time was being spent with too many action items on the agenda and decided unless a member wanted to specifically discuss an item they could leave it to the discretion of the General Manager to put it on the consent calendar. Director Petterle commented that a Board Member also has the right to pull any item. Mr. McIntyre added that placing an item on the consent item is subjective on his part. He noted that if it was a brand new budget item it would generally not be placed under consent, however in this case, it was discussed at the last meeting and the cost was identified at that time. Mr. McIntyre offered that anytime a Board Member would like additional discussion that the item can be pulled from consent. Director Petterle commented that he trusts Mr. McIntyre to make the judgement; the item can always be pulled. He added he prefers the discussion to be focused on what Mr. McIntyre thinks is most important. Director Joly stated he knows what his action plan is now and he is good to go.

Ms. Blue updated the Board on the email fraud that was reported a few months ago.

She stated the bank has been very proactive about providing cyber training and she and the accounting staff attended a training session with Bank of Marin and they also participated in a similar webinar with Chase Bank. Director Petterle stated the County has also pushed increased awareness on this topic. Ms. Blue stated that ransomware is also a big threat now. Director Baker asked Ms. Blue to keep the Board updated.

***MONTHLY PROGRESS REPORT***

Mr. McIntyre provided the Board with the Monthly Progress Report for September. He stated that water production in Novato is up 10% from one year ago. In West Marin, water production is down 18% from September one year ago. Recycled Water production is down 12% from one year ago. Stafford Treatment Plant production is up 90% from one year ago. He noted that Stafford Lake elevation is at 186 ft., 10 feet below the spillway and is at 56% of capacity. He added there is 30% more supply in the lake this year than average and Operations is doing a great job trying to maximize production. Mr. McIntyre reported that in Oceana Marin, the treatment plant pond freeboard levels look good.

Mr. McIntyre also commented that there has been an uptick of unplanned water breaks and they recently had one on Scown Lane. Director Baker asked for the location, and Mr. McIntyre replied this lane intersects Redwood Blvd by the old Perry's Deli. Mr. Vogler added that we have a CIP project to replace that line very soon. Mr. McIntyre stated that the crew was using the vacuum excavator to get some as-built information and touched it slightly and it broke. Mr. Arendell added that sometimes if they barely touch a pipe it will split.

Mr. McIntyre continued the report noting that there was a revision on the number of days without a lost time accident, which is currently 185 days. On the Summary of Complaints and Service Orders, the Board was apprised that the total numbers are down 16% from September one year ago and the Bill Adjustments in September were $4,500 compared to $12,000 one year ago. Mr. McIntyre added that our overall satisfaction rate is at 94% with a questionnaire return rate of 57%. He added that when we upgrade our website we need to get this message out so that our customers better informed regarding our high ranking in customer service and satisfaction.

Director Grossi announced that in regards to Stafford Lake water quality, the dairy cows are all gone at the Dominic Grossi Dairy, and currently only heifers are there. Director Baker asked if they were going to transition from dairy to beef. Director Grossi confirmed. Mr. Clark added that with range animals they disperse on their own and there is less chance of getting nutrients in the lake, and the lake quality will only get better.

***CONSENT ITEMS***

On the motion of Director Joly, and seconded by Director Petterle the Board approved the consent calendar by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

Director Fraites commented on the bylines on the Water Line and asked if they were new. Mr. McIntyre stated they were included last year, adding that the updated, new look is attributed to input from Kiosk. Director Joly commented that he thought the Water Line looked great, and it validates the decision to approve the Kiosk agreement.

***TEXT FOR FALL 2019 NOVATO "WATER LINE", VOLUME 20, ISSUE 23***

The Board authorized the General Manager to approve final text and design of the Fall Novato Water Line newsletter. This edition has a new design created by Kiosk and is the first step in implementing action items from the recently adopted Communications Strategy and Plan.

***FIRST AMENDED REIMBURSEMENT AGREEMENT WITH SONOMA COUNTY WATER AGENCY FOR THE NORTH MARIN WATER DISTRICT WATER CONSERVATION PROGRAM***

The Board authorized the General Manager to execute the First Amended Reimbursement Agreement with Sonoma County Water Agency for the North Marin Water District Water Conservation Program to extend the existing agreement for two additional years. This agreement allows Sonoma County Water Agency to assist with the administration of the Water Smart Home Survey program, and as needed support with the large Landscape and Commercial Audit Program. No additional funding approval is needed as this amendment only increases the duration of the agreement.

***AGREEMENT WITH KIOSK FOR PUBLIC COMMUNICATIONS PLAN IMPLEMENTATION***

The Board authorized the General Manager to execute an agreement with Kiosk, a local marketing firm to help develop a more comprehensive and strategic communications plan with the objective to increase recognition, reach, educate, engage and build trust with our customers. The approved budget ceiling limit for this agreement is $60,000

***ACTION ITEMS***

***JOB DESCRIPTION FOR HUMAN RESOURCES/SAFETY MANAGER POSITION AND AUTHORIZE RECRUITMENT***

Ms. Blue discussed the job description, recruitment and hiring of a Human

Resources/Safety Manager. She explained the HR/Safety Manager will take on many of the legal-compliance responsibilities within the District, thereby protecting both the District and its employees. She noted the HR/Safety Manager will report to the Auditor-Controller. Ms. Blue stated that this position will be included as an unrepresented employee and there will be no increase to the FTE count since it will replace one of the existing accounting positons. She added this job will be recruited externally and she hopes to fill the position by the end of the year. Director Baker stated that it may be a tough positon to fill since it is very unique and specialized. Ms. Blue replied our HR Consultant and legal counsel will help circulate the recruitment notice.

On the motion of Director Fraites, and seconded by Director Joly the Board approved the job description for Human Resources/Safety Manager position and authorized recruitment by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

***JOB DESCRIPTION FOR ACCOUNTING SUPERVISOR POSITION AND AUTHORIZE RECRUITMENT***

Ms. Blue discussed the job description, recruitment and hiring of an Accounting Supervisor. She explained this position will be responsible for supervising and overseeing the District's accounting positions and will be replacing the currently vacant Accounting/HR Supervisor position that has been vacant since July 2018. Ms. Blue added that, as a result, the accounting team has had an extra workload the last year. She advised that this positon will report to the Auditor Controller and supervise the accounting staff. Ms. Blue stated this employee would be in the Employee Association and would be subject to overtime. She added that there will be no FTE increase since this will be a conversion of a current position and we hope to fill this position by internal recruitment.

On the motion of Director Joly, and seconded by Director Fraites the Board approved the job description for Accounting Supervisor position and authorized recruitment by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

Director Joly thanked Ms. Blue for all the extra work she did in the HR positon.

***SALARY, TERMS AND CONDITIONS OF EMPLOYMENT – GENERAL MANAGER***

President Baker stated this item was previously presented at the last Board Meeting. He then recited: in accordance with Government Code section 54953(c)(3), I am providing an oral summary of the recommended action. The item before the Board tonight is to set the salary and terms and conditions of employment for the District's General Manager position, effective October 16, 2019. The recommended action is to grant the following changes to the General Manager's base salary: a 9.7% COLA wage increase effective Oct. 16, 2019; a true-up of $10,000 to match pre-May 2017 GM salary schedule, effective October 16, 2019, and going forward on a prospective basis; and an equity adjustment of $4,986 effective October 16, 2019, and going forward on a prospective basis. The total annual salary increase is estimated to be $35,002. In addition, payroll taxes will increase by $510 and retirement contributions will increase by $9,448 annually. After factoring in the above adjustments, the annual base compensation for the General Manager position will be $235,000, effective October 16, 2019. Additional changes to the General Manager's duties and terms and conditions of employment are set forth in the resolution associated with this agenda item. Director Baker then asked the Board or members of the public if they had any questions regarding this item. Director Grossi asked what the assigned resolution number will be. Ms. Kehoe replied once the resolution is approved it will be assigned 19-19.

On the motion of Director Joly, and seconded by Director Fraites the Board approved the salary, terms and conditions of employment for the General Manager by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

Director Baker congratulated Mr. McIntyre, and Director Joly added that it was well earned.

***ESA CONSULTING SERVICES AGREEMENT – PERMITTING SERVICES FOR LAGUNITAS CREEK SLOPE STABILIZATION PROJECT (UPSTREAM OF GALLAGHER RANCH BRIDGE)***

Mr. McIntyre reported that in order to complete the Natural Resources Conservation Service (NRCS) Emergency Watershed Protection grant funded project in a timely manner, ESA is needed to work on permitting services for the Lagunitas Creek Slope Stabilization Project upstream of the Gallagher Ranch Bridge. He added that NMWD has used ESA for many

projects requiring local, state and federal permits. Director Grossi asked if it was realistic to think the job will be done by April of 2020. Mr. McIntyre replied that this is a requirement of the grant and yes it is optimistic. He added that it is his understanding that NRCS will make allowances for project delays that are beyond our control. Director Baker asked if this area is included in the Local Coastal Plan and will require a Coastal Permit from Marin County. Mr. McIntyre confirmed. Director Joly praised Mr. McIntyre for a job well done; noting the estimated local match of $200,000 will not be completely absorbed by NMWD.

On the motion of Director Joly, and seconded by Director Grossi the Board authorized the General Manager to execute an Agreement with ESA Consulting Services for permitting services for the Lagunitas Creek Slope Stabilization Project by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

***CONTRACT THIRD PARTY COATING INSPECTION FOR CHERRY HILL TANK NO. 2 RECOAT AND REHABILITATION PROJECT – DB GAYA CONSULTING LLC***

Mr. Vogler presented the contract with DB Gaya Consulting LLC, for third party coating inspection for the Cherry Hill Tank No. 2 Recoat and Rehabilitation Project. He noted they will inspect the surface preparation, application, and coating to be sure we have a long lasting protective coating. Mr. Vogler added we received proposals from two qualified firms and DB Gaya was the lowest cost.

On the motion of Director Petterle, and seconded by Director Joly the Board authorized the General Manager to execute an Agreement with DB Gaya for third party coating inspection for Cherry Hill Tank No. 2 Recoat and Rehabilitation Project by the following vote:

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

NOES: None

ABSTAIN: None

ABSENT: None

***INFORMATION ITEMS***

***NBWA MEETING – OCTOBER 4, 2019***

Director Fraites summarized the NBWA meeting that took place on October 4th. There was an overview of the Re-Oaking Project conducted by the Napa and Sonoma Resource Conservation Districts. He stated that they met in Kenwood right in the middle of the area of the fires. Director Fraites explained that they are getting acorns native to the area to use for re-

planting. He added that these oaks are less susceptible to fire and this was an awesome project to bring this area back.

***MISCELLANEOUS***

The Board received the following miscellaneous items: Disbursements – Dated October 3, 2019, Disbursements – Dated October 10, 2019 and Salinity Notice – Point Reyes.

The Board received the following news articles: Letters- Turning point in Pt. Reyes; Novato schools building irks city and MARIN AREAS FACE PLANNED OUTAGES- PG&E FIRE PRECAUTION.

***ADJOURNMENT***

President Baker adjourned the meeting at 6:55 p.m.

Submitted by

Theresa Kehoe
District Secretary

# 2

# 3

# 4

# 5

# NORTH MARIN WATER DISTRICT

# FINANCIAL STATEMENT
# FISCAL YEAR 2019-20

## September 30, 2019

**NORTH MARIN WATER DISTRICT**
**FINANCIAL STATEMENTS**
**TABLE OF CONTENTS**

**MEMORANDUM**

To: Drew McIntyre, General Manager November 1, 2019

From: Reviewed by: Julie Blue, Auditor-Controller

Prepared by: Nancy Holton and Nancy Williamson, Senior Accountants

Subj: Information – FY19/20 September Financial Statement
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## FISCAL YEAR PERFORMANCE COMPARED TO THE ANNUAL BUDGET

| CONSOLIDATED SUMMARY<br>Actual vs. Budget | Sep-19<br>Actual | FY19/20<br>Actual YTD | FY19/20<br>Budget | FYTD /<br>Budget % |
|---|---|---|---|---|
| Operating Revenue | $1,826,437 | $7,051,338 | $22,998,000 | 31% |
| Operating Expense | 1,706,652 | 5,586,327 | 20,868,000 | 27% |
| Non-Operating Revenue / (Expense) | (53,189) | (55,476) | (300,000) | 18% |
| Net Income / (Loss) | $66,596 | $1,409,535 | $1,830,000 | 77% |
| Other Sources / (Uses)* | 236,958 | (474,679) | (4,151,000) | 11% |
| Cash Increase / (Decrease) | $303,554 | $934,855 | ($2,321,000) | - |

* See Page 8.

For the first quarter of the fiscal year, the District generated a net income of $1,409,535 and saw a net cash increase of $934,855. On a seasonally adjusted basis, Operating Revenue came in 8% under budget and Operating Expense came in 5% under budget. $405,337 (7%) of the Capital Improvement Projects Budget was expended this fiscal year-to-date. At month end the ratio of total cash to budgeted annual operating expense (sans depreciation) stood at 114%.

## SUMMARY INCOME STATEMENTS BY SERVICE AREA PRESENTED IN ACCORDANCE WITH GENERALLY ACCEPTED ACCOUNTING PRINCIPALS

| NOVATO WATER<br>Year over Year Comparison | Sep-19<br>Actual | FY19/20<br>Actual YTD | FY18/19<br>Actual YTD | FY20 vs 19<br>Up/(Down) |
|---|---|---|---|---|
| Operating Revenue | $1,696,656 | $6,072,240 | $6,788,848 | (11%) |
| Operating Expense | 1,536,625 | 5,062,669 | 5,027,559 | 1% |
| Other Income / (Expense) | (33,458) | (44,546) | (9,753) | 357% |
| Net Income / (Loss) | $126,573 | $965,024 | $1,751,536 | (45%) |
| Active Accounts | 20,541 | 20,541 | 20,542 | 0% |
| Consumption (MG) | 288 | 838 | 913 | (8%) |
| Average Commodity Rate / 1,000 gal (net) | $4.41 | $5.71 | $6.09 | (6%) |
| Income / (Loss ) / Active Account | $6.16 | $46.98 | $85.27 | (45%) |
| Income / (Loss) / 1,000 Gal | $0.44 | $1.15 | $1.92 | (40%) |
| Connection Fee Revenue | $228,800 | $896,600 | $95,800 | 836% |
| FRC Transfer (to)/from Recycled Water | ($116,730) | ($218,155) | $2,031,795 | - |
| Caltrans Capital Contribution | $0 | $90 | $3,250 | (97%) |
| MMWD AEEP Capital Contribution | $0 | $205,320 | $245,000 | (16%) |
| Developer 'In-Kind' Contributions | $109,639 | $414,390 | $32,431 | 1178% |

Consumption for the fiscal year-to-date was 8% less than the prior year same period. Total operating revenue, which includes wheeling and other miscellaneous service charges, decreased 11% ($716,608) from the prior year. Total operating expense was 1% ($35,110) more than last year same period.

The Stafford Treatment Plant produced 283 MG this fiscal year- to-date at a cost of $2,138/MG[1] versus $2,885/MG[3] from SCWA. The budget for Stafford is 650 MG at a cost of $2,358/MG.

Staff time (hours) charged to Novato operations was 10% less than last year. Salary and benefit cost was $1,419,237, which was 22% of the $6,514,000 budget for Novato operations.

The fiscal year net income (which includes non-operating items such as interest revenue and expense) of $965,024 compares to a budgeted net income for the year of $902,000 and to a net income of $1,751,536 for the prior year. $303,689 (7%) of the Novato Water Capital Improvement Project Budget was spent versus $1,084,871 (19%) for the prior year. $896,600 in connection fees have been collected ($340,000 is budgeted). Connection Fee reserves totaling $218,155 were transferred this fiscal year from the Novato Water Fund to Recycled Water Fund to cover debt service and capital project costs. The Novato Connection Fee Reserve has a net deficit of $7,146,992 arising from transfers to the RW Fund in advance of Connection Fee receipts. This is down from a net deficit of $9,379,993 last year. That deficit will be reimbursed by future Connection Fee revenue. The Novato cash balance increased $135,787 in September, and stood at $12,779,607 at month end, compared to a budgeted projection of $5,892,000 at fiscal year-end.

| **NOVATO RECYCLED**<br>**Year over Year Comparison** | **Sep-19**<br>**Actual** | **FY19/20**<br>**Actual YTD** | **FY18/19**<br>**Actual YTD** | **FY20 vs 19**<br>**Up/(Down)** |
|---|---|---|---|---|
| Operating Revenue | ($11,879) | $596,071 | $512,207 | 16% |
| Operating Expense | 92,414 | 293,680 | 379,660 | (23%) |
| Other Income / (Expense) | (9,223) | (28,892) | (38,580) | (25%) |
| Net Income / (Loss) | ($113,516) | $273,499 | $93,968 | 191% |
| Active Accounts | 91 | 91 | 84 | 8% |
| Consumption (MG) | 35.4 | 96.7 | 86.5 | 12% |
| Average Commodity Rate / 1,000 gal (net) | ($0.54) | $5.97 | $5.77 | 3% |
| Deer Island Production (MG) | 0.8 | 6.2 | 4.0 | 55% |
| Novato Sanitary Production (MG) | 21.3 | 69.2 | 83.4 | (17%) |
| Las Gallinas Production (MG) | 7.3 | 24.1 | 6.7 | 260% |
| Potable Water Input (MG) | 0.0 | 0.0 | 19.7 | - |

96.7 MG was delivered to RW customers this fiscal year-to-date, 12% more than the prior year same period. Operating revenue was 16% more than last year due to the June 1, 2019 3.5% rate increase and the consumption increase. Total operating expense was $85,979 (23%) less than the prior year same period. The recycled water was produced at a cost of $1,872/MG[2] (including potable water consumed) versus $2,876/MG[3] from SCWA. The budgeted production cost of recycled water is $2,410/MG.

The fiscal year net income of $273,499 compares to a budgeted net income for the year of $54,000 and a net income of $93,968 for the prior year same period. $1,794 (1%) of the Capital Improvement Project Budget has been expended this fiscal year-to-date.

The Novato Recycled cash balance stood at $5,084,483 at month end, $3.6M of which amount resides in restricted reserves for debt service, the Deer Island Facility Replacement Fund and the Recycled Water Capital Replacement and Expansion Fund.

[1] Stafford production cost = TP op expense ($407,761) + SRF loan interest ($55,672) + plant depreciation ($141,586) /283 MG produced

[2] Recycled Water production cost = purchased water cost ($130,625) + treatment expense ($3,098) + Deer Island RW Facility SRF loan interest ($11,926) + Deer Island plant depreciation ($28,980) /93.30 MG produced

[3] SCWA production cost per MG = O&M charge ($2,369) + debt service charge ($177) + Russian River conservation charge ($313) + Russian River projects charge ($26)

| WEST MARIN WATER<br>Year over Year Comparison | Sep-19<br>Actual | FY19/20<br>Actual YTD | FY18/19<br>Actual YTD | FY20 vs 19<br>Up/(Down) |
|---|---|---|---|---|
| Operating Revenue | $119,898 | $317,741 | $284,035 | 12% |
| Operating Expense | 60,694 | 176,978 | 184,861 | (4%) |
| Other Income / (Expense) | 4,304 | 13,917 | 1,160 | 1100% |
| Net Income / (Loss) | $63,509 | $154,680 | $100,334 | 54% |
| Active Accounts | 783 | 783 | 782 | 0% |
| Consumption (MG) | 8.9 | 23.1 | 22.9 | 1% |
| Average Commodity Rate / 1,000 gal (net) | $11.74 | $11.68 | $10.30 | 13% |
| Income/ (Loss) / Active Account | $81.11 | $197.55 | $128.30 | 54% |
| Income / (Loss) / 1,000 Gal | $7.16 | $6.70 | $4.37 | 53% |
| Connection Fee Revenue | $0 | $0 | $0 | - |

Consumption for the fiscal year was 23.1 MG, 1% more than the same period prior year. Operating revenue of $317,741 was 12% ($33,705) more than the prior year same period.

Operating expenditures were $7,883, or 4% less than the previous year same period. The fiscal year net income of $154,680 compares to a budgeted annual net income of $209,000 and to a net income of $100,334 for the prior year same period. $88,797 (7%) of the Capital Improvement Project Budget was expended this fiscal year-to-date, and no connection fees were collected ($0 is budgeted). The West Marin Water cash balance increased $3,896 in September and stood at $1,746,799 at month end, compared to a budgeted projection of $754,000 at June 30, 2020.

| OCEANA MARIN SEWER<br>Year over Year Comparison | Sep-19<br>Actual | FY19/20<br>Actual YTD | FY18/19<br>Actual YTD | FY20 vs 19<br>Up/(Down) |
|---|---|---|---|---|
| Operating Revenue | $21,762 | $65,286 | $63,180 | 3% |
| Operating Expense | 16,919 | 53,000 | 32,998 | 61% |
| Other Income / (Expense) | 1,824 | 4,045 | 3,269 | 24% |
| Net Income / (Loss) | $6,666 | $16,331 | $33,451 | (51%) |
| Active Accounts | 234 | 234 | 234 | 0% |
| Monthly Sewer Service Charge | $93 | $93 | $86 | 8% |
| Income / (Loss) / Active Account | $28.49 | $69.79 | $142.95 | - |
| Connection Fee Revenue | $0 | $0 | $0 | - |

Operating revenue of $65,286 was 3% more than the previous year same period due to the 3.5% rate increase effective July 1, 2019. Operating expenditures were 61% ($20,002) more than the previous year same period. The fiscal year-to-date net income of $16,331 compares to a budgeted annual net income of $92,000 and to a net income of $33,451 for the prior year same period. 16% of the Capital Improvement Project Budget has been expended this fiscal year-to-date.

No connection fees have been collected ($0 is budgeted). The Oceana Marin cash balance decreased $12,431 in September and stood at $262,641 at month end, compared to a budgeted projection of $384,000 at June 30, 2020.

# NORTH MARIN WATER DISTRICT
# STATEMENT OF NET POSITION
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | TOTAL | NOVATO WATER | NOVATO RECYCLED | WEST MARIN WATER | OCEANA MARIN SEWER |
|---|---|---|---|---|---|
| **ASSETS** | | | | | |
| **Cash & Investments** | | | | | |
| Unrestricted/Undesignated Cash | $2,388,538 | $0 | $1,243,622 | $955,378 | $189,537 |
| **Restricted Cash** (Note 1) | | | | | |
| Connection Fee Fund | 57,637 | 0 | 0 | 57,637 | 0 |
| Bank of Marin Project Fund | 461,194 | 26,773 | 0 | 434,421 | 0 |
| AMI Project Loan Fund | 0 | 0 | 0 | 0 | 0 |
| Deer Island RWF Replacement Fund | 1,575,748 | 0 | 1,575,748 | 0 | 0 |
| Capital Replacement & Expansion Fund | 1,198,480 | 0 | 1,198,480 | 0 | 0 |
| Tax Receipts Held in Marin Co Treasury | 617 | 0 | 0 | 562 | 54 |
| STP SRF Reserve-Marin Co Treasury | 1,079,593 | 1,079,593 | 0 | 0 | 0 |
| RWS North/South SRF Reserve Fund | 614,299 | 0 | 614,299 | 0 | 0 |
| RW Central Area SRF Reserve Fund | 275,773 | 0 | 275,773 | 0 | 0 |
| **Designated Cash** (Note 2) | | | | | |
| Liability Contingency Fund | 1,280,370 | 1,181,485 | 0 | 98,885 | 0 |
| Self-Insured Workers' Compensation Fund | 537,522 | 505,997 | 8,561 | 16,915 | 6,049 |
| Retiree Medical Benefits Fund | 4,123,565 | 4,123,565 | 0 | 0 | 0 |
| Maintenance Accrual Fund | 2,500,000 | 2,500,000 | 0 | 0 | 0 |
| Operating Reserve Fund | 3,764,099 | 3,346,099 | 168,000 | 183,000 | 67,000 |
| **Total Cash** | 19,857,435 | 12,763,513 | 5,084,483 | 1,746,799 | 262,641 |
| Gain/(Loss) on MV of Investments | 16,095 | 16,095 | 0 | 0 | 0 |
| **Market Value of Cash & Investments** | 19,873,530 | 12,779,607 | 5,084,483 | 1,746,799 | 262,641 |
| **Current Assets** | | | | | |
| Net Receivables - Consumers | $2,065,273 | $1,855,130 | $147,292 | ($2,217) | $65,069 |
| Accrued Water Sales | 2,447,690 | 1,971,185 | 264,775 | 211,730 | 0 |
| Accounts Receivable-Other | 1,621,280 | 291,796 | 1,068,307 | 0 | 261,177 |
| Prepaid Expense | 798,119 | 797,590 | 0 | 0 | 528 |
| Reimbursable Small Jobs | 100,256 | 97,021 | 0 | 0 | 3,235 |
| Interest Receivable | 88,921 | 84,893 | 4,028 | 0 | 0 |
| Inventories | 627,186 | 627,186 | 0 | 0 | 0 |
| Deposits Receivable | 25,006 | 25,006 | 0 | 0 | 0 |
| **Total Current Assets** | $7,773,731 | 5,749,808 | $1,484,401 | $209,512 | $330,010 |

# NORTH MARIN WATER DISTRICT
# STATEMENT OF NET POSITION
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | TOTAL | NOVATO WATER | NOVATO RECYCLED | WEST MARIN WATER | OCEANA MARIN SEWER |
|---|---|---|---|---|---|
| **Loans Receivable** | | | | | |
| Employee Loans (Note 3) | $675,000 | $675,000 | $0 | $0 | $0 |
| Other Long Term Receivables (Note 4) | 1,173,730 | 0 | 1,173,730 | 0 | 0 |
| **Loans Receivable** | $1,849,134 | 675,000 | $1,173,730 | $0 | $0 |
| **Property and Plant** | | | | | |
| Land & Land Rights | $1,473,091 | $1,368,872 | $0 | $103,411 | $808 |
| Dam, Lake, & Source Facilities | 5,675,845 | 5,183,433 | 0 | 492,412 | 0 |
| Treatment Facilities | 22,056,723 | 18,192,211 | 2,666,198 | 339,952 | 858,362 |
| Storage Facilities | 23,082,819 | 20,458,283 | 519,014 | 2,105,523 | 0 |
| Transmission Facilities (16"+) | 29,405,627 | 29,283,304 | 0 | 122,324 | 0 |
| Distribution and Pumping Facilities | 86,339,778 | 63,219,679 | 17,301,217 | 5,818,882 | 0 |
| Sewer Mains, Pumps, & Laterals | 1,258,111 | 0 | 0 | 0 | 1,258,111 |
| **Sub-Total** | $169,291,995 | $137,705,782 | $20,486,428 | $8,982,504 | $2,117,282 |
| Less Accumulated Depreciation (Note 5) | (57,534,149) | (48,628,346) | (3,874,662) | (3,973,740) | (1,057,401) |
| **Net Property and Plant** | $111,757,846 | 89,077,436 | $16,611,766 | $5,008,764 | $1,059,881 |
| **Buildings and Equipment** (Note 6) | | | | | |
| Buildings | $1,902,893 | $1,902,893 | $0 | $0 | $0 |
| Office Equipment | 832,236 | 832,236 | 0 | 0 | 0 |
| Laboratory Equipment | 252,324 | 252,324 | 0 | 0 | 0 |
| Trucks & Automobiles | 1,485,059 | 1,485,059 | 0 | 0 | 0 |
| Construction Equipment | 861,266 | 861,266 | 0 | 0 | 0 |
| Tools, Shop Equipment | 222,390 | 222,390 | 0 | 0 | 0 |
| **Sub-Total** | $5,556,168 | 5,556,168 | $0 | $0 | $0 |
| Less Accumulated Depreciation (Note 5) | (4,279,626) | (4,279,626) | 0 | 0 | 0 |
| **Net Buildings and Equipment** | $1,276,542 | 1,276,542 | $0 | $0 | $0 |
| **Construction In Progress** | | | | | |
| Developer | $1,028,161 | $1,028,161 | $0 | $0 | $0 |
| District | 23,672,027 | 7,184,120 | 15,745,059 | 644,807 | 98,040 |
| **Total Construction in Progress** | $24,700,187 | $8,212,281 | $15,745,059 | $644,807 | $98,040 |
| **Net Utility Plant** | 137,734,576 | 98,566,259 | 32,356,825 | 5,653,571 | 1,157,921 |
| **Deferred Outflow of Resources-GASB68** | 2,616,317 | 2,616,317 | 0 | 0 | 0 |
| **Deferred Outflow of Resources-GASB75** | 172,404 | 172,404 | 0 | 0 | 0 |
| **TOTAL ASSETS** | $170,019,287 | $120,559,395.10 | $40,099,438 | $7,609,882 | $1,750,571 |

# NORTH MARIN WATER DISTRICT
# STATEMENT OF NET POSITION
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | TOTAL | NOVATO WATER | NOVATO RECYCLED | WEST MARIN WATER | OCEANA MARIN SEWER |
|---|---|---|---|---|---|
| **LIABILITIES AND NET ASSETS** | | | | | |
| **Current Liabilities** | | | | | |
| Trade Accounts Payable | $1,205,216 | $1,117,614 | $87,602 | $0 | $0 |
| Reimbursement Prog. Unclaimed Funds | 87,186 | 76,086 | 0 | 11,100 | 0 |
| Loan Debt Principal Payable-Current | 1,708,316 | 828,522 | 879,794 | 0 | 0 |
| Bank of Marin Principal Payable-Current | 371,015 | 323,525 | 0 | 47,490 | 0 |
| JP Morgan/Chase AMI Loan-Current | 260,000 | 260,000 | 0 | 0 | 0 |
| Accrued Interest Payable-SRF Loan | 191,888 | 55,672 | 136,216 | 0 | 0 |
| JP Morgan/Chase AMI Loan Interest Payable | 9,845 | 9,845 | 0 | 0 | 0 |
| Deposits/Performance Bonds | 404,779 | 376,279 | 0 | 25,500 | 3,000 |
| Unemployment Insurance Reserve (Note 8) | 23,575 | 23,575 | 0 | 0 | 0 |
| Workers' Comp Future Claims Payable | 48,256 | 44,637 | 1,351 | 1,641 | 627 |
| Payroll Benefits (Note 9) | 853,377 | 783,986 | 25,906 | 31,457 | 12,028 |
| Deferred Revenue | 195,858 | 0 | 0 | 0 | 195,858 |
| **Total Current Liabilities** | $5,359,311 | 3,899,742 | $1,130,869 | $117,188 | $211,513 |
| **Restricted Liabilities** | | | | | |
| Construction Advances | $661,593 | $651,593 | $10,000 | $0 | $0 |
| **Total Restricted Liabilities** | $661,593 | 651,593 | $10,000 | $0 | $0 |
| **Long Term Liablilities** (Note 7) | | | | | |
| JP Morgan/Chase AMI Loan Payable | $4,100,000 | $4,100,000 | $0 | $0 | $0 |
| STP Rehab SRF Loan | 8,413,056 | 8,413,056 | 0 | 0 | 0 |
| RWF SRF Loan | 1,742,339 | 0 | 1,742,339 | 0 | 0 |
| RWS North/South Expansion SRF Loan | 6,597,174 | 0 | 6,597,174 | 0 | 0 |
| RWS Central Expansion SRF Loan | 6,705,816 | 0 | 6,705,816 | 0 | 0 |
| Bank of Marin Loan | 5,094,132 | 4,442,083 | 0 | 652,049 | 0 |
| Net Pension Liability @ 6/30/18 | 12,560,160 | 12,560,160 | 0 | 0 | 0 |
| Total OPEB Liability (Note 2) | 4,520,164 | 4,520,164 | 0 | 0 | 0 |
| **Total Long Term Liabilities** | $49,732,840 | 34,035,463 | $15,045,329 | $652,049 | $0 |
| **Deferred Inflow of Resources-GASB 68** | 540,356 | 540,356 | 0 | 0 | 0 |
| **Deferred Inflow of Resources-GASB 75** | 0 | 0 | 0 | 0 | 0 |
| **TOTAL LIABILITIES** | $56,294,100 | 39,127,153 | $16,186,197 | $769,237 | $211,513 |

# NORTH MARIN WATER DISTRICT
# STATEMENT OF NET POSITION
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | TOTAL | NOVATO WATER | NOVATO RECYCLED | WEST MARIN WATER | OCEANA MARIN SEWER |
|---|---|---|---|---|---|
| **Net Assets** | | | | | |
| **Invested in Capital Assets** | | | | | |
| Contributions in Aid of Construction | $85,215,084 | $76,596,853 | $5,800,128 | $2,138,348 | $679,755 |
| Grants in Aid of Construction | 13,215,539 | 426,448 | 9,961,904 | 2,827,187 | 0 |
| Connection Fees | 39,968,621 | 27,043,886 | 10,840,952 | 1,411,099 | 672,684 |
| **Total Investment** | $138,399,244 | 104,067,187 | $26,602,984 | $6,376,634 | $1,352,439 |
| **Restricted Reserves** | | | | | |
| Connection Fee Fund | ($7,289,103) | ($7,146,992) | $0 | $57,637 | ($199,748) |
| AMI Project Reserve Fund | (580) | (580) | 0 | 0 | 0 |
| Bank of Marin Project Fund | 461,194 | 26,773 | 0 | 434,421 | 0 |
| Deer Island RWF Replacement Fund | 1,575,748 | 0 | 1,575,748 | 0 | 0 |
| Capital Replacement & Expansion Fund | 1,198,480 | 0 | 1,198,480 | 0 | 0 |
| SRF Reserve Fund | 0 | 0 | 0 | 0 | 0 |
| RWS North/South SRF Reserve Fund | 614,299 | 0 | 614,299 | 0 | 0 |
| RW Central Area SRF Reserve Fund | 275,773 | 0 | 275,773 | 0 | 0 |
| **Designated Reserves** | | | | | |
| Liability Contingency Fund | 1,280,370 | 1,181,485 | 0 | 98,885 | 0 |
| Maintenance Accrual Fund | 2,500,000 | 2,500,000 | 0 | 0 | 0 |
| Self-Insured Workers' Compensation Fund | 489,266 | 461,360 | 7,210 | 15,274 | 5,422 |
| Retiree Medical Benefits Fund | 2,759,513 | 2,759,513 | 0 | 0 | 0 |
| Operating Reserve Fund | 5,795,000 | 5,377,000 | 168,000 | 183,000 | 67,000 |
| Earned Surplus - Prior Yrs | (35,754,365) | (28,818,735) | (6,746,206) | (479,320) | 289,896 |
| Net Income/(Loss) | 1,409,535 | 965,024 | 273,499 | 154,680 | 16,331 |
| Transfer (To)/From Reserves (see below) | 10,814 | 60,207 | (56,545) | (566) | 7,719 |
| **Total Restricted & Designated** | ($24,674,057) | (22,634,946) | ($2,689,743) | $464,012 | $186,620 |
| **TOTAL NET POSITION** | $113,725,187 | 81,432,242 | $23,913,241 | $6,840,646 | $1,539,058 |
| **Transfer (To)/From Reserves** | | | | | |
| Connection Fee | $8,865 | $0 | $0 | ($910) | $9,776 |
| AMI Project Fund | 580 | 580 | 0 | 0 | 0 |
| Liability Reserve | (39,200) | (39,200) | 0 | 0 | 0 |
| Maintenance Reserve | 0 | 0 | 0 | 0 | 0 |
| RWF Replacement Fund | (49,482) | 0 | (49,482) | 0 | 0 |
| Retiree Medical Insurance Fund | 0 | 0 | 0 | 0 | 0 |
| (Gain)/Loss Self-Insured WC Fund | (5,334) | (5,051) | (63) | (163) | (57) |
| Bank of Marin Project Fund | 3,384 | (123) | 0 | 3,507 | 0 |
| Operating Reserve Fund | 92,000 | 104,000 | (7,000) | (3,000) | (2,000) |
| **Total Transfer** | $10,814 | $60,207 | ($56,545) | ($566) | $7,719 |

# NORTH MARIN WATER DISTRICT
## SOURCES AND USES OF FUNDS STATEMENT - ALL SERVICE AREAS COMBINED
## FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | YTD Actual | Annual Budget | YTD/ Budget % | Prior YTD Actual |
|---|---|---|---|---|
| **OPERATING REVENUE** | | | | |
| Water Sales | $5,633,381 | $17,387,000 | 32% | $6,298,323 |
| Bimonthly Service Charge | 1,242,958 | 4,958,000 | 25% | 1,196,329 |
| Sewer Service Charge | 65,286 | 261,000 | 25% | 63,180 |
| Wheeling & Misc Service Charges | 109,713 | 392,000 | 28% | 90,439 |
| **TOTAL OPERATING REVENUE** | $7,051,338 | $22,998,000 | 31% | $7,648,271 |
| **OPERATING EXPENDITURES** | | | | |
| Source of Supply | $1,902,161 | $6,186,000 | 31% | $2,034,251 |
| Pumping | 138,996 | 438,000 | 32% | 145,088 |
| Operations | 187,239 | 808,000 | 23% | 271,704 |
| Water Treatment | 631,687 | 2,697,000 | 23% | 534,916 |
| Sewer Service | 31,035 | 171,000 | 18% | 17,480 |
| Transmission & Distribution | 798,011 | 3,656,000 | 22% | 818,983 |
| Consumer Accounting | 124,783 | 644,000 | 19% | 123,731 |
| Water Conservation | 76,992 | 399,000 | 19% | 77,340 |
| General & Administrative | 834,531 | 2,383,000 | 35% | 745,390 |
| Depreciation | 860,892 | 3,486,000 | 25% | 856,194 |
| **TOTAL OPERATING EXPENDITURES** | $5,586,327 | $20,868,000 | 27% | $5,625,078 |
| **NET OPERATING INCOME (LOSS)** | $1,465,011 | $2,130,000 | 69% | $2,023,193 |
| **NON-OPERATING REVENUE/(EXPENSE)** | | | | |
| Tax Proceeds | $1,531 | $116,000 | 1% | $685 |
| Interest Revenue | 127,589 | 277,000 | 46% | 83,383 |
| Miscellaneous Revenue | 19,975 | 133,000 | 15% | 74,367 |
| Bond & Loan Interest Expense | (203,920) | (806,000) | 25% | (198,239) |
| Miscellaneous Expense | (651) | (20,000) | 3% | (4,101) |
| **TOTAL NON-OP REVENUE/(EXPENSE)** | ($55,476) | ($300,000) | 18% | ($43,905) |
| **NET INCOME/(LOSS)** | $1,409,535 | $1,830,000 | 77% | $1,979,288 |
| **OTHER SOURCES/(USES) OF FUNDS** | | | | |
| Add Depreciation Expense | $860,892 | $3,486,000 | 25% | $856,194 |
| Connection Fees | 896,600 | 340,000 | 264% | 95,800 |
| Loan Proceeds | 0 | 69,000 | 0% | 2,033,836 |
| Grant Proceeds | 0 | 0 | - | 1,688 |
| Marin County Club Loan Principal Pmts | 12,259 | 0 | - | 24,809 |
| Caltrans AEEP Capital Contribution | 90 | 1,000 | 9% | 3,250 |
| StoneTree RWF Loan Principal | 37,438 | 227,000 | 16% | 36,552 |
| MMWD AEEP Capital Contribution | 205,320 | 205,000 | 100% | 245,000 |
| Capital Equipment Expenditures | (277,090) | (433,000) | 64% | 0 |
| Capital Improvement Projects | (405,337) | (5,713,000) | 7% | (1,148,556) |
| Bond & Loan Principal Payments | (244,350) | (2,333,000) | 10% | (248,685) |
| Change in Working Capital | (1,560,502) | 0 | - | (2,492,678) |
| **TOTAL OTHER SOURCES/(USES)** | ($474,679) | ($4,151,000) | 11% | ($592,789) |
| **CASH INCREASE/(DECREASE)** | $934,855 | ($2,321,000) | - | $1,386,499 |

# NORTH MARIN WATER DISTRICT
# INCOME STATEMENT AND CASH FLOW BY SERVICE AREA
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| SUMMARY INCOME STATEMENT | TOTAL | NOVATO WATER | NOVATO RECYCLED | WEST MARIN WATER | OCEANA MARIN SEWER |
|---|---|---|---|---|---|
| Operating Revenue | $7,051,338 | $6,072,240 | $596,071 | $317,741 | $65,286 |
| Operating Expense | 5,586,327 | 5,062,669 | 293,680 | 176,978 | 53,000 |
| **OPERATING INCOME/(LOSS)** | $1,465,011 | $1,009,570 | $302,391 | $140,763 | $12,286 |
| Non-Operating Revenue/(Expense) | (55,476) | (44,546) | (28,892) | 13,917 | 4,045 |
| **NET INCOME/(LOSS)** | $1,409,535 | $965,024 | $273,499 | $154,680 | $16,331 |
| **CAPITAL CONTRIBUTIONS** | | | | | |
| Developer In-Kind Contributions | $414,390 | $414,390 | $0 | $0 | $0 |
| Caltrans AEEP Capital Contributions | 90 | 90 | 0 | 0 | 0 |
| MMWD Capital Contribution | 205,320 | 205,320 | 0 | 0 | 0 |
| Connection Fees | 896,600 | 896,600 | 0 | 0 | 0 |
| FRC Transfer | 0 | (218,155) | 218,155 | 0 | 0 |
| **CAPITAL CONTRIBUTIONS** | $1,516,400 | $1,298,245 | $218,155 | $0 | $0 |
| **CHANGE IN NET POSITION** | $2,925,934 | $2,263,269 | $491,654 | $154,680 | $16,331 |
| Net Position June 30, 2019 | 110,864,836 | 79,230,648 | 23,421,988 | 6,688,798 | 1,523,402 |
| Net Position Sept 30, 2019 | $113,790,771 | $81,493,917 | $23,913,642 | $6,843,479 | $1,539,733 |
| **CASH FLOW STATEMENT** | | | | | |
| Net Income/(Loss) | $1,409,535 | $965,024 | $273,499 | $154,680 | $16,331 |
| Add back Depreciation | 860,892 | 683,534 | 118,457 | 47,018 | 11,884 |
| **Cash Generated From Operations** | $2,270,427 | $1,648,558 | $391,956 | $201,698 | $28,215 |
| **Other Sources (Uses) of Funds** | | | | | |
| Connection Fee Revenue | $896,600 | $896,600 | $0 | $0 | $0 |
| Loan Proceeds | 0 | 0 | 0 | 0 | 0 |
| Capital Assets Acquisition | (682,427) | (580,778) | (1,794) | (88,798) | (11,056) |
| Caltrans AEEP Capital Contribution | 90 | 90 | 0 | 0 | 0 |
| MMWD AEEP Capital Contribution | 205,320 | 205,320 | 0 | 0 | 0 |
| Marin Country Club & Stone Tree Loan Principal Pmts | 49,697 | 0 | 49,697 | 0 | 0 |
| Principal Paid on Debt | (244,350) | (79,316) | (153,391) | (11,643) | 0 |
| Consumer Receivables Decr (Incr) | (815,067) | (684,118) | (155,434) | 88,291 | (63,806) |
| Construction Advances (Decr) Incr | (118,214) | (118,214) | 0 | 0 | 0 |
| Other Assets Decr (Incr) | (380,714) | (58,366) | (1,078) | (125,939) | (195,330) |
| Other Liabilities (Decr) Incr | (342,669) | (539,653) | 5,255 | (4,447) | 196,177 |
| Trade Accounts Payable (Decr) Incr | 96,162 | 48,220 | 47,942 | 0 | 0 |
| Connection Fee Transfer | 0 | (218,155) | 218,155 | 0 | 0 |
| **Total Other Sources (Uses)** | ($1,335,571) | ($1,128,371) | $9,351 | ($142,536) | ($74,015) |
| **Net Cash Provided (Used)** | $934,856 | $520,187 | $401,307 | $59,162 | ($45,800) |
| **MV Cash & Investments June 30, 2019** | $18,938,674 | $12,259,420 | $4,683,176 | $1,687,637 | $308,441 |
| **MV Cash & Investments Sept 30, 2019** | $19,873,530 | $12,779,607 | $5,084,483 | $1,746,799 | $262,641 |

# NOVATO WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **OPERATING REVENUE** | | | | |
| Water Sales | $1,273,087 | $4,799,359 | 31% | $5,587,824 |
| Bill Adjustments | (3,585) | (13,018) | 16% | (25,259) |
| Bimonthly Service Charges | 392,435 | 1,177,306 | 25% | 1,137,265 |
| Account Turn-on Charges | 7,534 | 23,474 | 30% | 17,397 |
| New Account Charges | 875 | 2,090 | 30% | 1,960 |
| Returned Check Charges | 18 | 234 | 23% | 36 |
| Hydrant Meter Up/Down Charges | 800 | 2,000 | 40% | 1,700 |
| Backflow Service Charges | 12,570 | 37,197 | 26% | 36,125 |
| Lab Service-Outside Clients | 2,491 | 11,644 | 35% | 9,690 |
| Wheeling Charges - MMWD | 10,431 | 31,954 | 43% | 22,111 |
| **TOTAL OPERATING REVENUE** | $1,696,656 | $6,072,240 | 30% | $6,788,848 |
| **TOTAL EXPENDITURES** | | | | |
| **SOURCE OF SUPPLY** | | | | |
| Supervision & Engineering | $673 | $1,842 | 17% | $1,223 |
| Operating Expense - Source | 1,110 | 2,649 | 19% | 2,933 |
| Maint/Monitoring of Dam | 396 | 28,641 | 43% | 16,714 |
| Maint of Lake & Intakes | 0 | 2,610 | 13% | 9,554 |
| Maint of Structures | 0 | 0 | 0% | 205 |
| Maint of Watershed | 354 | 354 | 1% | 873 |
| Water Quality Surveillance | 0 | 85 | 1% | 301 |
| Purchased Water | 444,082 | 1,725,978 | 30% | 1,865,865 |
| **SOURCE OF SUPPLY** | $446,615 | $1,762,158 | 30% | $1,897,669 |
| **PUMPING** | | | | |
| Maint of Structures & Grounds | $1,151 | $3,531 | 11% | $14,961 |
| Maint of Pumping Equipment | 20 | 2,561 | 5% | 9,327 |
| Electric Power | 37,838 | 115,981 | 40% | 104,603 |
| **PUMPING** | $39,009 | $122,073 | 33% | $128,890 |
| **OPERATIONS** | | | | |
| Supervision & Engineering | $20,912 | $54,826 | 35% | $47,105 |
| Operating Expense - Operations | 24,517 | 80,285 | 34% | 75,714 |
| Maintenance Expense | 4,106 | 9,429 | 17% | 9,121 |
| Telemetry Equipment/Controls Maint | 4,168 | 10,503 | 12% | 15,915 |
| Leased Lines | 1,388 | 4,164 | 24% | 4,189 |
| **OPERATIONS** | $55,091 | $159,207 | 29% | $152,044 |

# NOVATO WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **WATER TREATMENT** | | | | |
| Supervision & Engineering | $12,090 | $31,066 | 22% | $29,958 |
| Operating Expense - Water Treatment | 41,191 | 122,622 | 38% | 80,214 |
| Purification Chemicals | 83,588 | 131,043 | 28% | 89,441 |
| Sludge Disposal | 6,826 | 25,863 | 21% | 23,693 |
| Maint of Structures & Grounds | 1,055 | 7,068 | 6% | 3,718 |
| Maint of Purification Equipment | 4,975 | 43,082 | 23% | 48,155 |
| Electric Power | 13,705 | 47,018 | 30% | 42,993 |
| Water Quality Programs | 10,011 | 26,760 | 26% | 28,928 |
| Laboratory Direct Labor | 30,141 | 93,451 | 26% | 87,823 |
| Lab Service-Outside Clients | 5,885 | 17,650 | 38% | 14,767 |
| Water Quality Supervision | 6,642 | 17,418 | 23% | 15,992 |
| Laboratory Supplies & Expense | 6,641 | 20,120 | 25% | 18,502 |
| Customer Water Quality | 4,204 | 12,141 | 18% | 9,898 |
| Lab Cost Distributed | (2,962) | (6,456) | 26% | (6,335) |
| **WATER TREATMENT** | $223,991 | $588,845 | 26% | $487,747 |
| **TRANSMISSION & DISTRIBUTION** | | | | |
| Supervision & Engineering | $44,435 | $130,020 | 22% | $137,944 |
| Maps & Records | 9,382 | 30,765 | 19% | 38,589 |
| Operation of T&D System | 10,920 | 33,557 | 49% | 26,452 |
| Facilities Location | 13,829 | 42,008 | 28% | 41,793 |
| Safety: Construction & Engineering | 3,144 | 9,463 | 16% | 13,628 |
| Customer Service Expense | 23,271 | 77,310 | 28% | 59,531 |
| Flushing | 0 | 447 | 1% | 14 |
| Storage Facilities Expense | 7,920 | 15,924 | 13% | 28,616 |
| Cathodic Protection | 1,733 | 2,239 | 12% | 1,608 |
| Maint of Valves/Regulators | 10,237 | 41,522 | 22% | 22,346 |
| Maint of Mains | 7,915 | 41,099 | 24% | 58,736 |
| Leak Detection - Mains | 400 | 2,174 | 18% | 4,314 |
| Backflow Prevention Program | 14,207 | 58,154 | 26% | 60,860 |
| Maint of Copper Services | 5,567 | 14,856 | 11% | 42,834 |
| Maint of PB Service Lines | 61,566 | 190,700 | 40% | 190,698 |
| Single Service Installations | 375 | 84 | - | (3,548) |
| Maint of Meters | 4,696 | 38,490 | 27% | 30,698 |
| Detector Check Assembly Maint | 17,627 | 32,695 | 39% | 14,515 |
| Maint of Hydrants | 1,155 | 12,055 | 17% | 1,946 |
| **TRANSMISSION & DISTRIBUTION** | $238,379 | $773,560 | 26% | $771,576 |
| **CONSUMER ACCOUNTING** | | | | |
| Meter Reading | $2,961 | $8,349 | 8% | $26,528 |
| Collection Expense - Labor | 2,971 | 8,212 | 26% | 6,331 |
| Collection Expense - Agency | 0 | 118 | 4% | 513 |
| Billing & Consumer Accounting | 19,815 | 63,000 | 30% | 52,928 |
| Contract Billing | 1,293 | 3,892 | 22% | 3,674 |
| Stationery, Supplies & Postage | 4,276 | 13,073 | 24% | 12,006 |
| Online Payment Processing Fees | 10,032 | 19,776 | 33% | 13,612 |
| Lock Box Service | 912 | 2,736 | 25% | 2,736 |
| Uncollectable Accounts | 969 | 1,818 | 36% | 2,421 |
| Office Equipment Expense | 580 | 2,090 | 6% | 1,845 |
| Distributed to West Marin (4.1%) | (1,540) | (4,400) | 27% | (3,671) |
| **CONSUMER ACCOUNTING** | $42,269 | $118,665 | 23% | $118,924 |

# NOVATO WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **WATER CONSERVATION** | | | | |
| Residential | $15,208 | $47,483 | 19% | $57,096 |
| Commercial | 838 | 2,092 | 10% | 1,915 |
| Public Outreach/Information | 14,742 | 21,924 | 50% | 8,791 |
| Large Landscape | 1,692 | 4,811 | 17% | 8,490 |
| **TOTAL WATER CONSERVATION** | $32,480 | $76,310 | 22% | $76,293 |
| **GENERAL AND ADMINISTRATIVE** | | | | |
| Directors Fees | $3,068 | $7,158 | 17% | $6,841 |
| Legal Fees | 588 | 2,709 | 13% | 3,927 |
| Human Resources | 831 | 7,193 | 14% | 26,603 |
| Auditing Fees | 0 | 10,820 | 52% | 16,600 |
| Consulting Services/Studies | 6,116 | 35,077 | 18% | 13,920 |
| General Office Salaries | 78,809 | 258,716 | 22% | 274,894 |
| Safety: General District Wide | 2,366 | 8,692 | 15% | 8,239 |
| Office Supplies | 1,696 | 7,481 | 16% | 4,514 |
| Employee Events | 547 | 800 | 7% | 1,244 |
| Other Administrative Expense | 716 | 1,818 | 12% | 1,811 |
| Dues & Subscriptions | 24,670 | 48,723 | 51% | 31,924 |
| Vehicle Expense | 676 | 2,028 | 25% | 2,028 |
| Meetings, Conferences & Training | 21,066 | 44,927 | 24% | 36,695 |
| Recruitment Expense | 42 | 192 | 6% | 775 |
| Gas & Electricity | 3,430 | 11,204 | 29% | 9,971 |
| Telephone | 1,097 | 2,274 | 28% | 114 |
| Water | 0 | 380 | 19% | 486 |
| Buildings & Grounds Maint | 4,020 | 10,298 | 18% | 11,082 |
| Office Equipment Expense | 3,390 | 64,162 | 50% | 37,208 |
| Insurance Premiums & Claims | 10,696 | 32,087 | 22% | 27,208 |
| Retiree Medical Benefits | 14,774 | 45,237 | 26% | 47,431 |
| (Gain)/Loss on Overhead Charges | (2,963) | (3,858) | 3% | 266,532 |
| G&A Applied to Other Operations (5.9%) | (9,949) | (35,689) | 24% | (31,302) |
| G&A Applied to Construction | (35,574) | (99,010) | 30% | (86,035) |
| GASB68 Adjustment (Pension) | 105,298 | 314,897 | 86% | 0 |
| **GENERAL & ADMINISTRATIVE** | $235,409 | $778,317 | 35% | $712,711 |
| **Depreciation** (Note 5) | 223,381 | 683,534 | 25% | 681,706 |
| **TOTAL OPERATING EXPENSE** | $1,536,625 | $5,062,669 | 28% | $5,027,559 |
| **OPERATING INCOME/(LOSS)** | $160,031 | $1,009,570 | 39% | $1,761,289 |

# NOVATO WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **NON-OPERATING REVENUE** | | | | |
| Interest: | | | | |
| General Funds | $0 | $0 | 0% | $0 |
| Wohler Pipeline Financing Fund | 0 | 0 | 0% | 3,098 |
| Collector #6 Financing Fund | 0 | 0 | 0% | 12,181 |
| Retiree Medical Insurance Fund | 17,814 | 55,418 | 111% | 29,721 |
| Self-Insured Workers' Comp Fund | 2,176 | 6,795 | - | 3,894 |
| Aqueduct Energy Efficiency Proj Fund | 114 | 354 | - | 250 |
| **Total Interest Revenue** | $20,104 | $62,568 | 43% | $49,145 |
| Rents & Leases | 2,106 | 28,731 | 35% | 34,301 |
| Other Non-Operating Revenue | 341 | 1,319 | 3% | 33,078 |
| Gain/(Loss) on MV of Investments | (14,283) | (10,325) | - | 7,056 |
| **NON-OPERATING REVENUE** | $8,268 | $82,293 | 29% | $123,579 |
| **NON-OPERATING EXPENSE** | | | | |
| Bank of Marin AEEP Loan Interest Exp | $13,656 | $41,194 | 26% | $43,857 |
| STP SRF Loan Interest Expense | 18,154 | 55,672 | 26% | 60,546 |
| JP Morgan/Chase AMI Loan Interest Expense | 9,774 | 29,321 | 25% | 28,529 |
| Other Non-Operating Expense | 142 | 651 | 3% | 401 |
| **NON-OPERATING EXPENSE** | $41,726 | $126,839 | 25% | $133,333 |
| **NET INCOME/(LOSS)** | $126,573 | $965,024 | 41% | $1,751,536 |
| **BEGINNING FUND EQUITY** | | $79,168,973 | | $74,211,063 |
| NET INCOME/(LOSS) | 126,573 | 965,024 | | 1,751,536 |
| SCWA 84 Water Conservation Grant | 0 | 0 | - | 1,688 |
| Developer 'In-Kind' Contributions | 109,639 | 414,390 | - | 32,431 |
| Caltrans AEEP Capital Contribution | 0 | 90 | 9% | 3,250 |
| MMWD AEEP Capital Contribution | 0 | 205,320 | 100% | 245,000 |
| Connection Fees | 228,800 | 896,600 | 264% | 95,800 |
| FRC Transfer to/from Recycled Water | (116,730) | (218,155) | -24% | 2,031,795 |
| **ENDING FUND EQUITY** | | $81,432,242 | | $78,372,562 |

# NOVATO RECYCLED WATER
# DETAIL INCOME STATEMENT
## FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **OPERATING REVENUE** | | | | |
| Recycled Water Sales | ($19,271) | $577,550 | 48% | $499,205 |
| Bimonthly Service Charges | 7,392 | 18,421 | 43% | 12,767 |
| Water Loads | 0 | 100 | - | 235 |
| **TOTAL OPERATING REVENUE** | ($11,879) | $596,071 | 48% | $512,207 |
| **OPERATING EXPENSE** | | | | |
| **SOURCE OF SUPPLY** | | | | |
| Purchased Water - NSD | $29,819 | $96,851 | 46% | $116,904 |
| Purchased Water - LGVSD | 10,234 | 33,775 | 54% | 9,378 |
| **SOURCE OF SUPPLY** | $40,052 | $130,625 | 48% | $126,282 |
| **PUMPING** | | | | |
| Maint of Pumping Equipment | $0 | $0 | 0% | $225 |
| Electric Power | 492 | 1,385 | 46% | 1,477 |
| **PUMPING** | $492 | $1,385 | 23% | $1,702 |
| **OPERATIONS** | | | | |
| Supervision & Engineering | $2,053 | $6,088 | 47% | $4,521 |
| Operating Expense - Operations | 915 | 6,024 | 46% | 6,784 |
| Potable Water Consumed | 0 | 3,056 | 28% | 97,960 |
| Maintenance Expense | 0 | 0 | 0% | 189 |
| Telemetry Equipment/Controls Maint | 0 | 0 | 0% | 1,510 |
| **OPERATIONS** | $2,968 | $15,168 | 20% | $110,964 |
| **WATER TREATMENT** | | | | |
| Purification Chemicals | $0 | $2,748 | 69% | $1,993 |
| Maint of Purification Equipment | 297 | 350 | 2% | 2,453 |
| Laboratory Direct Labor | 418 | 1,118 | 19% | 1,201 |
| Customer Water Quality | 0 | 0 | - | 33 |
| Lab Expense Distributed from Novato | 240 | 590 | 20% | 724 |
| **WATER TREATMENT** | $956 | $4,806 | 17% | $6,404 |
| **TRANSMISSION & DISTRIBUTION** | | | | |
| Supervision & Engineering | $113 | $306 | 1% | $1,145 |
| Facilities Location | 0 | 144 | 14% | 0 |
| Customer Service Expense | 343 | 2,409 | 34% | 2,599 |
| Storage Facilities Expense | 22 | 471 | 4% | 52 |
| Maint of Mains | 3,179 | 3,179 | 318% | 0 |
| **TRANSMISSION & DISTRIBUTION** | $3,657 | $6,510 | 14% | $3,796 |

# NOVATO RECYCLED WATER
# DETAIL INCOME STATEMENT
## FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **CONSUMER ACCOUNTING** | | | | |
| Distributed from Novato (0.2%) | $116 | $329 | 33% | $272 |
| **CONSUMER ACCOUNTING** | $116 | $329 | 33% | $272 |
| **GENERAL AND ADMINISTRATIVE** | | | | |
| Distributed from Novato (2.4%) | $4,000 | $14,350 | 26% | $11,785 |
| GASB68 Adjustment | 686 | 2,050 | - | $0 |
| **GENERAL & ADMINISTRATIVE** | $4,686 | $16,400 | 30% | $11,785 |
| **Depreciation** (Note 5) | 39,486 | 118,457 | 25% | 118,454 |
| **TOTAL OPERATING EXPENSE** | $92,414 | $293,680 | 31% | $379,660 |
| **OPERATING INCOME/(LOSS)** | ($104,293) | $302,391 | 109% | $132,548 |
| **NON-OPERATING REVENUE** | | | | |
| Interest: | | | | |
| General Funds | $4,678 | $12,518 | 28% | $0 |
| RWF Replacement Fund | 6,736 | 20,732 | - | 9,110 |
| Self-Insured Workers' Comp Fund | 37 | 116 | - | 68 |
| StoneTree RWF Loan | 3,091 | 9,428 | 26% | 13,703 |
| **Total Interest Revenue** | $14,542 | $42,793 | 53% | $22,881 |
| Other Non-Operating Revenue | 0 | 0 | - | 0 |
| **NON-OPERATING REVENUE** | $14,542 | $42,793 | 53% | $22,881 |
| **NON-OPERATING EXPENSE** | | | | |
| RWF SRF Loan Interest Expense | $3,889 | $11,926 | 25% | $13,046 |
| Expansion SRF Loan Interest Expense | 19,876 | 59,760 | 25% | 45,061 |
| Other Non-Operating Expense | 0 | 0 | - | 3,354 |
| **NON-OPERATING EXPENSE** | $23,765 | $71,686 | 25% | $61,461 |
| **NET INCOME/(LOSS)** | ($113,516) | $273,499 | 380% | $93,968 |
| **BEGINNING FUND EQUITY** | | $23,421,587 | | $24,764,003 |
| NET INCOME/(LOSS) | (113,516) | 273,499 | | 93,968 |
| FRC Transfer to/from Novato | 116,730 | 218,155 | -24% | (2,031,795) |
| **ENDING FUND EQUITY** | | $23,913,241 | | $22,826,176 |

# WEST MARIN WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **OPERATING REVENUE** | | | | |
| Water Sales | $105,068 | $274,053 | 38% | $239,833 |
| Bill Adjustments | (914) | (4,664) | - | (3,515) |
| Bimonthly Service Charges | 15,744 | 47,232 | 26% | 46,296 |
| Account Turn-on Charges | 0 | 78 | 8% | 286 |
| New Account Charges | 0 | 30 | 3% | 20 |
| Backflow Service Charges | 0 | 1,012 | 20% | 1,115 |
| **TOTAL OPERATING REVENUE** | $119,898 | $317,741 | 35% | $284,035 |
| **OPERATING EXPENSE** | | | | |
| **SOURCE OF SUPPLY** | | | | |
| Supervision & Engineering | $204 | $510 | - | $385 |
| Operating Expense | 49 | 182 | 3% | 1,005 |
| Maint of Structures | 0 | 8,685 | 109% | 8,736 |
| Purchased Water - MMWD | 0 | 0 | - | 175 |
| **SOURCE OF SUPPLY** | $253 | $9,377 | 67% | $10,301 |
| **PUMPING** | | | | |
| Maint of Structures and Grounds | $1,809 | $2,961 | 33% | $3,059 |
| Maint of Pumping Equip | 125 | 505 | 5% | 0 |
| Electric Power | 3,915 | 12,072 | 43% | 11,436 |
| **PUMPING** | $5,850 | $15,538 | 32% | $14,495 |
| **OPERATIONS** | | | | |
| Supervision & Engineering | $765 | $4,260 | 36% | $2,897 |
| Operating Expense | 550 | 4,075 | 24% | 3,566 |
| Maintenance Expense | 229 | 229 | - | 0 |
| Maint of Telemetry Equipment | 466 | 3,272 | 22% | 1,122 |
| Leased Lines | 346 | 1,028 | 21% | 1,110 |
| **OPERATIONS** | $2,356 | $12,864 | 26% | $8,696 |
| **WATER TREATMENT** | | | | |
| Supervision & Engineering | $1,664 | $3,152 | 15% | $1,988 |
| Operating Expense | 2,402 | 4,870 | 17% | 6,699 |
| Purification Chemicals | 0 | 1,536 | 31% | 895 |
| Maint of Purification Equipment | 839 | 5,101 | 27% | 3,072 |
| Electric Power | 1,929 | 5,874 | 28% | 8,016 |
| Laboratory Direct Labor | 4,826 | 10,126 | 27% | 8,947 |
| Laboratory Services | 605 | 1,605 | 23% | 4,524 |
| Water Quality Supervision | 309 | 309 | 8% | 297 |
| Customer Water Quality | 70 | 119 | 1% | 936 |
| Lab Expense Distributed from Novato | 2,695 | 5,345 | 28% | 5,391 |
| **WATER TREATMENT** | $15,339 | $38,037 | 22% | $40,765 |

# WEST MARIN WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **TRANSMISSION & DISTRIBUTION** | | | | |
| Supervision & Engineering | $1,463 | $1,738 | 5% | $1,173 |
| Facilities Location - USA | 768 | 3,505 | 29% | 1,139 |
| Customer Service Expense | 136 | 993 | 20% | 1,755 |
| Storage Facilities Expense | 848 | 3,122 | 10% | 1,588 |
| Cathodic Protection | 0 | 0 | 0% | 743 |
| Maint of Valves | 0 | 0 | 0% | 361 |
| Maint of Mains | 0 | 0 | 0% | 5,137 |
| Water Quality Maintenance | 0 | 0 | 0% | 101 |
| Backflow Dev Inspection/Survey | 0 | 0 | 0% | 239 |
| Maint of Copper Services | 0 | 0 | 0% | 2,979 |
| Maint of PB Service Lines | 6,016 | 7,741 | 27% | 19,103 |
| Maint of Meters | 0 | 0 | 0% | 296 |
| Detector Check Assembly Maint | 842 | 842 | 42% | 0 |
| Maint of Hydrants | 0 | 0 | 0% | 1,430 |
| Single Service Installation | 0 | 0 | - | 7,566 |
| **TRANSMISSION & DISTRIBUTION** | $10,073 | $17,941 | 12% | $43,611 |
| **CONSUMER ACCOUNTING** | | | | |
| Meter Reading | $777 | $1,719 | 14% | $1,137 |
| Distributed from Novato (3.6%) | 1,298 | 3,672 | 28% | 3,032 |
| **CONSUMER ACCOUNTING** | $2,074 | $5,390 | 22% | $4,168 |
| **WATER CONSERVATION** | | | | |
| Water Conservation Program | $136 | $681 | 8% | $1,048 |
| **TOTAL WATER CONSERVATION** | $136 | $681 | 8% | $1,048 |
| **GENERAL AND ADMINISTRATIVE** | | | | |
| Consulting Services/Studies | $0 | $0 | 0% | $898 |
| Distributed from Novato (3.6%) | 4,358 | 15,634 | 31% | 14,137 |
| GASB68 Adjustment (Pension) | 4,850 | 14,498 | - | 0 |
| **GENERAL & ADMINISTRATIVE** | $9,209 | $30,132 | 47% | $15,035 |
| **Depreciation** (Note 5) | 15,404 | 47,018 | 25% | 46,742 |
| **TOTAL OPERATING EXPENSE** | $60,694 | $176,978 | 25% | $184,861 |
| **OPERATING INCOME/(LOSS)** | $59,205 | $140,763 | 68% | $99,174 |

# WEST MARIN WATER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **NON-OPERATING REVENUE** | | | | |
| Interest - General Funds | $4,067 | $12,201 | 122% | $4,151 |
| Interest - FRC | 275 | 910 | 10% | 737 |
| Interest - Self-Insured WC Fund | 73 | 227 | - | 132 |
| Interest - Bank of Marin Project Fund | 1,894 | 5,884 | 39% | 3,326 |
| Tax Proceeds - PR-2 Tax Allocation | 0 | 741 | 1% | 332 |
| Other Non-Operating Revenue | 0 | 0 | - | (317) |
| **NON-OPERATING REVENUE** | $6,309 | $19,964 | 22% | $8,360 |
| **NON-OPERATING EXPENSE** | | | | |
| Bank of Marin Loan Interest Expense | $2,005 | $6,047 | 25% | $6,438 |
| PRE-1 Revenue Bond Interest Exp | 0 | 0 | - | 325 |
| PR-6 Revenue Bond Interest Exp | 0 | 0 | - | 437 |
| **NON-OPERATING EXPENSE** | $2,005 | $6,047 | 25% | $7,200 |
| **NET INCOME/(LOSS)** | $63,509 | $154,680 | 57% | $100,334 |
| **BEGINNING FUND EQUITY** | | $6,685,965 | | $6,431,493 |
| NET INCOME/(LOSS) | 63,509 | 154,680 | | 100,334 |
| CONTRIBUTED CAPITAL | | | | |
| Developer 'In-Kind' Contributions | 0 | 0 | - | 0 |
| **ENDING FUND EQUITY** | | $6,840,646 | | $6,531,827 |

# OCEANA MARIN SEWER
# DETAIL INCOME STATEMENT
# FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **OPERATING REVENUE** | | | | |
| Sewer Service Charges | $21,762 | $65,286 | 25% | $63,180 |
| **TOTAL OPERATING REVENUE** | $21,762 | $65,286 | 25% | $63,180 |
| **OPERATING EXPENSE** | | | | |
| **SEWAGE COLLECTION** | | | | |
| Supervision & Engineering | $736 | $2,436 | 7% | $2,037 |
| Operating Expense | 843 | 4,522 | 45% | 2,433 |
| Facilities Location | 0 | 236 | 5% | 213 |
| Maint of Telemetry Equipment | 299 | 389 | 13% | 293 |
| Maint of Lift Stations | 3,249 | 3,652 | 52% | 992 |
| Electric Power | 1,166 | 3,734 | 31% | 3,324 |
| **SEWAGE COLLECTION** | $6,292 | $14,969 | 21% | $9,293 |
| **SEWAGE TREATMENT** | | | | |
| Operating Expense | $218 | $853 | 4% | $630 |
| Maint of Equipment | 1,545 | 2,380 | 30% | 2,311 |
| Laboratory Direct Labor | 0 | 987 | 12% | 365 |
| Lab Expense Distributed from Novato | 27 | 521 | 26% | 220 |
| Electric Power | 1,155 | 4,216 | 70% | 1,216 |
| **SEWAGE TREATMENT** | $2,945 | $8,957 | 20% | $4,741 |
| **SEWAGE DISPOSAL** | | | | |
| Operating Expense | $277 | $801 | 5% | $1,099 |
| Maint of Pump Stations | 0 | 327 | 5% | 0 |
| Maint of Storage Ponds | 550 | 4,532 | 28% | 2,347 |
| Maint of Irrigation Field | 0 | 1,450 | 18% | 0 |
| **SEWAGE DISPOSAL** | $827 | $7,109 | 15% | $3,446 |
| **CONSUMER ACCOUNTING** | | | | |
| Distributed from Novato (0.6%) | $126 | $399 | 20% | $367 |
| **CONSUMER ACCOUNTING** | $126 | $399 | 20% | $367 |

# OCEANA MARIN SEWER
## DETAIL INCOME STATEMENT
## FOR THE PERIOD ENDING SEPTEMBER 30, 2019

| | SEPTEMBER 2019 | YEAR TO DATE ACTUAL | YTD/ BUDGET% | PRIOR YTD ACTUAL |
|---|---|---|---|---|
| **GENERAL AND ADMINISTRATIVE** | | | | |
| Distributed from Novato (1.1%) | $1,591 | $5,706 | 25% | $5,379 |
| Liability Insurance | 176 | 528 | 26% | 479 |
| GASB68 Adjustment | 1,154 | 3,449 | - | 0 |
| **GENERAL AND ADMINISTRATIVE** | $2,921 | $9,683 | 39% | $5,859 |
| **Depreciation** (Note 5) | 3,808 | 11,884 | 32% | 9,292 |
| **TOTAL OPERATING EXPENSE** | $16,919 | $53,000 | 23% | $32,998 |
| **OPERATING INCOME/(LOSS)** | $4,843 | $12,286 | 35% | $30,182 |
| **NON-OPERATING REVENUE** | | | | |
| Rents & Leases | $0 | $250 | - | $250 |
| Interest - General Funds | 1,798 | 2,924 | 37% | 2,965 |
| Interest - Self Insured WC Fund | 26 | 81 | - | 46 |
| Tax Proceeds - OM-1/OM-3 Tax Alloc | 0 | 790 | 1% | 354 |
| **NON-OPERATING REVENUE** | $1,824 | $4,045 | 6% | $3,615 |
| **NON-OPERATING EXPENSE** | | | | |
| Other Non-Operating Expense | $0 | $0 | - | $346 |
| **NON-OPERATING EXPENSE** | $0 | $0 | - | $346 |
| **NET INCOME/(LOSS)** | $6,666 | $16,331 | 16% | $33,451 |
| **BEGINNING FUND EQUITY** | | $1,522,727 | | $1,416,011 |
| NET INCOME/(LOSS) | 6,666 | 16,331 | | 33,451 |
| CONTRIBUTED CAPITAL | | | | |
| **ENDING FUND EQUITY** | | $1,539,058 | | $1,449,462 |

# NORTH MARIN WATER DISTRICT
# EQUIPMENT EXPENDITURES
# PERIOD ENDING SEPTEMBER 30, 2019

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| | SEPTEMBER 2019 | FYTD TOTAL | FY 19/20 BUDGET | (OVER) UNDER | Notes |
|---|---|---|---|---|---|
| **1 ADMINISTRATION** | | | | | |
| a. Website Upgrade | $0 | $0 | $10,000 | $10,000 | |
| b. Exchange Server Upgrade | 0 | 0 | 7,000 | 7,000 | |
| c. Timekeeping Software Upgrade | 0 | 0 | 10,000 | 10,000 | |
| | $0 | $0 | $27,000 | $27,000 | |
| **2 OPERATIONS/MAINTENANCE** | | | | | |
| a. Metals Analyzer | $0 | $0 | $68,000 | $68,000 | 1 |
| b. 100 KW Towable Generator | | 61,431 | 90,000 | 28,569 | |
| c. 45 KW Towable Generator (2) | | 77,489 | 50,000 | (27,489) | |
| d. Portable Light Generator | 0 | 0 | 12,000 | 12,000 | |
| | $0 | $138,920 | $220,000 | $81,080 | |
| **3 VEHICLE & ROLLING EQUIPMENT EXPENDITURES** | | | | | |
| a. 1/2 ton 2WD Pick-Up w/Tool Box & Radio | $0 | $0 | $28,000 | $28,000 | 1 |
| b. Vacuum Excavator | | 116,965 | 130,000 | 13,035 | 1 |
| c. Hybrid SUV w/Radio | | 0 | 28,000 | 28,000 | 1 |
| d. Truck Bed Body for 5-Yard Diesel Dump Truck | | 21,205 | 0 | (21,205) | 1 |
| | $0 | $138,170 | $186,000 | $47,830 | |
| **TOTAL EQUIPMENT EXPENDITURES** | $0 | $277,090 | $433,000 | $155,910 | |

Notes:
(1) Replacement item.

# NORTH MARIN WATER DISTRICT
## EXPENDITURES BY CATEGORY
## FOR PERIOD ENDING SEPTEMBER 30, 2019

| | OPERATING EXPENSE | Novato | Recycled | West Marin | Oceana Marin | YTD Total | Annual Budget | YTD Budget % | Prior YTD Actual | % Change |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Salaries & Benefits | $1,419,237 | $17,946 | $45,832 | $14,378 | $1,497,394 | $6,226,000 | 24% | $1,498,884 | -0 % |
| 2 | Water Purchases | 1,725,978 | 130,625 | 0 | 0 | 1,856,603 | 5,985,000 | 31% | 1,992,147 | -6 % |
| 3 | Depreciation | 683,534 | 118,457 | 47,018 | 11,884 | 860,892 | 3,528,000 | 24% | 856,194 | 0 % |
| 4 | Materials, Services & Supplies | 524,091 | 3,405 | 20,775 | 7,539 | 555,810 | 1,910,000 | 29% | 562,674 | -1 % |
| 5 | Consulting Services/Studies | 35,077 | 0 | 0 | 0 | 35,077 | 335,000 | 10% | 14,818 | 136 % |
| 6 | Chemicals | 131,043 | 2,748 | 1,536 | 0 | 135,327 | 484,000 | 28% | 92,330 | 46 % |
| 7 | Electric Power | 162,999 | 1,385 | 17,946 | 7,949 | 190,280 | 513,000 | 37% | 173,065 | 9 % |
| 8 | Vehicles and Equipment (Distrib) | 53,220 | 885 | 2,730 | 882 | 57,716 | 317,000 | 18% | 76,304 | -24 % |
| 9 | Tools & Supplies (Distrib) | 55,390 | 909 | 1,993 | 286 | 58,578 | 177,000 | 33% | 66,962 | -12 % |
| 10 | Retiree Medical Expenses | 45,237 | 0 | 0 | 0 | 45,237 | 172,000 | 26% | 47,431 | -4 % |
| 11 | Water Conservation Rebates | 8,738 | 0 | 0 | 0 | 8,738 | 104,000 | 8% | 6,171 | 41 % |
| 12 | Insurance & Claims | 32,087 | 0 | 0 | 528 | 32,616 | 173,000 | 19% | 27,688 | 17 % |
| 13 | Office Supplies & Postage | 20,554 | 0 | 0 | 0 | 20,554 | 102,000 | 20% | 30,133 | -31 % |
| 14 | GASB 68 Adjustments | 314,897 | 2,050 | 14,498 | 3,449 | 334,894 | 0 | - | 0 | - |
| 15 | Overhead Charges (Gain)/Loss | (3,858) | 0 | 0 | 0 | (3,858) | (39,000) | 10% | 266,532 | -101 % |
| 16 | Distributed Costs (Lab,G&A,ConsAcctg) | (145,554) | 15,269 | 24,650 | 6,105 | (99,531) | (366,000) | 27% | (86,254) | 15 % |
| 17 | **Total Operating Expense** | $5,062,669 | $293,680 | $176,978 | $53,000 | $5,586,327 | $19,621,000 | 28% | $5,625,078 | -0 % |
| 18 | Interest Expense & Other | 126,839 | 71,686 | 6,047 | 0 | 204,572 | 870,000 | 24% | 173,811 | 17 % |
| 19 | **Total Expense** | $5,189,508 | $365,366 | $183,025 | $53,000 | $5,790,899 | $20,491,000 | 28% | $5,798,889 | -0 % |
| | **Warehouse, Shop & Yard** | | | | | | | | | |
| 20 | Salaries & Benefits | $52,785 | $0 | $0 | $0 | $52,785 | $267,000 | 20% | $42,560 | 24 % |
| 21 | Materials, Services & Supplies | 138,004 | 0 | 0 | 0 | 138,004 | 339,000 | 41% | $78,790 | 75 % |
| 22 | Depreciation | 29,854 | 0 | 0 | 0 | 29,854 | 0 | 0% | $30,657 | -2 % |
| 23 | Distributed Costs | (220,643) | 0 | 0 | 0 | (220,643) | (606,000) | 36% | (152,007) | 45 % |
| 24 | **Total W/H, Shop & Yard** | $0 | $0 | $0 | $0 | $0 | $0 | - | $0 | - |
| | **District Capital Outlay** | | | | | | | | | |
| 25 | Salaries & Benefits | $58,183 | $1,291 | $32,393 | $1,128 | $92,993 | $628,000 | 15% | $140,228 | -33 % |
| 26 | Equipment Expenditures | 277,090 | 0 | 0 | 0 | 277,090 | 355,000 | 78% | 0 | - |
| 27 | Debt Principal Payments | 79,316 | 153,391 | 11,643 | 0 | 244,350 | 2,279,000 | 11% | 248,685 | -1 % |
| 28 | Materials, Services & Supplies | 245,507 | 503 | 56,405 | 9,929 | 312,344 | 5,086,000 | 6% | 1,008,328 | -69 % |
| 29 | **Total District Capital Outlay** | $660,095 | $155,185 | $100,440 | $11,056 | $926,777 | $8,348,000 | 11% | $1,397,241 | -33 % |
| | **Developer Funded Projects** | | | | | | | | | |
| 30 | Salaries & Benefits | $119,189 | $0 | $0 | $0 | $119,189 | $208,000 | 57% | $42,958 | 177 % |
| 31 | Materials, Services & Supplies | 308,935 | 0 | 0 | 0 | 308,935 | 131,000 | 236% | 15,238 | 1927 % |
| 32 | **Total Developer Projects** | $428,123 | $0 | $0 | $0 | $428,123 | $339,000 | 126% | $58,196 | 635 % |
| 33 | **Total** | $6,277,727 | $520,551 | $283,465 | $64,056 | $7,145,799 | $29,178,000 | 24% | $7,254,325 | -1 % |

# NORTH MARIN WATER DISTRICT
## VEHICLE FLEET ANALYSIS
## FOR PERIOD ENDING SEPTEMBER 30, 2019

| | Year | Description | Veh# | Assigned | Fiscal Year to Date Mileage | Expense[1] | Recovery[2] | Gain/(Loss) | Vehicle Cost per Mile Mileage | Life to Date | FYTD20 | FYTD19 | FYTD18 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2002 | Chev K1500 4x4 | 47 | Construction | 390 | $158 | $147 | ($11) | 147,510 | $0.38 | $0.40 | $0.62 | $0.35 |
| 2 | 2003 | Dodge Dakota 4x4 | 49 | STP | 2,123 | $442 | $1,078 | $636 | 113,359 | $0.42 | $0.21 | $0.42 | $0.54 |
| 3 | 2004 | Chev C1500 | 53 | Construction | 468 | $363 | $42 | ($321) | 132,748 | $0.46 | $0.78 | $0.40 | $0.48 |
| 4 | 2004 | Chev C1500 Xtra Cab | 54 | Pool | 785 | $143 | $301 | $159 | 107,558 | $0.46 | $0.18 | $0.52 | $0.53 |
| 5 | 2005 | Honda Civic Hybrid | 56 | Auction | 21 | $290 | $0 | ($290) | 80,242 | $0.30 | $13.81 | $0.89 | $0.56 |
| 6 | 2005 | Honda Civic Hybrid | 57 | Auction | 0 | $232 | $23 | ($209) | 80,398 | $0.24 | - | $0.40 | $0.28 |
| 7 | 2005 | Ford Ranger | 58 | FSR/Pool | 661 | $248 | $466 | $218 | 133,190 | $0.46 | $0.37 | $0.59 | $0.63 |
| 8 | 2006 | Chev Colorado | 501 | Auction | 0 | $145 | $0 | ($145) | 145,060 | $0.37 | - | - | $0.31 |
| 9 | 2007 | Chev Colorado | 504 | Rodriguez | 3,388 | $925 | $0 | ($925) | 84,371 | $0.41 | $0.27 | $0.45 | $0.37 |
| 10 | 2008 | Ford F250 4x4 | 505 | Maintenance | 1,903 | $700 | $707 | $7 | 102,992 | $0.76 | $0.37 | $0.65 | $1.81 |
| 11 | 2008 | Ford F250 4x4 | 506 | STP | 1,066 | $383 | $777 | $394 | 77,521 | $0.78 | $0.36 | $1.10 | $0.41 |
| 12 | 2008 | Chev Colorado 4x4 | 509 | Engineering | 1,577 | $483 | $2,016 | $1,533 | 108,317 | $0.35 | $0.31 | $0.57 | $0.31 |
| 13 | 2009 | Toyota Prius Hybrid | 510 | Auction | 1,271 | $863 | $217 | ($646) | 134,302 | $0.19 | $0.68 | $0.15 | $0.12 |
| 14 | 2010 | Ford F150 4x4 | 511 | STP | 1,188 | $330 | $602 | $272 | 88,188 | $0.50 | $0.28 | $1.17 | $0.39 |
| 15 | 2010 | Ford F150 | 512 | Kurfirst | 1,916 | $553 | $2,534 | $1,981 | 111,578 | $0.49 | $0.29 | $0.49 | $0.54 |
| 16 | 2010 | Ford F150 | 513 | STP | 1,572 | $642 | $847 | $205 | 84,530 | $0.47 | $0.41 | $0.45 | $0.56 |
| 17 | 2012 | Ford F250 | 515 | Reed | 2,507 | $1,029 | $3,647 | $2,618 | 63,660 | $0.60 | $0.41 | $0.68 | $0.40 |
| 18 | 2012 | Ford F250 | 516 | Castellucci | 2,265 | $2,185 | $2,909 | $724 | 70,065 | $0.55 | $0.96 | $0.53 | $0.60 |
| 19 | 2014 | Ford F150 | 517 | | 318 | $329 | $595 | $266 | 13,875 | $0.43 | $1.03 | $0.49 | $0.45 |
| 20 | 2015 | Ford F250 4x4 | 518 | Kehoe, Chris | 3,468 | $1,320 | $5,366 | $4,046 | 85,476 | $0.41 | $0.38 | $0.43 | $0.47 |
| 21 | 2015 | Ford Escape 4X4 | 520 | Arendell | 4,115 | $1,114 | $2,070 | $956 | 69,680 | $0.25 | $0.27 | $0.30 | $0.23 |
| 22 | 2015 | Ford F150 4X4 | 521 | Watkins/Shop | 1,265 | $589 | $462 | ($127) | 41,455 | $0.30 | $0.47 | $0.35 | $0.30 |
| 23 | 2016 | Nissan Frontier | 522 | Roberto | 3,493 | $1,004 | $2,875 | $1,871 | 44,871 | $0.37 | $0.29 | $0.43 | $0.32 |
| 24 | 2017 | Ford Escape 4X4 | 523 | Lab | 1,653 | $522 | $1,033 | $511 | 21,266 | $0.30 | $0.32 | $0.31 | $3.27 |
| 25 | 2016 | Nissan Frontier | 524 | Bynum | 2,834 | $2,090 | $2,468 | $377 | 25,876 | $0.44 | $0.74 | $0.41 | $0.46 |
| 26 | 2018 | Ford Cargo Van | 526 | On-Call | 2,905 | $628 | $336 | $377 | 12,088 | $0.68 | $0.22 | $0.28 | - |
| 27 | 2018 | Dodge Ram 2500 | 527 | Rupp | 3,557 | $1,607 | $3,399 | ($292) | 11,581 | $0.68 | $0.45 | $0.77 | - |
| 28 | 2019 | Chev Colorado 4x4 | 528 | Stompe | 1,707 | $447 | $946 | $1,792 | 4,629 | $0.72 | $0.26 | $0.99 | - |
| 29 | 2019 | NISSAN ROGUE | 531 | Clark | 2,736 | $835 | $1,020 | $499 | 2,736 | $0.38 | $0.31 | - | - |
| 30 | 2019 | NISSAN ROGUE | 532 | Eng/Wtr Consv | 469 | $580 | $179 | $185 | 469 | $1.64 | $1.24 | - | - |
| 31 | 2019 | NISSAN FRONTIER | 533 | Castellucci | 1,911 | $596 | $644 | ($401) | 2,074 | $0.58 | $0.31 | $3.78 | - |
| 32 | 2019 | FORD F-150 2WD | 534 | Grisso | 60 | $128 | $161 | $48 | 60 | $2.14 | $2.14 | - | - |
| 33 | 2019 | FORD F-150 4x4 | 535 | LeBrun | 248 | $33 | $0 | $33 | 248 | $0.13 | $0.13 | - | - |
| | | | | **Total 3/4 Ton & Under** | **53,840** | **21,933** | **37,864** | **16,341** | **2,201,973** | **$0.43** | $0.41 | **$0.49** | **$0.45** |
| 1 | 1999 | Ford F350 W/Svc Body | 19 | Pool | 141 | $104 | $560 | $456 | 137,760 | $0.00 | $0.74 | $0.00 | $1.93 |
| 2 | 2002 | Int'l 5 Yd Dump | 44 | Construction | 1,026 | $1,371 | $4,844 | $3,473 | 106,465 | $1.75 | $1.34 | $1.64 | $1.97 |
| 3 | 1999 | Ford F550 3-Yd Dump[3] | 52 | Construction | 1,563 | $716 | $4,410 | $5,299 | 97,890 | $0.00 | $0.46 | $0.00 | $1.47 |
| 4 | 2006 | Int'l 4300 Crew | 503 | Bergstrom | 1,112 | $847 | $6,146 | $5,299 | 47,219 | $1.65 | $0.76 | $2.29 | $1.30 |
| 5 | 2009 | Peterbilt 325 Crew | 508 | Breit/Crew | 497 | $3,369 | $9,968 | $6,599 | 37,011 | $2.27 | $6.78 | $2.94 | $1.51 |
| 6 | 2012 | Int'l 5 Yd Dump | 514 | Rupp | 1,327 | $1,425 | $4,270 | $2,845 | 41,845 | $1.41 | $1.07 | $1.15 | $1.78 |
| 7 | 2015 | Int'l 5 Yd Dump | 519 | Sjoblom | 1,479 | $4,819 | $5,222 | $403 | 36,857 | $1.18 | $3.26 | $1.30 | $1.21 |
| 8 | 2017 | Ford F350 4x4 | 525 | Ielmorini/Davenport | 3,047 | $2,068 | $4,032 | $1,964 | 26,532 | $0.55 | $0.68 | $0.62 | $0.43 |
| 9 | 2019 | FORD F550 3 YD DUMP | 530 | Construction | 0 | $1,962 | $1,020 | ($942) | - | - | - | - | - |
| | | | | **Total 1 Ton & Over** | **10,192** | **$16,680** | **$40,472** | **$25,397** | **531,579** | **$1.27** | **$1.64** | **$1.37** | **$1.24** |

[1] Expense amount shown excludes depreciation (approximately $84,000 for FY20).

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

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

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# NORTH MARIN WATER DISTRICT
# WATER CONSERVATION PROGRAM DETAIL
# FOR PERIOD ENDING SEPTEMBER 30, 2019

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| | | Description | COST THRU JUNE 2019 | SEPTEMBER 2019 | FYTD TOTAL | FY 19/20 BUDGET | (OVER) UNDER | TOTAL COST |
|---|---|---|---|---|---|---|---|---|
| | | **NOVATO** | | | | | | |
| | | a. Residential | | | | | | |
| 1-7700-01 | 1-7700-26 | 1 Cash for Grass | $424,575 | $619 | $4,211 | $35,000 | $30,789 | $428,786 |
| 1-7700-02 | 1-7700-27 | 2 Landscape Efficiency Rebates | 24,065 | 192 | 363 | 5,000 | 4,637 | 24,428 |
| 1-7700-03 | | 3 Fixtures Purchases | 53,020 | 0 | 500 | 5,000 | 4,500 | 53,519 |
| 1-7700-06 | 1-7700-28 | 4 Washing Machine Rebates | 349,202 | 136 | 272 | 5,000 | 4,728 | 349,475 |
| 1-7700-07 | | 5 Demonstration Garden Improvements | 55,105 | 0 | 0 | 1,000 | 1,000 | 55,105 |
| 1-7700-11 | 1-7700-29 | 6 Toilet Rebate SF | 1,001,289 | 1,653 | 6,139 | 18,000 | 11,861 | 1,007,429 |
| 1-7700-12 | 1-7700-30 | 7 Toilet Rebate MF | 18,261 | 0 | 118 | 2,000 | 1,882 | 18,379 |
| 1-7700-13 | | 8 Residential Audits | 447,287 | 1,275 | 4,729 | 65,000 | 60,271 | 452,016 |
| 1-7700-15 | | 9 High Efficiency Toilet Distribution | 242,177 | 0 | 0 | 0 | 0 | 242,177 |
| 1-7700-16 | | 10 Water Waste Ordinance Monitoring | 92,441 | 0 | 98 | 7,000 | 6,902 | 92,539 |
| 1-7700-17 | 1-7700-31 | 11 Swimming Pool Cover Rebate | 3,464 | 33 | 33 | 1,000 | 967 | 3,497 |
| 1-7700-19 | 1-7700-32 | 12 ET Controller Rebate | 35,660 | 180 | 1,244 | 5,000 | 3,756 | 36,904 |
| 1-7700-08 | | 13 Administration | 1,534,674 | 9,716 | 26,265 | 130,000 | 103,735 | 1,560,939 |
| 1-7700-20 | | 14 New Development Wtr Cons Program | 101,232 | 1,404 | 3,511 | 15,000 | 11,490 | 104,742 |
| 1-7700-21 | 1-7700-33 | 15 Demand Offset Rebate Program | 2,816 | 0 | 0 | 2,000 | 2,000 | 2,816 |
| 1-7700-23 | | 16 Grant Administration | 3,300 | 0 | 0 | 1,000 | 1,000 | 3,300 |
| 1-7700-24 | 1-7700-34 | 17 Hot Water Recirculation Rebate | 2,416 | 0 | 0 | 2,000 | 2,000 | 2,416 |
| 1-7700-25 | | 18 Residential Fill Station | 66,421 | 0 | 0 | 0 | 0 | 66,421 |
| | | b. Commercial | | | | | | |
| 1-7701-02 | 1-7701-05 | 1 Toilet Rebate Program | 67,361 | 0 | 0 | 10,000 | 10,000 | 67,361 |
| 1-7701-03 | 1-7701-04 | 2 Commercial Audits | 29,291 | 838 | 2,092 | 9,000 | 6,908 | 31,383 |
| | | c. Public Outreach/Information | | | | | | |
| 1-8672-16 | | 1 Fall Newsletter | 77,971 | 3,902 | 3,902 | 8,000 | 4,098 | 81,872 |
| 1-8672-17 | | 2 Spring Newsletter | 94,888 | 0 | 0 | 9,000 | 9,000 | 94,888 |
| 1-8672-18 | | 3 Summer Newsletter | 20,290 | 0 | 0 | 0 | 0 | 20,290 |
| 1-7700-04 | | 4 Public Outreach / $H_2O$ Fair | 142,144 | 2,316 | 7,097 | 17,000 | 9,903 | 149,241 |
| 1-7700-05 | | 5 Marketing | 161,983 | 8,525 | 10,925 | 15,000 | 4,075 | 172,908 |
| 1-7700-22 | | 6 Public Outreach/Leadership Novato | 11,327 | 0 | 0 | 0 | 0 | 11,327 |
| | | d. Large Landscape | | | | | | |
| 1-8653-02 | | 1 Large Landscape Audits | 90,824 | 409 | 409 | 3,000 | 2,591 | 91,232 |
| 1-7702-01 | | 2 Large Landscape Budgets | 38,567 | 150 | 625 | 1,000 | 375 | 39,192 |
| 1-7702-02 | 1-7702-04 | 3 Large Landscape Irrig Efficiency Rebates | 14,460 | 0 | 500 | 4,000 | 3,500 | 14,960 |
| 1-8653-01 | | 4 CIMIS Station Maintenance | 19,496 | 15 | 60 | 2,000 | 1,940 | 19,557 |
| 1-7702-03 | | 5 Administration-Large Landscape | 89,859 | 1,118 | 3,217 | 13,000 | 9,783 | 93,076 |
| | | **TOTAL NOVATO WATER CONSERVATION** | $5,315,864 | $32,480 | $76,310 | $390,000 | $313,690 | $5,392,174 |
| | | **WEST MARIN WATER** | | | | | | |
| 2-5166-00 | | a. Water Conservation Program | $104,061 | $136 | $681 | $9,000 | $8,319 | $104,742 |
| | | **TOTAL WATER CONSERVATION EXPENDITURES** | $104,061 | $136 | $681 | $9,000 | $8,319 | $104,742 |

# NORTH MARIN WATER DISTRICT
# CAPITAL IMPROVEMENT PROJECTS
# PERIOD ENDING SEPTEMBER 30, 2019

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| | Description | COST THRU JUNE 2019 | SEPTEMBER 2019 | FYTD TOTAL | FY 19/20 BUDGET | (OVER)/UNDER BUDGET | TOTAL COST |
|---|---|---|---|---|---|---|---|
| | **1 PIPELINE REPLACEMENTS/ADDITIONS** | | | | | | |
| | a. Main/Pipeline Replacements | | | | | | |
| 1-7183-00 | 1 Replace Plastic thin Walled Pipe < 4-inch | $0 | $2,691 | $2,691 | $150,000 | $0 | $2,691 |
| | 2 Other Main Replacements (60+ years old) | 0 | 0 | 0 | 200,000 | 200,000 | 0 |
| | b. Main/Pipeline Additions | | | | | | |
| 1-7150-00 | 1 San Mateo Inlet/Outlet Pipe (2,200') | 56,760 | 5,297 | 6,061 | 50,000 | 43,939 | 62,821 |
| | c. PB Service Line Replacements | | | | | | |
| 1-7139-xx | 1 Replace PB in Sync w/City Paving (30 Svcs) | 0 | 0 | 0 | 70,000 | 70,000 | 0 |
| 1-7123-xx | 2 Other PB Replacements (80 Svcs) | 0 | 0 | 0 | 80,000 | 80,000 | 0 |
| 1-7123-24 | 3 Repl PB-Lanham Village (32) | 73,577 | 0 | 31,844 | 80,000 | 48,156 | 105,421 |
| 1-7123-26 | 4 PB Repl-MCC Estates (23) | 0 | 845 | 845 | 80,000 | 79,155 | 845 |
| | d. Relocations to Sync w/City & County CIP | | | | | | |
| 1-8737-xx | 1 Other Relocations | 0 | 0 | 0 | 70,000 | 70,000 | 0 |
| | **TOTAL PIPELINE REPLACEMENTS/ADDITIONS** | $130,337 | $8,833 | $41,441 | $780,000 | $591,250 | $169,087 |
| | e. Aqueduct Replacements & Enhancements | | | | | | |
| 1-7118-02 | 1 MSN B2-Utility Agreement Costs[1] | $97,736 | $0 | $90 | $0 | $0 | $97,826 |
| 1-7118-11 | 2 AEEP Post Construction Costs | 11,533 | 0 | 472 | 0 | (472) | 12,005 |
| | | $109,269 | $0 | $562 | $0 | ($472) | $109,831 |
| | **2 SYSTEM IMPROVEMENTS** | | | | | | |
| 1-7007-13 | a. Detector Check Assembly Repair/Repl (~14/yr) | $0 | $3,937 | $10,642 | $100,000 | $89,358 | $10,642 |
| 1-7090-04 | b. Anode Installations (150/yr) | 0 | 264 | 264 | 10,000 | 9,736 | 264 |
| 1-7178-00 | c. Asset Management Software Procurement/Implementation | 74,499 | 7,753 | 16,774 | 163,000 | 146,226 | 91,272 |
| 1-7136-00 | d. Facilities Security Enhancements | 67,986 | 149 | 149 | 25,000 | 24,851 | 68,135 |
| 1-7181-00 | e. Novato Fair Shopping Center-Backflow | 7,725 | 306 | 981 | 0 | (981) | 8,707 |
| 1-7158-00 | f. Advanced Meter Information Retrofit | 5,696,348 | 19,717 | 23,906 | 0 | (23,906) | 5,720,254 |
| | **TOTAL SYSTEM IMPROVEMENTS** | $5,846,558 | $32,126 | $52,716 | $298,000 | $245,284 | $5,899,274 |
| | **3 BUILDINGS, YARD, & S.T.P. IMPROVEMENTS** | | | | | | |
| | a. Administration Building | | | | | | |
| 1-6501-43 | 1 Electronic Document Management System | $0 | $0 | $0 | $70,000 | $70,000 | $0 |
| 1-6501-44 | 2 Office/Yard Building Renovation[2] | 79,285 | 168 | 3,932 | 900,000 | 896,068 | 83,217 |
| | b. Corp Yard/Warehouse/Construction Office | | | | | | |
| 1-6502-xx | Other Yard Improvements | 0 | 0 | 0 | 30,000 | 30,000 | 0 |
| | b. Stafford Treatment Plant | | | | | | |
| 1-6600-69 | 1 Dam Concrete Repair (Apron) | 195,455 | 0 | 0 | 50,000 | 50,000 | 195,455 |
| 1-6600-96 | 2 Leveroni Creek Embankment Repair | 2,907 | 0 | 9,998 | 191,000 | 181,002 | 12,906 |
| 1-6600-xx | 3 Other Treatment Plant Improvements | 0 | 0 | 0 | 114,000 | 114,000 | 0 |
| 1-6600-97 | 4 Efficiency Improvements | 0 | 0 | 0 | 100,000 | 100,000 | 0 |
| 1-6600-98 | 5 STP Generator | 0 | 90,923 | 90,923 | 400,000 | 309,077 | 90,923 |
| 1-6600-92 | 6 STP-Chemical System Upgrades | 8,946 | 7,904 | 12,143 | 0 | (12,143) | 21,090 |
| | **TOTAL BUILDING, YARD, & STP IMPROVEMENTS** | $286,593 | $98,996 | $116,996 | $1,855,000 | $1,738,004 | $403,590 |

# NORTH MARIN WATER DISTRICT
# CAPITAL IMPROVEMENT PROJECTS
# PERIOD ENDING SEPTEMBER 30, 2019

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| | Description | COST THRU JUNE 2019 | SEPTEMBER 2019 | FYTD TOTAL | FY 19/20 BUDGET | (OVER)/UNDER BUDGET | TOTAL COST |
|---|---|---|---|---|---|---|---|
| | **4 STORAGE TANKS & PUMP STATIONS** | | | | | | |
| | a. Tank Construction | | | | | | |
| 1-6207-20 | 1 Old Ranch Rd Tank Replacement | $50,687 | $1,780 | $17,034 | $150,000 | $132,966 | $67,721 |
| | b. Tank Rehabilitation | | | | | | |
| 1-7170-00 | 1 Hydropnuematic Tank Repairs | 15,145 | 0 | 0 | 30,000 | 30,000 | 15,145 |
| 1-6205-22 | 2 Cherry Hill #2 Recoat | 16,754 | 3,781 | 9,330 | 400,000 | 390,670 | 26,084 |
| 1-6112-24 | c. Lynwood Pump Station Motor Control Center | 127,093 | 1,109 | 2,455 | 320,000 | 317,545 | 129,549 |
| 1-6141-00 | d. Crest P.S.(Design/Const)/Reloc School Rd P.S. | 124,870 | 726 | 22,921 | 635,000 | 612,079 | 147,790 |
| 1-6111-21 | f. Indian Hills PS-Bypass | 946 | 0 | 6,192 | 0 | (6,192) | 7,138 |
| 1-6116-21 | g. Rockrose PS-Bypass | 901 | 0 | 6,609 | 0 | (6,609) | 7,511 |
| 1-6105-20 | h. Diablo PS-Bypass | 710 | 0 | 0 | 0 | 0 | 710 |
| 1-7184-00 | i. Quick Connects-Generators (16) | 0 | 163 | 27,433 | 0 | (27,433) | 27,433 |
| | **TOTAL STORAGE TANKS & PUMP STATIONS** | $337,106 | $7,559 | $91,974 | $1,535,000 | $1,443,026 | $429,080 |
| | **5 RECYCLED WATER** | | | | | | |
| 5-7127-00 | a. NBWRA Grant Program Administration | $1,314,750 | $0 | $0 | $20,000 | $20,000 | $1,314,751 |
| | b. Other Recycled Water Expenditures | 0 | 0 | 0 | 100,000 | 100,000 | 0 |
| 5-6058-10 | c. Expansion to Central Area[3] | 1,095,783 | 0 | 0 | 0 | 0 | 1,095,783 |
| 5-6058-15 | d. RW Central Right of Way Costs[3] | 89,486 | 0 | 108 | 0 | (108) | 89,594 |
| 5-6058-50 | e. RW Central-Norman Tank Rehab/Const | 1,122,107 | 601 | 1,685 | 0 | (1,685) | 1,123,793 |
| | **TOTAL RECYCLED WATER** | $3,622,126 | $601 | $1,794 | $120,000 | $118,206 | $3,623,920 |
| | **6 WEST MARIN WATER SYSTEM** | | | | | | |
| 2-6263-20 | a. Replace PRE Tank #4A (25K Gal w/125K Gal) | $235,454 | $7,956 | $12,522 | $550,000 | $537,478 | $247,976 |
| 2-6609-20 | b. New Gallagher Well #2 | 8,720 | 3,457 | 4,311 | 75,000 | 70,689 | 13,031 |
| 2-8829-00 | c. PB Replace in Sync w/County Paving | 1,455 | 0 | 0 | 50,000 | 50,000 | 1,455 |
| 2-7182-00 | d. WM Brominated-TTHM Reduction | 20,482 | 7,068 | 20,571 | 300,000 | 279,429 | 41,054 |
| 2-8912-00 | e. Lagunitas Bridge Pipeline Replacement | 18,742 | 229 | 879 | 200,000 | 199,121 | 19,621 |
| 2-8737-07 | f. Olema Creek Bridge Replacement | 1,010 | 0 | 0 | 35,000 | 35,000 | 1,010 |
| 2-6130-23 | g. Olema PS Wireless to Tank | 0 | 0 | 0 | 20,000 | 20,000 | 0 |
| 2-7123-25 | k. PB Replacement-Drakes View Dr | 1,814 | 25,847 | 42,992 | 0 | (42,992) | 44,806 |
| 2-7185-00 | l. Lagunitas Creek Slope Stabilization | 0 | 252 | 252 | 0 | (252) | 252 |
| 2-6130-24 | m. Olema Pump Station Pump Replacement | 0 | 7,270 | 7,270 | 0 | (7,270) | 7,270 |
| | **TOTAL WEST MARIN WATER SYSTEM** | $287,677 | $52,079 | $88,797 | $1,230,000 | $1,141,203 | $376,475 |
| | **7 OCEANA MARIN SEWER SYSTEM** | | | | | | |
| 8-8672-28 | a. Infiltration Repair | $39,195 | $573 | $573 | $40,000 | $39,427 | $39,768 |
| 8-7085-04 | b. Tahiti Way Lift Pump 1 Assembly | 0 | 0 | 9,489 | 15,000 | 5,511 | 9,489 |
| 8-7173-00 | c. OM Treatment Pond Rehab-404 Grant-FEMA | 47,789 | 841 | 994 | 15,000 | 14,006 | 48,783 |
| | **TOTAL OCEANA MARIN SEWER SYSTEM** | $86,984 | $1,414 | $11,056 | $70,000 | $58,944 | $98,040 |
| | **TOTAL PROJECT EXPENDITURES** | $10,706,650 | $201,608 | $405,337 | $5,888,000 | $5,335,444 | $11,109,296 |

# NORTH MARIN WATER DISTRICT
# CAPITAL IMPROVEMENT PROJECTS
# PERIOD ENDING SEPTEMBER 30, 2019

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| Description | COST THRU JUNE 2019 | SEPTEMBER 2019 | FYTD TOTAL | FY 19/20 BUDGET | (OVER)/UNDER BUDGET | TOTAL COST |
|---|---|---|---|---|---|---|
| **8 LESS FUNDED BY GRANTS, LOANS & REIMBURSEMENTS** | | | | | | |
| **(Accrued)/Deferred** | | | | | | |
| a. MSN Aqueduct Caltrans Reimb-Segment B2[1] | ($26,372) | $0 | ($90) | $0 | $90 | ($26,462) |
| b. Office/Yard Building Renovation[2] | (79,501) | (168) | (3,932) | 0 | 3,932 | (83,433) |
| **FUNDING BY OTHERS (ACCRUED)/DEFERRED** | ($105,873) | ($168) | ($4,022) | $0 | $4,022 | ($109,895) |
| **Received** | | | | | | |
| a. MSN Aqueduct Caltrans Reimb-Segment B2[4] | ($59,974) | $0 | $0 | $0 | $0 | ($59,974) |
| b. Office/Yard Building Renovation[2] | 0 | 0 | 0 | (900,000) | (900,000) | 0 |
| **FUNDING BY OTHERS RECEIVED** | ($59,974) | $0 | $0 | ($900,000) | ($900,000) | ($59,974) |
| **NET PROJECT EXPENDITURES** | $10,540,803 | $201,440 | $401,315 | $4,988,000 | $4,439,466 | $10,939,427 |

| CIP SUMMARY-GROSS EXPENDITURES: | Current Month | FYTD Total | FY 19/20 Budget | FYTD/ Budget% |
|---|---|---|---|---|
| **Novato Water Capital Projects** | $147,514 | $303,689 | $4,468,000 | 7% |
| **Novato Recycled Water Capital Projects** | 601 | 1,794 | 120,000 | 1% |
| **West Marin Water Capital Projects** | 52,079 | 88,797 | 1,230,000 | 7% |
| **Oceana Marin Sewer Capital Projects** | 1,414 | 11,056 | 70,000 | 16% |
| **Gross Capital Improvement Project Outlays** | $201,608 | $405,337 | $5,888,000 | 7% |

| CIP SUMMARY-NET EXPENDITURES: | Current Month | FYTD Total | FY 19/20 Budget | FYTD/ Budget% |
|---|---|---|---|---|
| **Novato Water Capital Projects** | $147,345 | $299,667 | $3,568,000 | 8% |
| **Novato Recycled Water Capital Projects** | 601 | 1,794 | 120,000 | 1% |
| **West Marin Water Capital Projects** | 52,079 | 88,797 | 1,230,000 | 7% |
| **Oceana Marin Sewer Capital Projects** | 1,414 | 11,056 | 70,000 | 16% |
| **Net Capital Improvement Project Outlays** | $201,439 | $401,315 | $4,988,000 | 8% |

**Notes to Capital Improvement Projects Schedule:**

(1) Funding provided 100% by Caltrans.

(2) Office/Yard Refurbish to be funded by Bank Loan.

| CONSULTING SERVICES/STUDIES | | | | | | |
|---|---|---|---|---|---|---|
| 1-4055-00 a. Stafford Lake Sanitary Survey | $20,761 | $375 | $4,455 | $15,000 | $10,545 | $25,216 |
| 1-4057-00 b. Local Water Supply Enhancement Study | 0 | 0 | 0 | 25,000 | 25,000 | 0 |
| 1-7039-02 c. Novato Water Master Plan Update | 176,896 | 765 | 3,256 | 0 | (3,256) | 180,153 |
| 1-4058-20 d. 2019 Cost of Service Study | 9,970 | 2,570 | 6,140 | 50,000 | 43,860 | 16,110 |
| 1-4059-00 e. Stafford Lake Water Rights Update | 0 | 0 | 0 | 50,000 | 50,000 | 0 |
| 1-4073-00 f. Surplus Property | 200 | 948 | 3,648 | 0 | (3,648) | 3,848 |
| 1-4076-00 g. CVRA-Trans From At-Large Elections | 56,898 | 21 | 6,243 | 15,000 | 8,757 | 63,141 |
| 1-4077-00 h. Potter Valley Project FERC Relicensing | 0 | 777 | 5,229 | 10,000 | 4,771 | 5,229 |
| 1-7140-01 i. Stafford Dam EAP & Inundation Mapping Updates | 0 | 0 | 0 | 10,000 | 10,000 | 0 |
| 1-4050-01 j. Urban Water Management Plan | 0 | 660 | 880 | 20,000 | 19,120 | 880 |
| 1-4060-00 k. STP Efficiency Improvements | 75,221 | 0 | 5,226 | 0 | (5,226) | 80,446 |
| | $339,946 | $6,116 | $35,077 | $195,000 | $159,923 | $375,023 |

# North Marin Water District Financial Statement Notes

## Note 1 - Restricted Cash

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

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

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

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

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

**Recycled Water Capital Replacement and Expansion Fund:** The 2011 Interagency Agreements for Recycled Water between NSD, LGVSD & NMWD require that any payments to the Distributor (NMWD) by the End User (Consumers) in excess of actual costs (marginal payments) shall be deposited in this fund. Operation and Maintenance Costs are defined as the actual cost of: labor (including general and administrative overhead plus tools and supplies normally applied), equipment and vehicle charges, consumables (such as chemicals and electrical power), and spare parts and/or replaced components necessary to reliably treat and deliver recycled water to the End Users. Operation and Maintenance Costs do not include costs for major capital replacement or process changes.

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

**STP SRF Reserve Fund – Marin County Treasury:** The 2004 Stafford Treatment Plant State Revolving Fund (SRF) loan agreement requires the District to build a Reserve Fund equal to one year of payments ($1,044,474) in the Marin County Treasury during the first ten years of the 20-year repayment period. Every January 1 and July 1, commencing January 1, 2010, the District deposits with the County 10% of the semi-annual SRF payment. This Reserve Fund was fully funded at 6/30/19.The County credits the fund with interest quarterly, and will use the Reserve to pay the last 2 semi-annual SRF loan payments.

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

**RWS Central SRF Reserve Fund:** The State Water Resource Control Board Agreement for the Clean Water State Revolving Fund Loan made for expansion of the Recycled Water System distribution system requires that the District establish a reserve fund equal to one year's debt service ($275,773) prior to the construction completion date.

**Note 2 - Designated Cash**

**Liability Contingency Fund:** Established in 1986 when the District first elected to self-insure its general liability risk. This reserve was funded with $1 million initially and $200,000 annually thereafter until it reached a balance of $2 million. In FY98 the West Marin Water System was included in the fund and built-up a proportional reserve of $74,000 over several years. Commencing FY93, $1 million of the reserve was made available to fund loans to eligible employees under the District's Employer Assisted Housing Program. In August 2008, $500,000 was transferred into this reserve from the Self-Insured Workers' Compensation Fund and made available to fund Employer Assisted Housing Program loans. Currently there is $675,000 in Employer Assisted Housing Loans outstanding (see Note 3). In March 2005, $652,400 was expended from the fund to purchase a home at 25 Giacomini Road in Point Reyes Station. The home is currently rented. In 2006, $8,885 was added from the sale of surplus property in West Marin. The fund balance does not accrue interest.

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

**Retiree Medical Benefits Fund:** NMWD pays the cost of health insurance for retirees between the ages of 55 and 65 and spouse under any group plan offered by CalPERS. The retiree must be at least 55 and have a minimum of 12 years (for employees hired on or before September 30, 2018) and a minimum of 20 years (for employees hired after September 30, 2018) of NMWD service at the date of retirement. NMWD's contribution toward the chosen plan is capped in the same manner as all other NMWD employees in the same class. Coverage terminates for the spouse when the spouse becomes eligible for Medicare, or for both the retiree and spouse when the retiree becomes eligible for Medicare. When the retiree or spouse becomes eligible for Medicare, NMWD pays up to the couple annuitant rate, which is capped at $3,830 per year ($319/month). In August 2003, NMWD transferred $2.55 million ($2.3 million for current retirees plus $250,000 for future retirees) from unrestricted cash into a reserve to fund this obligation. In 2010 the Board directed staff to add $1,500 per employee annually as a payroll overhead to accrue and accelerate amortization of this liability. The accrual is maintained as a Long-Term Liability entitled Retiree Health Benefits Payable. The total OPEB Liability has a balance of $4.1M. In 2017 an Actuarial Analysis calculated NMWD's total actuarial liability at $5.6 million. The Retiree Medical Benefits cash fund earns interest monthly. Accounting Standards require that the $5.6M reserve by fully funded in 20 years.

**Drought Contingency (Rate Stabilization) Fund:** In August 2008, the Board directed staff to establish this reserve with $135,000 from the Self-Insured Workers' Compensation Fund for the Novato district to draw upon during dry years. A threshold of 3.2 billion gallons of potable consumption was established as a benchmark for 'normal' years. During any fiscal year that water sales volume exceeds 3.2BG, the incremental revenue generated is deposited into the Drought Contingency Reserve. In those years when sales volume falls below the benchmark, funds are withdrawn from the reserve to maintain the budgeted

revenue forecast. The goal is to build a reserve equal to 20% (currently $2,500,000) of budgeted annual water commodity sales. In FY09 $50,335 was added to the reserve. The fund was fully depleted in FY10. The fund balance accrues interest monthly.

**Maintenance Accrual Fund:** Established in FY91 to provide a source of maintenance money for replacement of treatment, storage, transmission and distribution facilities as they wear out. The annual contribution from operating reserves was initially $200,000. Net polybutylene claim settlement proceeds of $671,060 were closed into the fund in FY93. In FY94 the annual contribution was reduced to $100,000. The District's goal is to build a reserve equal to 10% of the net book value of Novato's existing plant, currently $7.0M. Funds are borrowed from the Maintenance Accrual Fund to offset the shortfall in unrestricted Cash & Investments. The fund balance does not accrue interest.

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

## Note 3 – Employee Loans

**Housing Loans:** The District's Employer Assisted Housing Program allows up to $300,000 to be loaned to an employee for a period of up to 15 years for the purchase of a home within the District service territory that will enable the employee to respond rapidly to emergencies affecting the operation of the District. Repayment is due upon sale, termination of employment, or other event as described in the Program. Interest on the loan is contingent upon and directly proportional to the appreciation in value occurring on the purchased property. There are three employee-housing loans currently outstanding totaling $675,000: a $150,000 loan dated November 2007, a $250,000 loan dated March 2015, and a $275,000 loan dated June 2018.

## Note 4 – Other Long Term Receivables

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

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

## Note 5 – Depreciation

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

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

## Note 6 - Capitalization Policy

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

## Note 7 – Bond & Loan Servicing Schedule for Fiscal Year 2019-2020

| | Service Area | Description | Issue Date | Rate | Original Amount | Payment Due | Final Pmt | FY20 Interest Expense | FY20 Principal Paid | 6/30/20 Outstanding Balance |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Novato | SRF Loan - STP | 2004 | 2.39% | $16,528,850 | 7/1 & 1/1 | 7/1/29 | $215,953 | $828,522 | $8,413,056 |
| 2 | Novato | Bank Marin Loan | 2011 | 3.54% | $7,000,000 | 27th/mo | 10/27/31 | $160,674 | $321,368 | $4,523,948 |
| 3 | Novato | Chase Bank Loan | 2018 | 2.69% | $4,600,000 | 3/1 & 9/1 | 3/1/33 | $117,284 | $260,000 | $4,100,000 |
| | | | | | | | Novato Total | $493,911 | $1,409,890 | $17,037,004 |
| 3 | RW TP | SRF Loan | 2006 | 2.4% | $4,302,560 | 6/20 | 6/19/27 | $47,243 | $226,124 | $1,742,339 |
| 4 | RW North | SRF Loans (4) | 2013 | 2.6% | $4,375,605 | Varies | Varies | $82,086 | $199,807 | $3,157,142 |
| 5 | RW South | SRF Loans (3) | 2013 | 2.2% | $5,361,952 | Varies | Varies | $88,890 | $243,517 | $4,040,446 |
| 6 | RW Central | SRF Loan | 2016 | 1.0% | $7,130,503 | 12/19 | 12/31/47 | $69,125 | $206,648 | $6,705,816 |
| | | | | | | | Recycled Water Total | $287,344 | $876,096 | $15,214,031 |
| 7 | WM Water | Bank Marin Loan | 2012 | 3.54% | $1,000,000 | 27th/mo | 10/27/31 | $23,585 | $47,173 | $663,761 |
| | | | | | | | West Marin Water Total | $23,585 | $47,173 | $663,761 |
| | | | | | | | FY20 Total | $804,840 | $2,333,159 | $32,914,796 |

1. In April 2004 the California State Department of Water Resources approved a 2.39% 20-year loan for reconstruction of the Stafford Water Treatment Plant. The project was completed in FY09 with repair of the Outlet Tower Sluice Gate. Interest paid during construction totaled $1,636,378. The loan covenants require an annual reserve fund contribution of $104,447 (10% of the annual debt service

obligation) be deposited into the Marin County Treasury during each of the first ten years of the repayment period. Debt service is funded 25% by Facility Reserve Charges. The first payment was made in December 2009.

2. In October 2011 Bank of Marin made a 20-year 3.54% (APR) loan of $8 million to fund the District's share of the Aqueduct Energy Efficiency Project. See Note 15 below, and note to loan 9 above.
3. In March 2018 Chase Bank made a 15-year 2.69% (APR) loan of $4.6 million to fund the District's Automated Meter Information system Project.
4. In August 2006 the California State Department of Water Resources approved a 2.4% 20-year loan of $4,264,545 for construction of the Deer Island Recycled Water Facility. With the addition of $38,015 in Construction Period Interest, the loan principal totaled $4,302,560. The project was completed in June 2007, and the first payment was made June 19, 2008.
5. In July 2011 the California State Department of Water Resources approved a series of four 2.6% 20-year loans which totaled $4,375,605 for the Recycled Water North Service Area Expansion Project. The projects were completed on October 31, 2012, and the first payment was made in November of 2012.
6. In March 2012 the California State Department of Water Resources approved a series of three 2.2% 20-year loans totaling $5,361,952 for the Recycled Water South Service Area Expansion Project. The projects were completed on September 4, 2013, and the first payment was made in December of 2013.
7. In May 2016 the California State Department of Water Resources approved a 1.0% 30-year loan of $7,130,503 for the Recycled Water Central Service Area Expansion. The project will be completed in December 2017, and the first payment will be made December 31, 2018.
8. The Paradise Ranch Estates private water system was created by David Adams and Sons in 1952 to provide water to 85 homes in the PRE subdivision located north of Inverness Park. Problems with water quality and quantity developed and in 1969 the Marin County Health Department issued a boil-water order to all customers of the company. In 1972 the County declared a moratorium on issuance of building permits. A suit by property owners resulted in an agreement reached in Marin Superior Court in late 1978 directing Adams to finance a District feasibility study for the takeover of the system. This culminated in formation of Improvement District PRE-1 and an election authorizing issue of $240,000 of 5% 40-year revenue bonds, which, in conjunction with a $720,000 Farmers Home Administration grant, financed system rehabilitation. Service was provided from the Point Reyes System by installation of an additional well, expansion of the treatment plant, and a 6-inch pipeline connection at the Inverness Park pump station extending 1.6 miles along Sir Francis Drake Boulevard to the newly reconstructed Paradise Ranch Estates distribution system. On 4/22/80 the USDA purchased the revenue bond issue in its entirety.
9. In 1981 work commenced on rehabilitating the Point Reyes Inverness Park water system. 18,865 feet of pipeline was either replaced or installed, a 300,000-gallon tank was added in Point Reyes Station and a 100,000-gallon tank was added in Inverness Park. Total cost of these improvements was $820,015. A 72% grant combined with a $217,800 5% 40-year revenue bond acquired 8/28/81 by the Farmers Home Administration financed the project.
10. In June 2012 the Board authorized reallocating $1 million of the Bank of Marin loan to West Marin Water to repay Novato Water $223,000 owed for loans to fund Long Range Improvement Projects and the remainder to fund the Solids Handling Facility at the Point Reyes Water Treatment Plant. See note to loan 2 above.

**Note 8 – Unemployment Insurance Reserve**

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

**Note 9 – Payroll Benefits**

Payroll Benefits payable includes payroll taxes; vacation, sick, and holiday leave; Section 125 payments; cancer, long term care and disability insurance premiums; union dues; and employee benefit fund.

**Note 10 - Interest Policy on Inter-District Loans**

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

No interest shall be paid by an improvement district on funds borrowed from that improvement district's Board Designated Fund reserves. Interest on loans from the Novato Improvement District shall be paid by the recipient district to the Novato district based upon the outstanding loan balance at the close of the previous accounting period. Interest shall be calculated at the higher of: 1. The weighted average interest rate of Novato improvement district debt (2.78% at 6/30/18); or 2.The average interest rate earned on the District treasury since the close of the previous accounting period; plus $50 per month.

**Note 11 – Budget Augmentations**

**Note 12 – Prior Period Adjustment**

**Note 13 – Explanation of Financial Statement Components**

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

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

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

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

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

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

**Other Supplementary Information** includes Detail Income Statements presented in accordance with GAAP for each of the four service areas (pages 10, 14, 16, 19). These statements present income and expenditures in close detail for further analysis. Other supplementary schedules of note include the

Vehicle Fleet Analysis (page 25), Equipment Expenditures (page 22) and Capital Improvement Project Expenditures (page 27), which show outlays to date, compared with budget authority.

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

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

| | Expansion Local Share | | | SRF RWF Expansion | | | | | Transfer | |
|---|---|---|---|---|---|---|---|---|---|---|
| | North | South | Central | NBWRA | Loan | SRF Loan | CIP | Total | Executed | |
| FY07 | | | | $29,725 | | | | $29,725 | | |
| FY08 | | | | $50,478 | $22,795 | | | $73,273 | | |
| FY09 | | | | $150,455 | $22,795 | | | $173,250 | | |
| FY10 | $133,659 | | | $75,198 | $22,795 | | | $231,652 | $133,659 | $133,659 |
| FY11 | | | | $133,319 | $22,795 | | | $156,114 | | $1,175,098 |
| FY12 | $233,478 | $265,500 | | $115,883 | $22,795 | | | $637,656 | | ($7,088) |
| FY13 | | | | $315,023 | $22,795 | $464,572 | | $802,390 | $1,970,400 | $802,390 |
| FY14 | $236,291 | $723,525 | $4,024 | $63,035 | $22,795 | $500,529 | | $1,550,200 | $1,550,200 | $1,550,200 |
| FY15 | | $17,563 | ($4,024) | $38,283 | $22,795 | $614,299 | | $688,916 | $688,916 | $688,916 |
| FY16 | $0 | $0 | $66,729 | $102,842 | $22,795 | $614,299 | | $806,664 | $806,664 | $806,664 |
| FY17 | | | $362,524 | $194,636 | $22,795 | $614,299 | $36,687 | $1,230,940 | $1,230,940 | $1,230,940 |
| FY18 | | | $5,071,512 | $38,908 | $22,795 | $614,299 | | $5,747,513 | $5,747,513 | $5,747,513 |
| FY19 | | | ($2,168,755) | $6,966 | $22,795 | $890,072 | | ($1,248,922) | ($1,248,922) | ($1,248,922) |
| FY20 | | | $709 | $0 | $0 | $216,362 | $1,084 | $218,155 | $218,155 | $218,155 |
| | **$603,428** | **$1,006,589** | **$3,332,719** | **$1,314,751** | **$273,539** | **$4,528,730** | **$37,771** | **$11,097,527** | **$11,097,527** | **$11,097,527** |

## Note 15 –Debt Service Coverage Ratio

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

| | FY16 | FY17 | FY18 | FY19 | FY20 |
|---|---|---|---|---|---|
| Net Income/(Loss) | $91,719 | $597,600 | $1,860,520 | $1,159,000 | $1,830,000 |
| Depreciation | $3,286,353 | $3,416,507 | $3,434,069 | $3,528,000 | $3,486,000 |
| Interest Expense | $807,035 | $757,935 | $833,197 | $850,000 | $806,000 |
| Connection Fees | $278,690 | $1,034,585 | $1,455,400 | $733,000 | $340,000 |
| Total Available For Debt Service | $4,463,797 | $5,806,627 | $7,583,186 | $6,270,000 | $6,462,000 |
| Annual Debt Service | $2,528,938 | $2,527,021 | $2,201,451 | $3,129,000 | $3,139,000 |
| **Debt Service Coverage Ratio** | **1.77** | **2.30** | **3.45** | **2.01** | **2.06** |

# 6

**MEMORANDUM**

To: Board of Directors

November 1, 2019

From: Drew McIntyre, General Manager
Julie Blue, Auditor/Controller JB

Subj: Operator-in-Charge Side Letter with Employee Association
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**RECOMMENDED ACTION: APPROVE OPERATOR-IN-CHARGE EXTRA DUTY INCENTIVE PAY SIDE LETTER WITH EMPLOYEE ASSOCIATION**

**FINANCIAL IMPACT:** $500/Month + Payroll Taxes $38/Month = Total $538/Month
($6,000/Year + Payroll taxes $459/Year = Total $6,459/Year)

**Oceana Marin Wastewater System Operator-in-Charge Extra Duty Incentive Pay**

In order to comply with the state of California, the District's Oceana Marin Sewer System must have an Operator-in-Charge (OIC) on record with the State Water Resource Control Board. This position is responsible for operating the equipment that is used to clean and improve the quality of wastewater. District Staff and the Employee Association (EA) have reached a tentative agreement with respect to the manner of selection, and the amount of extra duty incentive pay, for the individual selected to perform the additional OIC duties, subject to the Board's approval.

The General Manager would be vested with the authority to select one individual to perform the additional duties as the OIC for Oceana Marin, and in exchange, the selected individual would receive an additional extra duty incentive pay of $500 per month. Such additional incentive pay is not subject to pension (in other words, "not PERSable").

The selected individual must possess the requisite licensure requirements, and only one individual would be appointed to perform such additional duties at any given time. The need for OIC duties and the individual to be selected would be within the General Manager's purview, and the General Manager's decision would not be subject to the grievance procedure.

Attached is a side letter agreement which further outlines the requirements and process for the OIC selection for the Board's review. This side letter has been signed by the Employee Association's (EA) elected chairperson. The cost of this expense is minimal and will be absorbed by the current fiscal year favorable variance in the Oceana Marin budget and will be incorporated into the annual budget going forward.

**RECOMMENDATION:**

Board to authorize the General Manager to sign the Side Letter with the Employee Association related to the Operator-in-Charge Extra Duty Incentive Pay.

**NMWD Employee Association**

NORTH MARIN WATER DISTRICT

**Side Letter Agreement**

# SIDE LETTER AGREEMENT TO THE 2018 – 2023 NMWD/EMPLOYEE ASSOCIATION MEMORANDUM OF UNDERSTANDING CONCERNING OCEANA MARIN WASTEWATER SYSTEM OPERATOR-IN-CHARGE EXTRA DUTY INCENTIVE PAY

The North Marin Water District ("District") and the North Marin Water District Employee Association ("Employee Association") enter into this Side Letter Agreement and hereby agree to the following:

**TITLE:** OCEANA MARIN WASTEWATER SYSTEM OPERATOR-IN-CHARGE EXTRA DUTY INCENTIVE PAY

At the sole discretion of the General Manager, extra duty incentive pay may be offered to one designated Stafford Treatment Plant operator, in addition to their regular duties, as compensation for performing extra duties as the Operator-in-Charge ("OIC") of the Oceana Marin Wastewater system ("Oceana Marin"). No more than one OIC designation and/or extra duty incentive pay will be in effect from time to time for Oceana Marin, and the need for OIC designation will be determined by the General Manager.

To be eligible, the designated OIC must have, at minimum, a valid California Wastewater Treatment Plant Operator Grade I certification (consistent with the requirements under chapter 26 of division 3 of title 23 of the California Code of Regulations or any current applicable regulations) that is not required for their current classification. The designated OIC will be eligible for an extra duty incentive pay of $500 per month while performing such OIC extra duties in this capacity, and the extra duty incentive pay shall not be PERSable (i.e. counted towards base salary or final compensation for CalPERS retirement calculation). The General Manager has the authority to remove the extra duty incentive pay designation and/or eligibility at any

time. The District's determination of the application of this provision (including its decision whether or not to designate an OIC or the designation of individuals to perform the OIC duties) shall not be subject to the grievance procedure of this MOU.

Unless otherwise stated, the provisions of this Side Letter Agreement supersede any inconsistent or conflicting provisions of the parties' Memorandum of Understanding, effective October 1, 2018 – September 30, 2023 ("MOU"). All other provisions of the parties' MOU shall otherwise remain in full force and effect. This Side Letter Agreement shall only become binding and effective upon the District's Board of Directors' adoption of this Side Letter Agreement.

The side letter will sunset upon the expiration of the 2018 – 2023 MOU.

The parties' signatures below signify that they have met and conferred in good faith in accordance with California Government Code Section 3500, *et seq.* Agreed to and signed below, by the parties' authorized representatives.

For the District

Drew McIntyre
General Manager

Date

For the Employee Association

Jeff Corda
Chairperson

9-26-19
Date

# 7

**MEMORANDUM**

To: Board of Directors November 1, 2019

From: Drew McIntyre, General Manager

Julie Blue, Auditor/Controller

Subj: Floating Holiday Employee Association Side Letter
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**RECOMMENDED ACTION: APPROVE FLOATING HOLIDAY SIDE LETTER WITH EMPLOYEE ASSOCIATION**

**FINANCIAL IMPACT:** None

**Changes to Floating Holiday**

Under the current MOU, floating holidays are accrued as follows: January 1 of each year – one day; July 1 of each year – 3 days, with a maximum accrual of four days (or 32 hours) for full-time employees. However, based on staff's assessment of the operational impacts this has caused to the Maintenance and Operations groups, the District would be better served to divide the distribution of the four floating holidays to one day per quarter, and to allow for one additional day of accrual, so that employees are not incentivized to combine floating holidays with other major holidays towards the latter part of the calendar year, which may cause departments to be short-staffed during those times.

Accordingly, the District and the EA have agreed to modify the existing process to, instead, allow employees to earn one day of floating holiday per quarter, so that it is evenly distributed throughout the year, and to allow full-time employees to accrue up to 40 hours of floating holiday leave. Importantly, the District retains the discretion to determine whether employees may take floating holidays, based on operational needs. This is a fair compromise that takes into account the employee's ability to accrue for time off not yet taken, and provides management with flexibility in delaying floating holiday time off requests during critical operational times. Part-time employees would continue to accrue such time off on a pro-rata basis.

Further, for employees who start after the first day of each quarter, the attached side letter also specifies that they would not earn floating holiday until the first day of the following quarter.

Attached is a side letter which further outlines the Floating Holiday policy for the Board's review. This side letter has been signed by the Employee Association's (EA) elected Chairperson. Also, attached is the related Employee Handbook revisions as referenced in the side letter.

**RECOMMENDATION:**

Board to authorize the General Manager to sign the Side Letter with the Employee Association related to the Floating Holiday Benefit and to approve the update to the Employee Handbook.

**NMWD Employee Association**

NORTH MARIN WATER DISTRICT

**Side Letter**

# SIDE LETTER AGREEMENT TO THE 2018 – 2023 NMWD/EMPLOYEE ASSOCIATION MEMORANDUM OF UNDERSTANDING CONCERNING FLOATING HOLIDAYS

The North Marin Water District ("District") and the North Marin Water District Employee Association ("Employee Association") enter into this Side Letter Agreement and hereby agree to the following:

**TITLE:** MODIFICATION TO MOU AND EMPLOYEE HANDBOOK CONCERNING FLOATING HOLIDAYS

With regards to floating holiday accruals, Section 20 of the current (2018 – 2023) MOU shall be amended as follows:

Floating Holidays (4)

The District does not observe the below-listed holidays. Instead, employees accrue up to four floating holidays per year that may be taken on dates selected by the employee and approved by the District, subject to the accrual maximum and limitations set forth below.

| | |
|---|---|
| Lincoln's Birthday | February 12 |
| Admission Day | September 9 |
| Columbus Day | 2nd Monday in October |
| Veteran's Day | November 11 |

Effective January 1, 2020, for full-time employees, one floating holiday shall accrue on the first day of each quarter as follows: January 1, April 1, July 1, and October 1. Part-time employees accrue floating holiday time on a pro-rata basis, based on the percentage of their full-time equivalent rate. In no case can an employee take a floating holiday that has not yet been earned. Should an employee begin employment after the first day of a quarter, the employee shall not earn a floating holiday until the start of the following quarter, as there is no pro-ration of floating holiday for new employees (i.e. if employee begins work on April 5, employee will not earn a floating holiday until July 1). Employees must have prior approval from the District before taking a floating holiday. Employees shall cease to accrue floating holiday leave if their accrued unused balance has reached five days (40 hours – prorated for part-time employees).

# NMWD Employee Association

NORTH MARIN WATER DISTRICT

# Side Letter

Unless otherwise stated, the provisions of this Side Letter Agreement supersede any inconsistent or conflicting provisions of the parties' Memorandum of Understanding, effective October 1, 2018 – September 30, 2023 ("MOU"). All other provisions of the parties' MOU shall otherwise remain in full force and effect. This Side Letter Agreement shall only become binding and effective upon the District's Board of Directors' adoption of this Side Letter Agreement.

The parties further agree that this Side Letter Agreement shall be incorporated into the successor MOU as a new provision without further meet-and-confer efforts, and it is the parties' intention that the terms of this Side Letter Agreement shall remain in force beyond the expiration of the 2018 – 2023 MOU.

In addition, the parties agree to the amend the current Employee Handbook with respect to the issue of floating holiday, as reflected in Exhibit A, which is herein incorporated to this Side Letter Agreement by reference.

The parties' signatures below signify that they have met and conferred in good faith in accordance with California Government Code Section 3500, *et seq.* Agreed to and signed below, by the parties' authorized representatives.

For the District

Drew McIntyre
General Manager

Date

For the Employee Association

Jeff Corda
Chairperson

10-25-19
Date

# NMWD EMPLOYEE HANDBOOK REVISIONS

Floating Holidays (4)

The District does not observe the below-listed holidays. Instead, regular employees accrue up to four floating holidays per year that may be taken on dates selected by the employee and approved by the District, subject to the accrual maximum and limitations set forth below.

| | |
|---|---|
| Lincoln's Birthday Feb. 12 | Admission Day Sept. 9 |
| Columbus Day 2nd Monday in Oct. | Veteran's Day Nov. 11 |

Effective January 1, 2020, for regular full-time employees, one floating holiday shall accrue on the first day of each quarter as follows: January 1, April 1, July 1, and October 1. Regular part-time employees accrue floating holiday time on a pro-rata basis, based on the percentage of their full-time equivalent rate. Temporary employees are not eligible to accrue floating holiday leave. In no case can an employee take a floating holiday that has not yet been earned/accrued.

Should an employee begin employment after the first day of a quarter, the employee shall not earn a floating holiday until the start of the following quarter, as there is no pro-ration of floating holiday for new employees (i.e. if employee begins work on April 5, employee will not earn a floating holiday until July 1). Newly hired regular part-time employees shall accrue floating holiday leave on a pro-rata basis, based on the percentage of their full-time equivalent rate, based upon this same schedule.

Employees must have prior approval from the District before taking a floating holiday. Employees shall cease to accrue floating holiday leave if their accrued unused balance has reached five days (40 hours) for regular full-time employees and a prorated amount for regular part-time employees). Once an employee uses accrued floating holiday leave to bring the accrued amount below the cap, the employee will resume accruing floating holiday leave up to the cap.

Floating holiday time will be used to cover sick time off when an employee has an illness/injury and has no remaining sick or vacation leave. Refer to the Family and Medical Leave section if absence has been designated as leave under the Family and Medical Leave Act (FMLA) and/or California Family Rights Act (CFRA). Refer to the Pregnancy Disability section if the absence is related to a pregnancy or pregnancy related disability.

# 8

**Item #8**

**MEMORANDUM**

To: Board of Directors Date: November 1, 2019

From: Rocky Vogler, Chief Engineer RV

Subject: Approve Kennedy/Jenks Consultants – Consulting Engineering Services Agreement (Crest Pump Station)
R:\Folders by Job No\6000 jobs\6141 Crest PS\Board Memos\BOD Memo 11-5-19 Approve KJ Agreement.doc

**RECOMMENDED ACTION:** That the Board authorize the General Manager to execute an agreement with Kennedy/Jenks Consultants for the Crest Pump Station design

**FINANCIAL IMPACT:** $38,500 plus $3,500 contingency included in the FY19/20 budget

Background

The School Road pump station supplies water to the Crest Tanks and the associated distribution system providing water to the Green Point neighborhood. This pump station has been scheduled for replacement due to its lack of redundancy, limited capacity, hydraulic inefficiency and issues involving staff safety. On December 18, 2018, the Board approved an agreement of purchase and sale between the District and the City of Novato to acquire a small portion (approximately 2,000 SF) of the City's property located roughly 600 feet east of Cerro Crest Drive on the south side of Bahia Drive (see Figure 1) for the purpose of building a new pump station to replace the facility located on School Road. The conveyance document officially transferring the property from City to District ownership was recorded at the County on May 17, 2019.

A partial design for the new pump station on Bahia Drive has been prepared, including grading and drainage, site layout, 95% architectural, mechanical and electrical drawings, as well as draft specifications. The District requires assistance from a consulting engineer with the requisite qualifications to review the District's work and complete the design to deliver a set of plans and specification suitable for public bidding.

Consulting Agreement

Kennedy/Jenks (K/J) is recommended to provide consulting engineering services to utilize the District's preliminary plans and specifications to complete the design and prepare the associated documents. K/J is an experienced design and consulting firm. They have a proven track record performing hydraulic calculations and designing pump stations. Their scope includes:

- Task A – Specifications
- Task B – Design Review
- Task X – Project Management

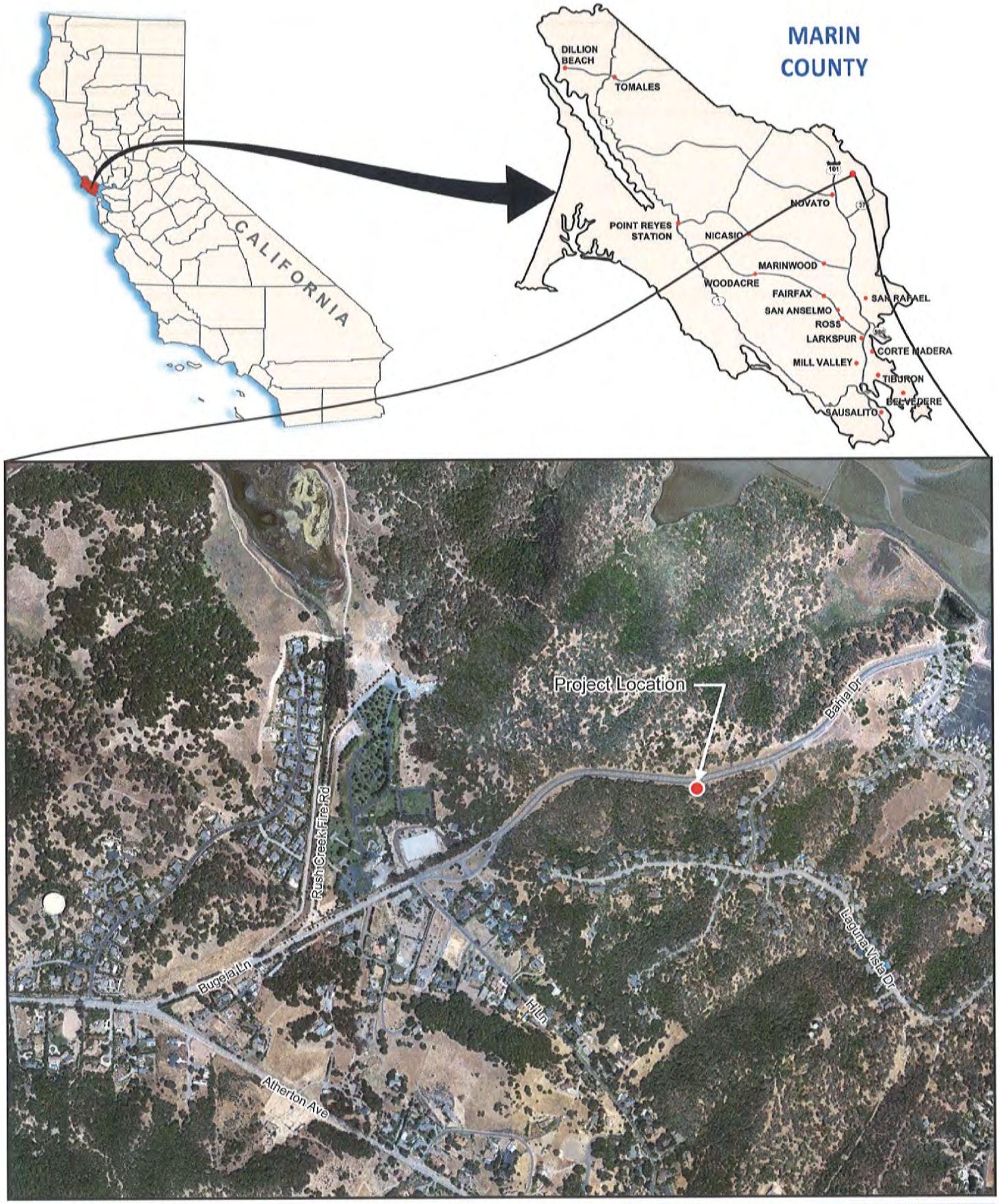
The K/J proposal including scope of work, fee estimate and schedule is provided in Attachment 1. The total consulting services cost estimate is $38,445. The completed design is estimated by mid-January 2020.

Financial Impact

K/J's cost estimate for $38,445 was included in the approved FY19/20 budget. An updated total project cost estimate will be performed as part of this work.

RECOMMENDATION

That the Board authorize the General Manager to execute an agreement with Kennedy/Jenks Consultants for preparation of finalized plans and specifications for the Crest Pump station project for a not to exceed fee of $38,500 plus a contingency of $3,500.

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Horizontal Datum: NAD 1983 2011
Grid: NAD 1983 2011 StatePlane California III FIPS 0403 Ft US

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NORTH MARIN WATER DISTRICT
CREST PUMP STATION PROJECT

Location Map

Project No. 11159128
Revision No.
Date 08/08/18

FIGURE 1

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Print date: 08 Aug 2018 - 13:20

Data source: . Created by: rwremillard

# AGREEMENT FOR CONSULTING SERVICES

The following is an agreement between **North Marin Water District**, hereinafter "**NMWD**", and **Kennedy/Jenks Consultants**, hereinafter, "**Consultant**".

**WHEREAS**, Consultant is a duly qualified consulting firm, experienced in the design of water storage, pumping and transmission facilities.

**WHEREAS**, in the judgment of the Board of Directors of the NMWD, it is necessary and desirable to employ the services of the Consultant for the Crest Pump Station project..

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

## PART A -- SPECIFIC PROVISIONS:

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

a. The scope of work and fee amount covered by this agreement shall be that specified in the Consultant's proposal dated October 24, 2019 and included in Attachment A of this agreement.

b. The fee for the work shall be on a time and expense (T & E) basis utilizing the fee schedule included in Attachment A of this agreement and shall not exceed $38,500 without prior written authorization by NMWD.

## PART B -- GENERAL PROVISIONS

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

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

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

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

b. With respect to all services other than design professional services provided under this agreement, Consultant shall indemnify, hold harmless, release and defend NMWD, its agents and employees from and against any and all actions, claims, damages, disabilities or expenses, including attorney's fees and witness costs that may be asserted by any person or entity, including the Consultant, arising out of or in connection with the activities necessary to perform those services and complete the tasks provided for herein, but excluding liabilities due to the sole negligence or willful misconduct of NMWD.

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

**4. PROSECUTION OF WORK:** The execution of this agreement shall constitute the Consultant's authority to proceed immediately with the performance of this contract. Performance of the services hereunder shall be completed by December 31, 2019, provided, however, that if the performance is delayed by earthquake, flood, high water or other Act of God or by strike, lockout or similar labor disturbance, the time for the Consultant's performance of this contract shall be extended by a number of days equal to the number of days the Consultant has been delayed.

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

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

Consultant:
Kennedy Jenks Consultants
200 Fourth Street, Suite 210
Santa Rosa, CA 95401
Attention: Rod Houser

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

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

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

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

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

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

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

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

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

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

handicap.

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

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

**14. INSURANCE REQUIREMENTS FOR CONSULTANTS**

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

**Minimum Scope of Insurance**

Coverage shall be at least as broad as:

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

**Minimum Limits of Insurance**

Consultant shall maintain limits no less than:

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

**Verification of Coverage**

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

**Subcontractors**

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

**Self-Insured Retentions**

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

**Other Insurance Provisions**

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

1. The District, its officers, officials, employees, and volunteers are to be covered as insureds with respect to liability arising out of automobiles owned, leased, hired or borrowed by or on behalf of the Consultant.

2. For any claims related to this project, the Consultant's insurance coverage shall be primary insurance as respects the District, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the District, its officers, officials, employees, or volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

3. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the District.

**Acceptability of Insurers**

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

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

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

agree in writing to use different rules and/or arbitrators.

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

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

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

**NORTH MARIN WATER DISTRICT**
**"NMWD"**

Dated: _____

_____
Drew McIntyre, General Manager

**KENNEDY JENKS CONSULTANTS**
**"CONSULTANT"**

Dated: _____

_____
Rod Houser, Vice President

Kennedy Jenks

October 24, 2019

Rocky Vogler, P.E.
Chief Engineer
North Marin Water District
999 Rush Creek Place
Novato, CA 94945

Subject: Letter Proposal – School Road Pump Station
Design Assistance (rev 1)

Dear Rocky:

This letter serves as our proposal to provide design assistance related to the subject project. We understand from our conversations that the District has prepared all the necessary planning documents required for CEQA compliance. The District has also prepared a set of plans that are considered 95% complete. At this point the District intends to finalize the design so that the construction project can be advertised in January, 2020. In order to complete the design, the District requested Kennedy/Jenks' assistance to prepare technical specifications and to perform a third-party design review of the District's plans. Thus, we propose the following scope of services:

**Task A – Specifications**

Prepare technical specifications for civil, architectural, structural and process mechanical disciplines. Edit District-furnished guide specifications as appropriate for this project. Prepare new sections as needed for a coordinated set of technical specifications (see Exhibit A).

Specifications will be organized and formatted using CSI's Section Format and Master Format standards. Draft and final deliverables will consist of editable MSWord documents that the District will incorporate into the bid package. Accordingly, the District will be responsible for the following documents:

- Bid forms (invitation, instructions and forms)
- Construction agreement (general and supplemental conditions and agreement)
- Division 1 specifications (general requirements)
- Division 16 and 17 specifications (electrical and instrumentation)

**Task B – Design Review**

Perform independent design review of the civil, architectural, structural and process mechanical disciplines. We understand that the new pump station may be located near an urban-wildland interface, so we will coordinate with the local fire department to establish requirements for fire-resistive construction.

Prepare structural calculations to verify conformance with the California Building Code. We will rely on information provided by the District's geotechnical consultant for a portion of this task[1]. We further assume that a formal submittal to the local building department will not be required.

Perform independent review of the District's cost estimate.

Deliverables will consist of red-line markups to the District's construction drawings accompanied by a list of written review comments. For purposes of estimating level of effort we assume that the District will perform all drafting required to pick up review comments.

**Task X – Project Management**

The following management activities are covered under this task:

- Routine communications (emails, conference calls and status reports)
- Setup project filing and accounting systems
- Internal QA/QC review of KJ work product

For purposes of budgeting the effort of this task we assume the scope of work will require no more than two months to complete.

**Budget**

KJ recommends a budget of $38,445 to complete the scope of services described above. This budget includes a contingency allowance of $3,500 that would only be used with the District's written authorization if additional out of scope services were requested. A detailed breakdown of budgets by task is included as Exhibit B of this proposal. We would invoice the District monthly, on a time and expense reimbursement basis, in accordance with our current rate schedule (Exhibit C).

**Schedule**

KJ will submit draft specifications and review comments within five(5) weeks of receiving the District's written notice to proceed and a complete set of the District' 95% design documents (plans, specs and cost estimate). We have increased the duration of Task A by a week to account for the upcoming holiday season. Final versions of the specifications will be submitted within two weeks of receiving the District's written review comments of our draft submittal.

Feel free to call me with any questions regarding this proposal.

Kennedy/Jenks Consultants, Inc.

Rod Houser, P.E.
Vice President | Project Manager
Attachments

[1] Email from Miller-Pacific Engineering Group, Scott Stevens, 9/10/19.

Kennedy Jenks
Rocky Vogler, P.E.
North Marin Water District
September 10, 2019

# Exhibit A – List of Specifications

Civil specifications:

- Earthwork
- Trenching

Architectural specifications:

- Water repellent sealant
- Roof insulation
- Fiber cement siding
- Flashing and sheet metal
- Roof accessories
- Joint sealants
- Hollow metal doors and frames
- Finish hardware
- Painting
- Building specialties
- Building signage
- Gypsum board
- Fiber cement shingles

Structural specifications:

- Cement masonry units
- Wood framing
- Structural metal fasteners
- Concrete formwork
- Concrete reinforcement
- Cast-in-place concrete
- Grout

Process Mechanical specifications:

- Vertical multi-stage pumps
- General piping systems
- Disinfection of piping
- Hydrostatic testing
- PVC pressure pipe
- Steel pipe
- Process valves (butterfly, gate, air-release)
- Fire hydrants
- Piping accessories

Kennedy Jenks
Rocky Vogler, P.E.
North Marin Water District
September 10, 2019

# Exhibit A – List of Specifications

Civil specifications:

- Earthwork
- Trenching

Architectural specifications:

- Water repellent sealant
- Roof insulation
- Fiber cement siding
- Flashing and sheet metal
- Roof accessories
- Joint sealants
- Hollow metal doors and frames
- Finish hardware
- Painting
- Building specialties
- Building signage
- Gypsum board
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Structural specifications:

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- Concrete reinforcement
- Cast-in-place concrete
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- Vertical multi-stage pumps
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- Hydrostatic testing
- PVC pressure pipe
- Steel pipe
- Process valves (butterfly, gate, air-release)
- Fire hydrants
- Piping accessories

## Proposal Fee Estimate (Exhibit B)

**Kennedy Jenks**

**CLIENT Name:** North Marin Water District

**PROJECT Description:** Pump Station Design Assistance

**Proposal/Job Number:** _____ **Date:** 9/9/2019

| January 1, 2019 Rates<br>Classification: | QA/QC Eng-Sci-8 D. Barraza | PM/PIC R. Houser Eng-Sci-8 | Architectural M. Preston Eng-Sci-6 | Structural P. Symonds Eng-Sci-6 | Estimator J. Hoffman Eng-Sci-5 | Eng-Sci-3 | Eng-Sci-2 | J. Aquino Project Administrator | Total | KJ Labor | KJ Assoc. Proj. Costs | Total Labor | Total Expenses | Total Labor + Subs + Expenses |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Hourly Rate:** | $280 | $280 | $240 | $240 | $215 | $180 | $160 | $125 | Hours | Fees | $9.74 | | | Fees |
| **Phase **** (Default)** | | | | | | | | | | | | | | |
| Task **** (Associated Project Costs) | | | | | | | | | | | $1,315 | | $1,315 | $1,315 |
| ***Phase **** - Subtotal*** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $0 | $1,315 | $0 | $1,315 | $1,315 |
| **Task X - Project Management** | | | | | | | | | | | | | | |
| conference calls | | 2 | 2 | 2 | | | | | 6 | $1,520 | | $1,520 | $0 | $1,520 |
| Project Set-up | | | | | | | | 2 | 2 | $250 | | $250 | $0 | $250 |
| QA/QC | 8 | | | | | | | | 8 | $2,240 | | $2,240 | $0 | $2,240 |
| Contingency allowance | | | | | | | | | 0 | $3,500 | | $3,500 | $0 | $3,500 |
| | | | | | | | | | | | | | | |
| ***Phase 1 - Subtotal*** | 8 | 2 | 2 | 2 | 0 | 0 | 0 | 2 | 16 | $7,510 | $0 | $7,510 | $0 | $7,510 |
| **Task A - Specifications** | | | | | | | | | | | | | | |
| architectural specs | | | 30 | | | | | | 30 | $7,200 | | $7,200 | $0 | $7,200 |
| structural specs | | | | 12 | | | | | 12 | $2,880 | | $2,880 | $0 | $2,880 |
| mechanical specs | | 16 | | | | | | | 16 | $4,480 | | $4,480 | $0 | $4,480 |
| civil specs | | 8 | | 4 | | | | | 12 | $3,200 | | $3,200 | $0 | $3,200 |
| | | | | | | | | | | | | | | |
| ***Phase 2 - Subtotal*** | 0 | 24 | 30 | 16 | 0 | 0 | 0 | 0 | 70 | $17,760 | $0 | $17,760 | $0 | $17,760 |
| **Task B - Design Review** | | | | | | | | | | | | | | |
| review architectural drawings | | | 10 | | | | | | 10 | $2,400 | | $2,400 | $0 | $2,400 |
| review structural drawings | | | | 28 | | | | | 28 | $6,720 | | $6,720 | $0 | $6,720 |
| review mechanical drawings | | 2 | | | | | | | 2 | $560 | | $560 | $0 | $560 |
| review civil drawings | | 2 | | | | | | | 2 | $560 | | $560 | $0 | $560 |
| review cost estimate | | 1 | 2 | | 4 | | | | 7 | $1,620 | | $1,620 | $0 | $1,620 |
| | | | | | | | | | | | | | | |
| ***Phase 3 - Subtotal*** | 0 | 5 | 12 | 28 | 4 | 0 | 0 | 0 | 49 | $11,860 | $0 | $11,860 | $0 | $11,860 |
| **All Phases Total** | **8** | **31** | **44** | **46** | **4** | **0** | **0** | **2** | **135** | **$37,130** | **$1,315** | **$37,130** | **$1,315** | **$38,445** |

**Exhibit C - Rate Schedule**

Kennedy Jenks

**Client/Address:** North Marin Water District
999 Rush Street
Novato, CA 94945

**Contract/Proposal Date:** September 10, 2019

## Schedule of Charges

**January 1, 2019**

## PERSONNEL COMPENSATION

| Classification | Hourly Rate |
|---|---|
| Engineer-Scientist-Specialist 1 | $130 |
| Engineer-Scientist-Specialist 2 | $160 |
| Engineer-Scientist-Specialist 3 | $180 |
| Engineer-Scientist-Specialist 4 | $195 |
| Engineer-Scientist-Specialist 5 | $215 |
| Engineer-Scientist-Specialist 6 | $240 |
| Engineer-Scientist-Specialist 7 | $265 |
| Engineer-Scientist-Specialist 8 | $280 |
| Engineer-Scientist-Specialist 9 | $295 |
| CAD-Technician | $115 |
| Senior CAD-Technician | $130 |
| CAD-Designer | $150 |
| Senior CAD-Designer | $170 |
| Project Administrator | $125 |
| Administrative Assistant | $105 |
| Aide | $80 |

In addition to the above Hourly Rates, an Associated Project Cost charge of $9.74 per hour will be added to Personnel Compensation for costs supporting projects including telecommunications, software, information technology, internal photocopying, shipping, and other support activity costs related to the support of projects.

## Direct Expenses

Reimbursement for direct expenses, as listed below, incurred in connection with the work, will be at cost plus ten percent for items such as:

a. Maps, photographs, 3rd party reproductions, 3rd party printing, equipment rental, and special supplies related to the work.
b. Consultants, soils engineers, surveyors, contractors, and other outside services.
c. Rented vehicles, local public transportation and taxis, travel and subsistence.
d. Project specific telecommunications and delivery charges.
e. Special fees, insurance, permits, and licenses applicable to the work.
f. Outside computer processing, computation, and proprietary programs purchased for the work.

Reimbursement for vehicles used in connection with the work will be at the federally approved mileage rates or at a negotiated monthly rate.

If prevailing wage rates apply, the above billing rates will be adjusted as appropriate.

Overtime for non-exempt employees will be billed at one and a half times the Hourly Rates specified above.

Rates for professional staff for legal proceedings or as expert witnesses will be at rates one and one-half times the Hourly Rates specified above.

Excise and gross receipts taxes, if any, will be added as a direct expense.

The foregoing Schedule of Charges is incorporated into the agreement for the services provided, effective January 1, 2019 through December 31, 2019. After December 31, 2019, invoices will reflect the Schedule of Charges currently in effect.

# 9

**MEMORANDUM**

To: Board of Directors Date: November 1, 2019

From: Rocky Vogler, Chief Engineer RV

Subject: Plum Street Tank Property Exchange – Grant Deed
R:\Folders by Job No\6000 jobs\6058 RW Central\Plum Street Tank\Plum St Tank Land Swap BOD Memo 11-5-19.docx

**RECOMMENDATION:** Board Approve Resolution to convey portion of District property (APN 143-101-19) to 15 Zandra Place (143-650-08)

**FINANCIAL IMPACT:** None

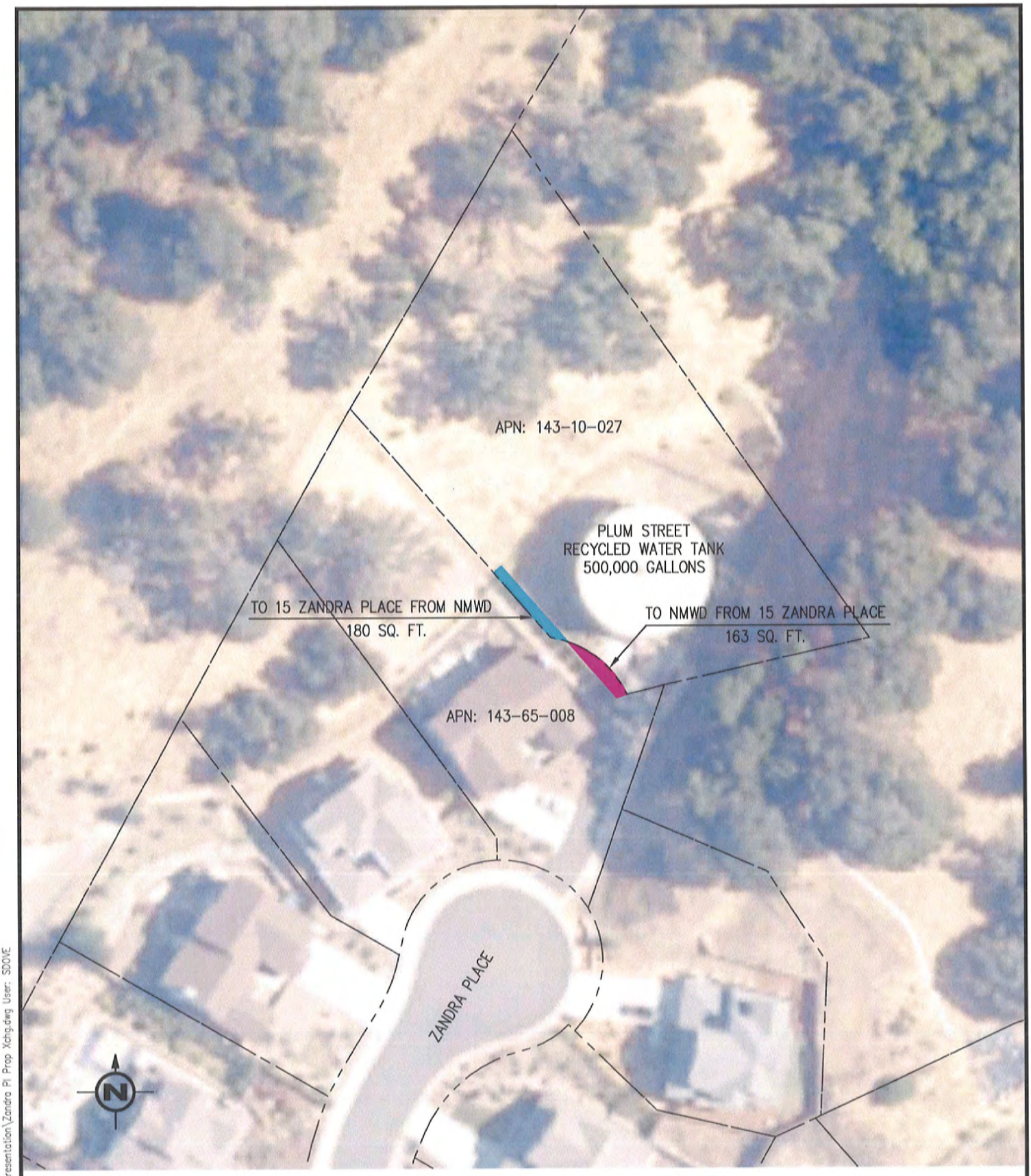
On October 1, 2002, the Board authorized the General Manager to accept easements granted to the District (Resolution 02-35). On August 3, 2010, the Board authorized the General Manager to accept conveyances of real property interests (Resolution 10-14). However, Resolution 10-14 only pertains to conveyances accepted at no cost to the District, and any future conveyances requiring expenditure of District funds requires Board approval. In addition, no other resolutions exist that allow the General Manager the blanket ability to convey real property interests *to* other parties.

On October 18, 2016, the Board approved the mutually beneficial exchange of property between the District and property owners Prosser/Rhim (15 Zandra Place – APN 143-101-19; Resolution 16-27). As shown in Attachment 1, the property owners were to gain an additional 180 SF strip of land (~40'x4.5') for landscaping purposes to help screen the District's Plum Street Recycled Water Tank. In return, the District gained a 163 SF crescent shape wedge (~34' in length) which provides improved access to and within the NMWD tank parcel. The property exchange is deemed to be an even trade (180 SF vs. 163 SF) with a net property increase or decrease value of zero. Transfer of private property to the District was completed and recorded with the County. However, there was a delay in transferring the portion of the District property to the private property owner. Subsequently, when District staff tried to complete the transfer (via lot line adjustment), they were informed that the previous owners (Prosser/Rhim) had sold 15 Zandra Place to new owner Aaron Parker, and associated transfer of ownership documentation required updating to reflect the change.

In order to complete the transfer of District property to 15 Zandra Place, the Board must approve a Resolution authorizing the execution of a grant deed conveying 180 SF of District property to new owner Aaron Parker.

RECOMMENDATION

That the Board approve Resolution 19-XX.




ATTACHMENT 1

# NMWD AND 15 ZANDRA PLACE PROPERTY EXCHANGE

| DATE | SCALE | JOB.NO. | DWG.NO. |
|---|---|---|---|
| 10/29/19 | N.T.S. | 2000 | MAP |

Oct 29, 2019 - 9:02am W:\JOB\MISC\Presentation\Zandra Pl Prop Xchg.dwg User: SDOVE

RESOLUTION NO. 19-

AUTHORIZATION OF EXECUTION OF PLUM STREET TANK SITE CORPORATION GRANT DEED (PORTION OF)

TO

AARON H. PARKER OF 15 ZANDRA PLACE

BE IT RESOLVED by the Board of Directors of NORTH MARIN WATER DISTRICT that the President and Secretary of this District be and they hereby are authorized and directed for and on behalf of this District to execute that certain Corporation Grant Deed to Aaron H. Parker (APN 143-650-08, 15 Zandra Place), as Grantee, by NORTH MARIN WATER DISTRICT, a public district, as Grantor, as part of a mutual agreement to exchange property of same value property between said parties.

* * *

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 this _____ day of _____, 2019, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAINED:

_____

Theresa Kehoe, District Secretary
North Marin Water District

(SEAL)

# 10

**MEMORANDUM**

To: Board of Directors Date: November 1, 2019

From: Rocky Vogler, Chief Engineer RV

Subject: Old Ranch Road Tank No.2 – Request for Authorization to Conduct CEQA Public Review

R:\Folders by Job No\6000 jobs\6207.20 Old Ranch Rd Tank Rep\BOD Memos\6207.20 Req to Conduct CEQA Pub Rev BOD MEMO 11-5-19.docx

**RECOMMENDED ACTION:** Staff requests authorization from the Board to initiate the CEQA 30-Day Public Review Period for the project and to schedule a public hearing for the January 7, 2020 Board meeting at which time the Board will consider adoption of the Mitigated Negative Declaration (MND).

**FINANCIAL IMPACT:** None at this time ($57,300 for the CEQA Review authorized on July 16, 2019)

Background

The FY20 and FY21 Capital Improvement Project budgets for Novato include design and construction of the Old Ranch Road Tank No. 2 project (see Figure 2 in Attachment 1). This project consists of the design and construction of a 100,000 gallon welded steel tank to replace the existing aging 50,000 gallon redwood tank. The project includes additional fire flow storage to satisfy Novato Fire protection goals and is consistent with the Board approved 2018 Novato Water Master Plan. The Board approved an agreement with Amy Skewes-Cox (ASC) to prepare the Old Ranch Road Tank No. 2 Project CEQA documentation at the July 16, 2019 meeting.

CEQA Review

Staff and its consultant, ASC, have prepared the enclosed Draft Mitigated Negative Declaration and Initial Study (IS) for the Old Ranch Road Tank No. 2 Project (Attachment 1). Upon receipt of any comments from the Board, staff is prepared to move forward with the 30-day public review period required by CEQA. The 30-day period is slated to begin no later than November 15, 2019 and end on or before December 16, 2019. The review period initiates with circulation of a Notice of Intent (Attachment 2) via advertisement in the local paper (Marin Independent Journal) and posting at the County Clerk's office. Staff has scheduled the public hearing for the January 7, 2020 Board meeting in Novato upon which the Board will consider adoption of the MND. The CEQA documentation schedule is shown in Attachment 3.

Outreach

On July 16, 2019, a notice was mailed to all property owners on Old Ranch Road and side streets intersecting Old Ranch Road to inform them of an upcoming public scoping meeting related to the Old Ranch Road Tank No. 2 project. On July 30, 2019, the public scoping meeting was held to provide interested parties with information related to the project, as

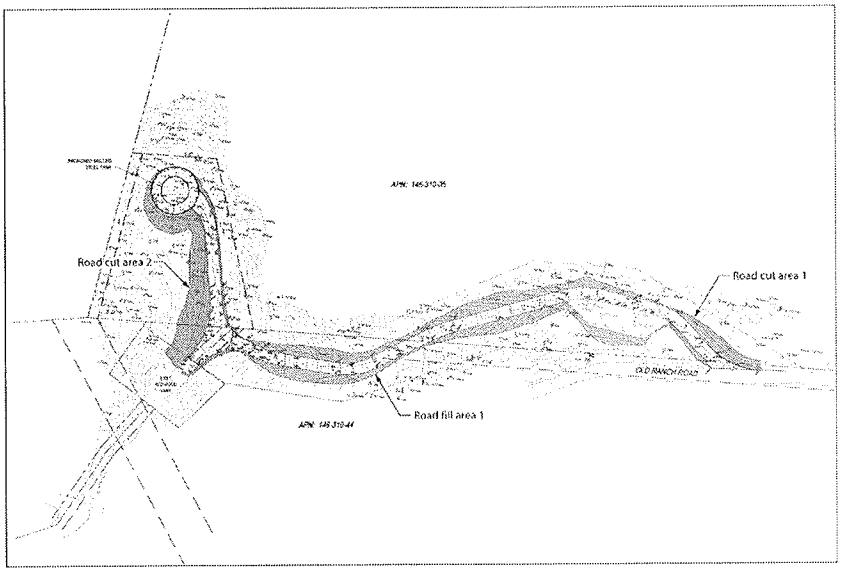
well as an opportunity to get questions answered. A total of six residents living on or near Old Ranch Road attended the meeting.

RECOMMENDATION

Staff requests authorization from the Board to initiate the CEQA 30-Day Public Review Period for the project and to schedule a public hearing for the January 7, 2020 Board meeting at which time the Board will consider adoption of the Mitigated Negative Declaration.

# 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 1

# 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

# TABLE OF CONTENTS

## LIST OF FIGURES



## LIST OF TABLES

# 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.

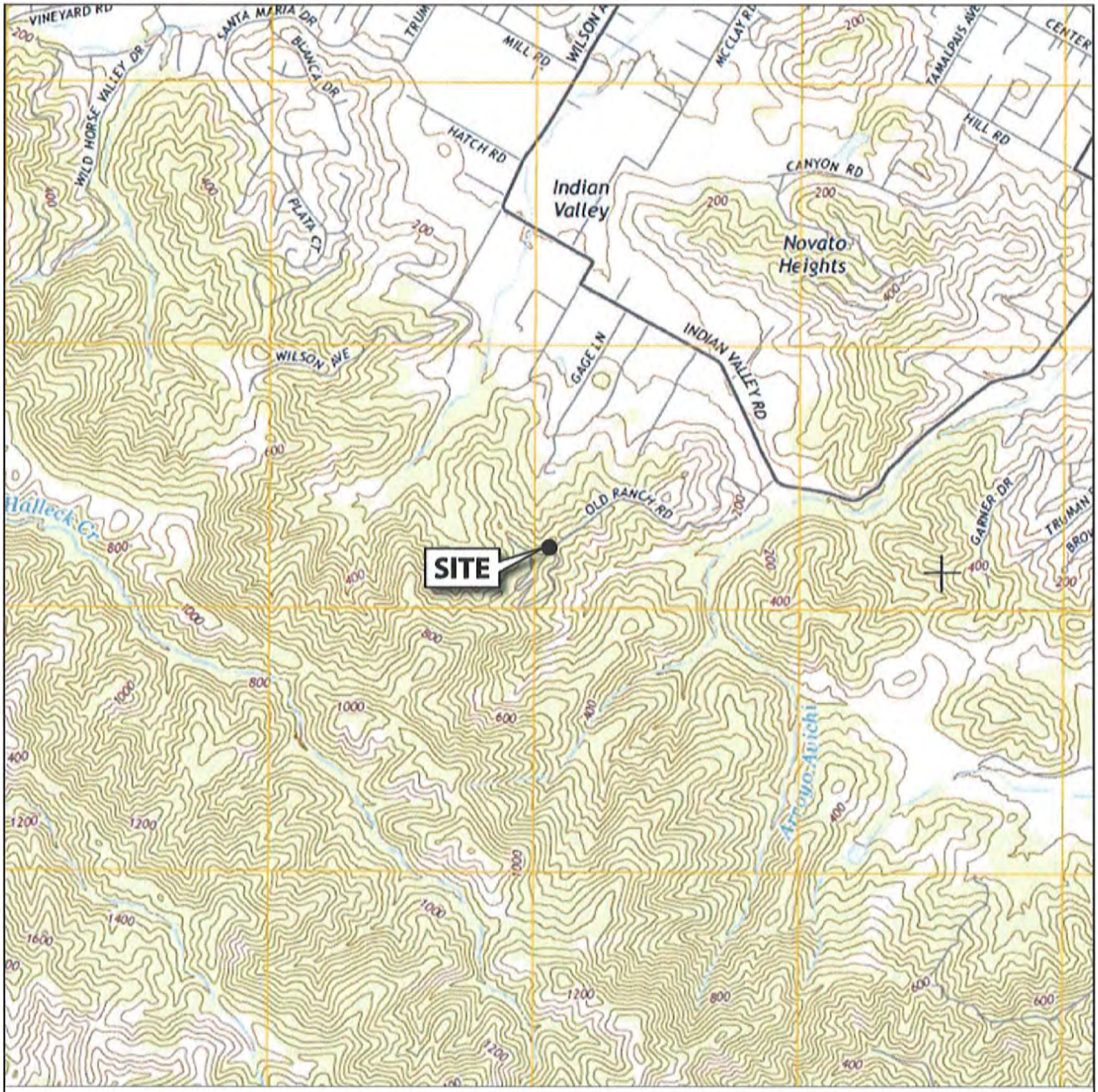



Figure 1

**SITE LOCATION MAP**

SOURCE: Miller Pacific Engineering Group, 2018

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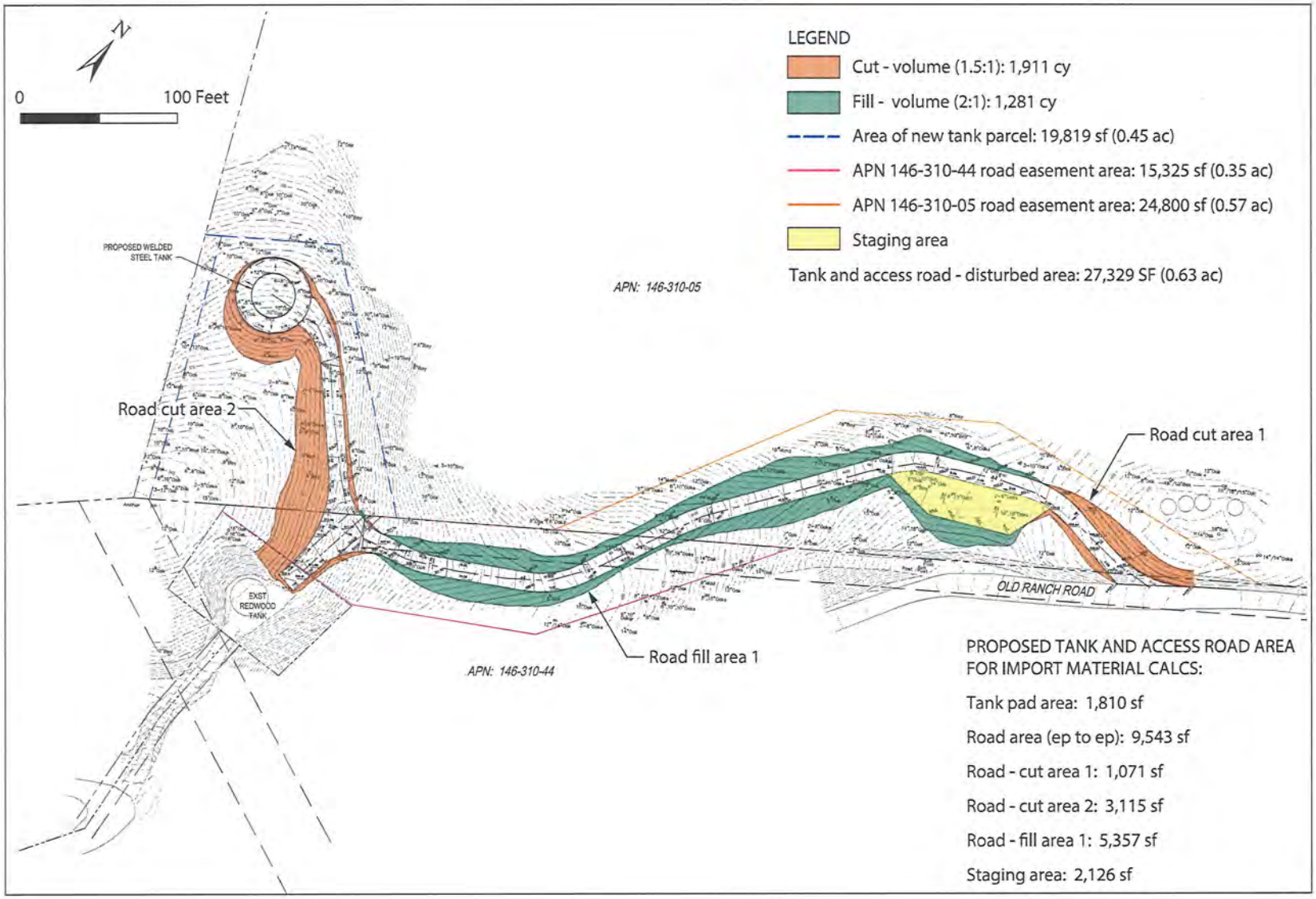


Figure 2

**SITE PLAN**

SOURCE: NMWD, 2019

AMY SKEWES-COX
ENVIRONMENTAL PLANNING

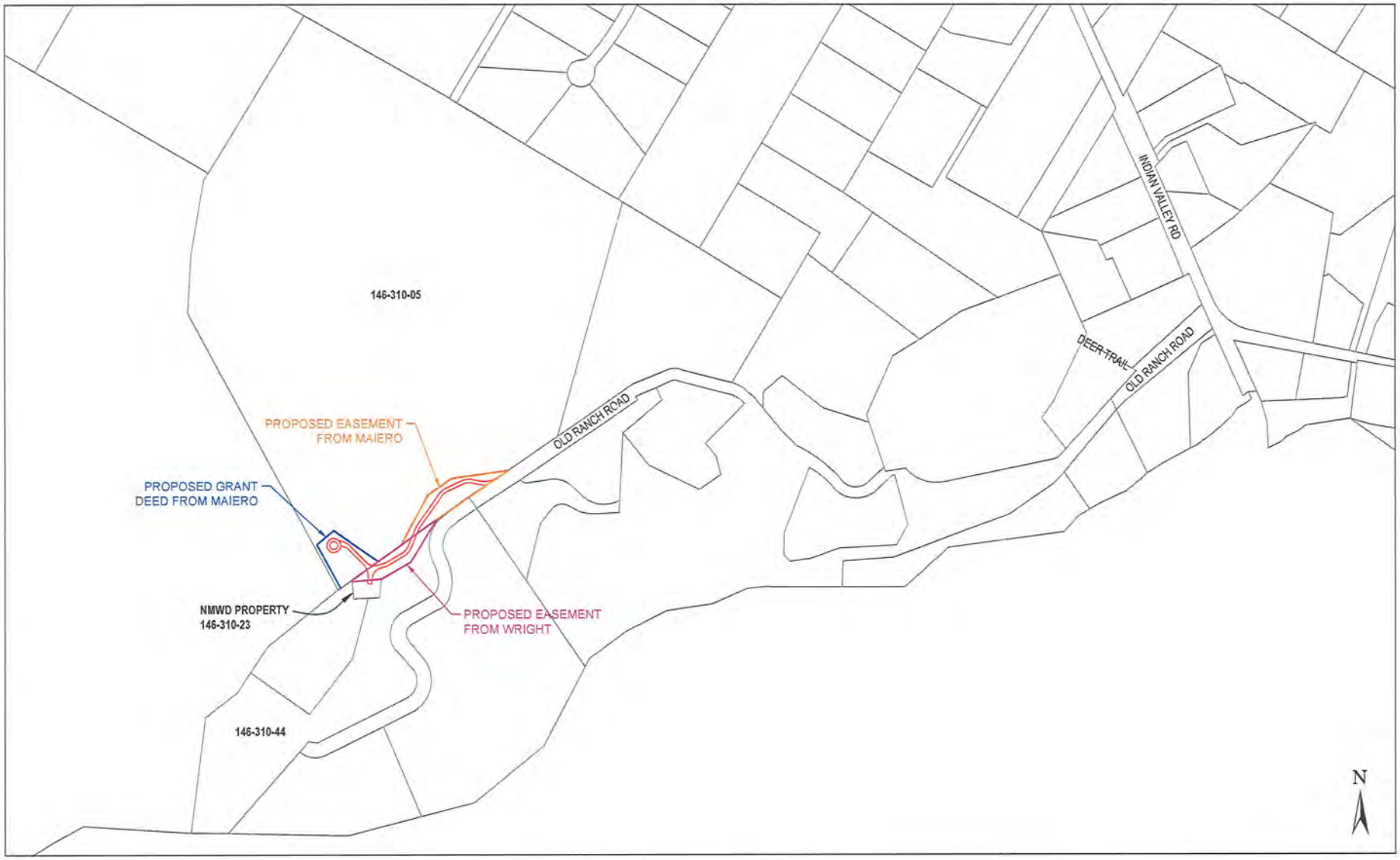


Figure 3

SOURCE: NMWD, 2019

**ASSESSOR PARCEL MAP LOCATION AND SURROUNDINGS**

AMY SKEWES-COX
ENVIRONMENTAL PLANNING

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

Figure 4

**VIEW OF SITE**

SOURCE: A. Skewes-Cox, 2019

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 — Signature

10/22/19 — Date

Rocky Vogler — Printed Name

North Marin Water District — 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)<br>10 tons/year (maximum annual emission) |
| | $NO_x$ | 54 pounds/day (average daily emission)<br>10 tons/year (maximum annual emission) |
| | Exhaust $PM_{10}$ | 82 pounds/day (average daily emission)<br>15 tons/year (maximum annual emission) |
| | Exhaust $PM_{2.5}$ | 54 pounds/day (average daily emission)<br>10 tons/year (maximum annual emission) |
| Local Community Risks and Hazards (Operation and/or Construction) | CO | 9.0 ppm (8-hour average)<br>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<br>Chronic hazard index > 1.0 |
| | TACs (cumulative) | Cancer risk > 100 in 1 million<br>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 $\chi/Q$ ("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.

## REFERENCES

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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.

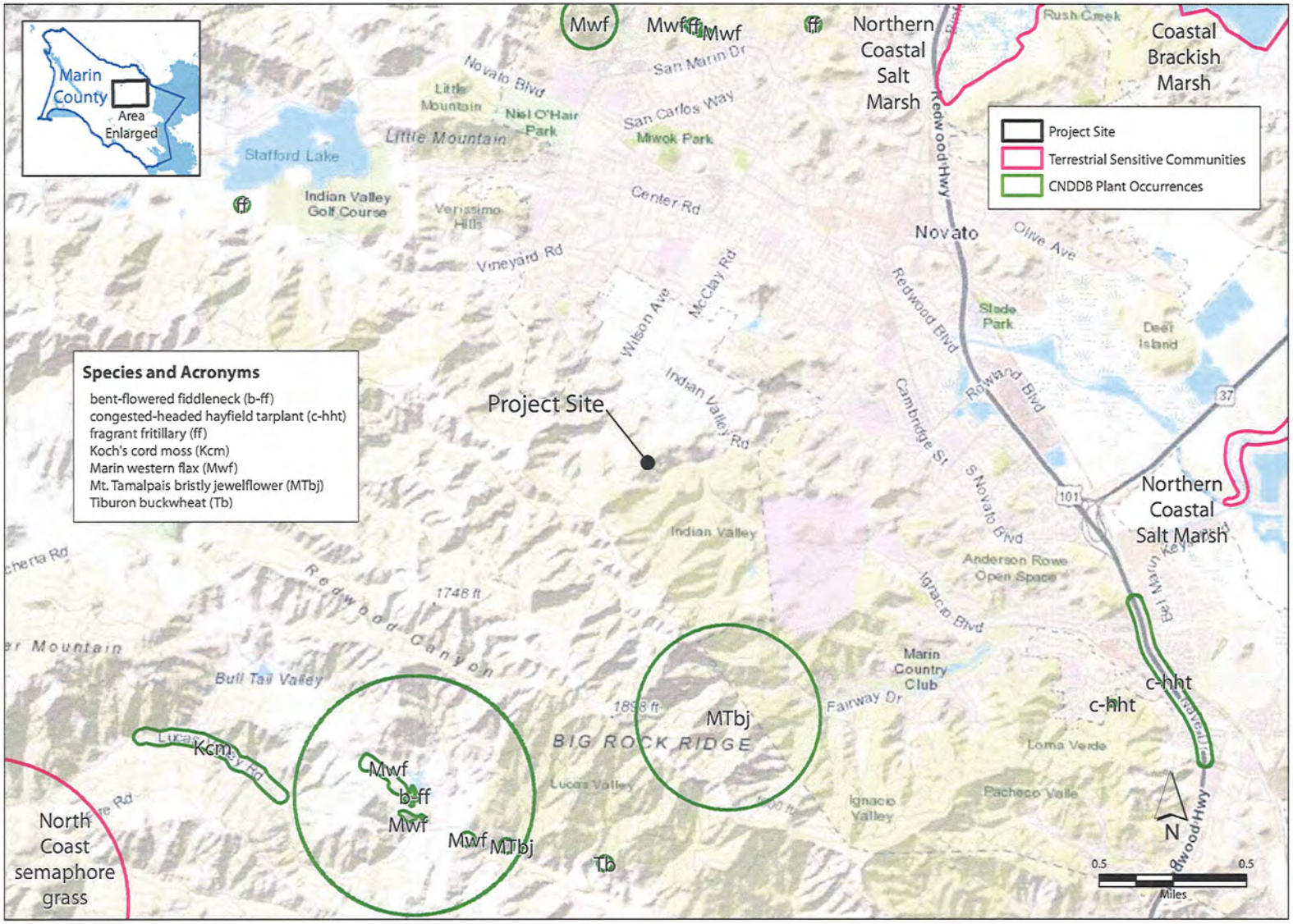
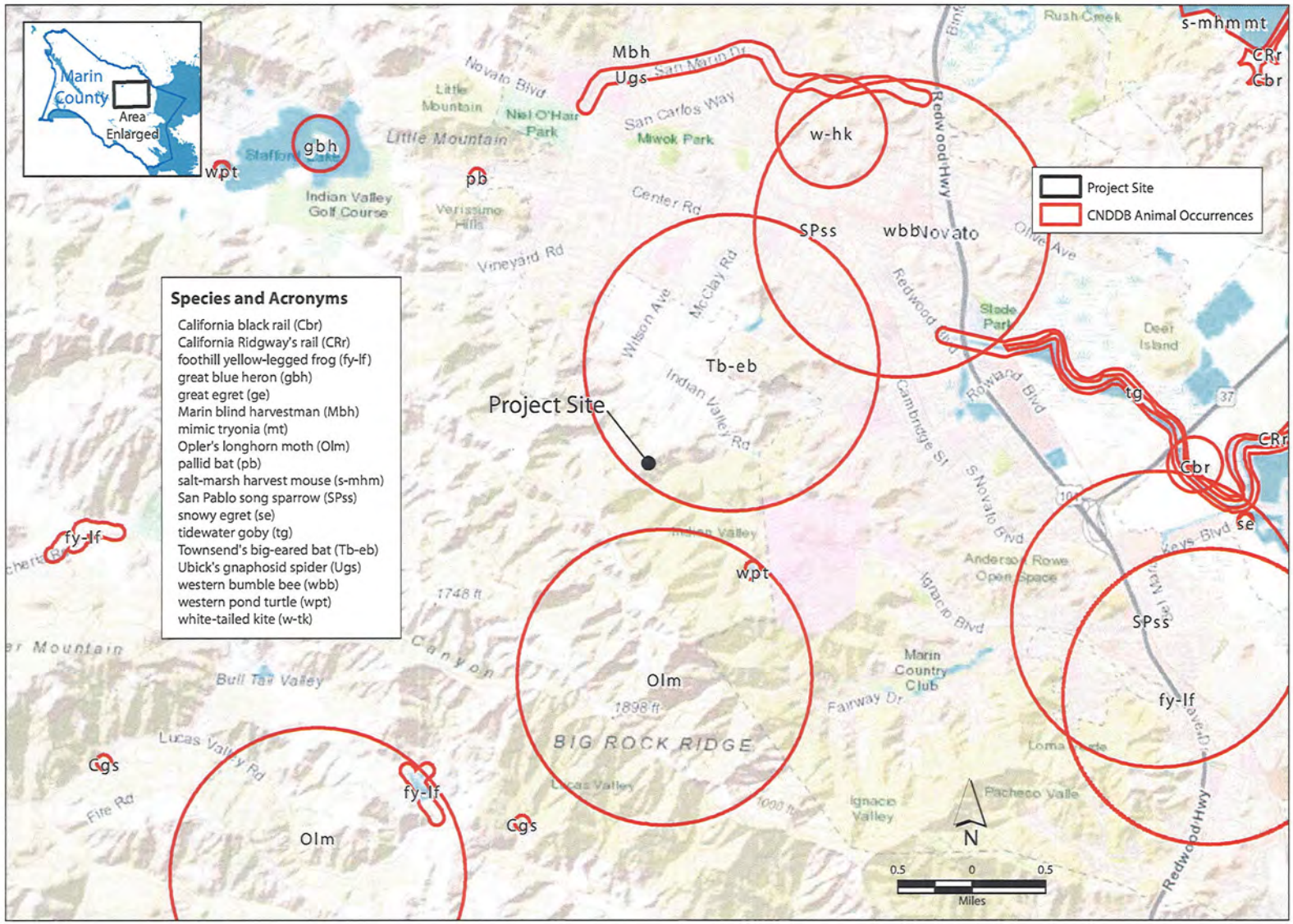



Figure 5

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**

regulations prescribed by the Secretary of the Interior; this prohibition includes whole birds, parts of birds, and bird nests and eggs. Tree removal and other construction activities during the breeding season could result in the incidental loss of fertile eggs or nestlings or nest abandonment. This would be considered a potentially significant impact.

A standard method to address the potential for nesting birds is either to initiate construction during the non-nesting season, which in Marin County is typically from September 1 to January 31, or to conduct a nesting survey within 14 days prior to initial tree removal and construction to determine whether any active nests are present that must be protected until any young have fledged and are no longer dependent on the nest. Protection of the nests, if present, would require that construction setbacks be provided during the nesting and fledging period, with the setback depending on the type of bird species, degree to which the individuals have already acclimated to other ongoing disturbance, and other factors. Without these controls, tree removal and construction activities could have a potentially significant impact on nesting birds. The following measure is recommended to fully mitigate the potentially significant impacts of the project on special-status species.

**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)**

*Mitigation Measure 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. (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):<br>▪ All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.<br>▪ All haul trucks transporting soil, sand, or other loose material off-site shall be covered.<br>▪ 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.<br>▪ All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.<br>▪ 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.<br>▪ 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.<br>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:<br>▪ 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.<br>▪ 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.<br>▪ 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.<br>▪ 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.<br>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.<br><br>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:<br><br>"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."<br><br>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.<br><br>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.<br><br>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.<br><br>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:<br><br>"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."<br><br>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:<br>▪ Using spark arrestors on all vehicles and equipment used for vegetation management;<br>▪ Using fire-resistant plants when planting areas for erosion control;<br>▪ Pruning the lower branches of tall trees;<br>▪ Clearing out ground-level brush and debris; and<br>▪ Storing combustible materials away from vegetated areas.<br><br>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:<br>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.<br>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.<br>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:<br>a) Designation of an on-site construction complaint and enforcement manager for the project;<br>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.<br><br>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

# 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

North Marin Water District Tank.v1 - Marin County, Annual

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 |
|---|---|---|---|---|---|

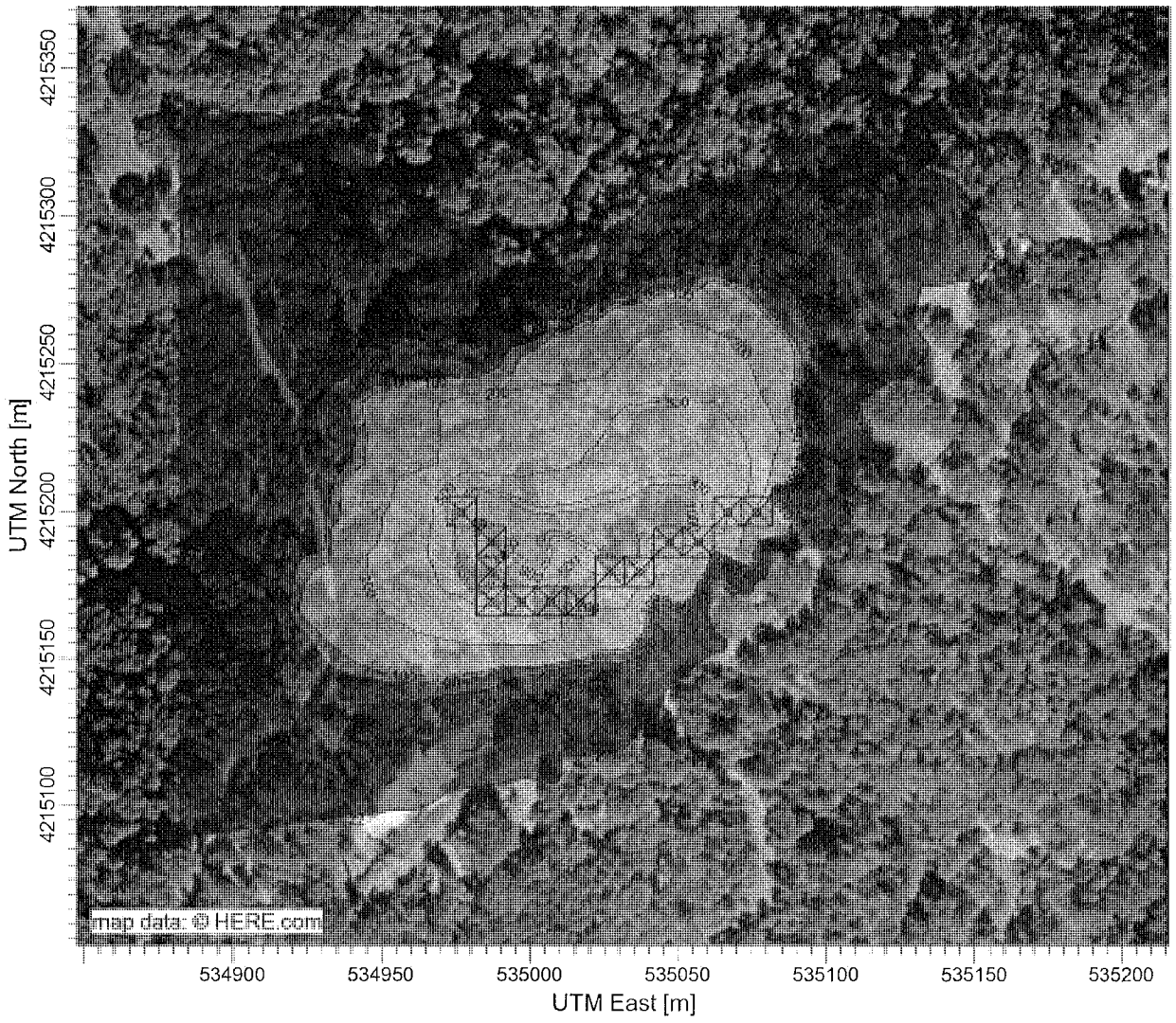
### User Defined Equipment

| 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: Public Agencies and Interested Citizens/Parties

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) 897-4133. 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.

ATTACHMENT 2

## ATTACHMENT 3

## OLD RANCH ROAD TANK NO. 2 PROJECT

## CEQA REVIEW PROCESS TIMELINE

| Description | Date | Current Status / Comments |
|---|---|---|
| Administrative Draft Submitted to District | October 24, 2019 | Complete |
| Board Meeting – Request Approval to Initiate CEQA Public Review | November 5, 2019 | |
| 30-day Public Review Period Begins | November 15, 2019 | |
| 30-day Public Review Period Ends | December 16, 2019 | |
| Board Meeting – Public Hearing/Certify CEQA | January 7, 2020 | |

Updated: November 1, 2019

# 11

**MEMORANDUM**

To: Board of Directors November 1, 2019

From: Robert Clark, Operations / Maintenance Superintendent RMC

Subject: PG&E October 26-30, 2019 Public Safety Power Shutdown Response (PSPS) Update
X:\MAINT SUP\2020\BOD\BOD Memo Oct 26 PSPS Review.doc

**RECOMMENDED ACTION:** Information

**FINANCIAL IMPACT**: Unknown at this time

On Wednesday October 23rd the Marin County Office of Emergency Services (OES) began to communicate to local area partners that PG&E had posted a potential Public Safety Power Outage Alert that could impact parts of Marin County. On Thursday October 24th, the District received notification that approximately 50% of our PG&E services were going to be affected by the planned power outage and to begin to plan for the event. The initial event was to begin midday Saturday and continue through Monday, until all affected areas had been inspected.

On Friday, October 25th, District staff revised the original NMWD PSPS Outage Response Plan from 12 hour to 8 hour shifts and informed the affected staff of the plan changes and anticipated actions for the next few days. The response plan called for NMWD staff to fill the water storage tanks and begin to set up generators on Friday, October 25th and to show up on Saturday October 26th for the planned outage. 24/7 staffing was accomplished by three shifts (1) 7:00 a.m. to 3:30 p.m., (2) 3:00 p.m. to 11:30 p.m. and (3) 11:00 p.m. to 7:30 a.m. with 30 District staff assigned to various roles along with all Department heads on hand for support. The District's Emergency Operation Center (EOC) was activated on Sunday, October 27th and was open through the morning of Wednesday, October 30th.

District staff set up temporary generators to keep the water storage facilities filled, provide uninterrupted water and sewer service, maintain at least 5 psi of water pressure in the Distribution system and communicate with our customers. Generators for the Main Office and Yard Operations desk were started at 8:30 p.m. and all power in Novato, West Marin and Oceana Marin went out beginning around 9:00 p.m. on Saturday October 26th. These ongoing response efforts continued through 7:00 a.m. on October 30th. During the power shutdown event the District lost all internet service from Comcast and had limited cellular service from Verizon.

With the return of PG&E power late Tuesday, October 29th, all normal operations were restored for Novato and West Marin water systems including internet communications and cell phone service. Staff began to recover the equipment in the field and clean up equipment used during the event. Stafford Treatment Plant operators and the Electrical Mechanical crews restarted the Stafford

Treatment Plant early Wednesday and the Plant was up to full operation by 2:00 p.m. The power at Oceana Marin remained off until Thursday October 31st at 6:00 p.m. During this entire event there was no interruption of potable water or sewer service to our customers.

Staff will perform post event reviews and develop a lessons learned document that will be used to improve our response for the next significant power outage or emergency event. Overall this was a great exercise for NMWD staff to work together to meet the District's mission to provide reliable water and sewer services to our customers.

In closing I want to thank all District Staff for their outstanding response to an unprecedented event in the history of the District. I also want to thank the Board for supporting additional funding of over $200,000 to purchase/rent generators and temporary fuel storage tanks in advance of the PSPS events in October.

# 12

# *DISBURSEMENTS - DATED OCTOBER 17, 2019*

Date Prepared 10/15/19

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

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 1 | ACWA | Annual Dues (McIntyre) (1/20-12/20) (Budget $21,600) | $23,010.00 |
| 2 | Allquip Universal | Pressure Regulators (3) | 437.59 |
| 3 | Alpha Analytical Labs | Lab Testing | 755.00 |
| 4 | Amazon/Genuine-Hardware | Misc IT Equipment ($382), Communication Cables & Media Connectors ($280) (STP), Brief Relief Urine Bags ($80) (80), Tool Grinder, Drill Bit Set ($159), Gas Siphon Hose ($23), Comm Cables ($37), Stickers for Equipment ($14), Resistivity Light ($102) (Lab), Bluetooth Radio & Battery Charger ($232) | 1307.29 |
| 5 | A.S.T.I. | Annual Fire Service Testing (27) | 2,760.00 |
| 6 | Buck's Saw Service | Gas Cans (4) | 173.56 |
| 7 | Cilia, Joseph | Retiree Exp Reimb (Oct Health Ins) | 333.79 |
| 8 | Clipper Direct | November Commuter Benefit Program | 412.00 |
| 9 | Energy Systems | New Standby Generator for STP (Balance Remaining on Contract $70,880) | 90,923.00 |
| 10 | Environmental Express | Tubes for IC Analysis (Lab) | 289.06 |
| 11 | Environmental Science Assoc | Jurisdictional Delineation Report for San Mateo Tank Permitting Assistance (Balance Remaining on Contract $36,244) | 4,417.54 |
| 12 | Evoqua Water Technologies | Service on Lab Deionization System | 363.25 |
| 13 | Ferguson Waterworks | 2" Compound Meter for Avesta Job | 2,284.03 |
| 14 | Fisher Scientific | Chlorine Test Kits (2) (Lab) | 74.01 |
| 15 | Fremouw Environmental | Oily Debris Disposal | 376.96 |
| 16 | Friedman's Home Improvement | Lag Bolts for OM Ponds Flow Meter Transmitter Enclosure (4) & Tubing for Tank Level Transmitters ($26) | 34.75 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 17 | Garcia, Lori | Novato "Toilet Rebate" Program | 100.00 |
| 18 | Garcia, David | Novato "Washer Rebate" Program | 50.00 |
| 19 | Government Finance Officers Association | GFOA Certificate of Achievement for Excellence in Financial Reporting Application Fee FY 18/19 | 560.00 |
| 20 | GHD | General Services Agreement: Lynwood PS (Balance Remaining on Contract $32,792) | 698.50 |
| 21 | Grainger | Hard Hat (Watkins), Digging Bars (2) ($91), Trailer Lock ($109), Couplings (5) ($157), Safety Signs (2), Filter (STP), Sealant Tape (STP), Disposable Gloves (2,000) (STP) ($322), Alarm for Chlorine Gas Storage Room ($323), Recycling Container, Front Office HVAC Filters (30) ($477) & Chlorine Alarm Buzzer ($323) | 1,822.84 |
| 22 | Idexx Laboratories | Quanti-Tray (100) ($261) & Colilert Media (200) ($815) (Lab) | 1,076.30 |
| 23 | Jackson, David | Retiree Exp Reimb (Oct Health Ins) | 986.81 |
| 24 | JW Mobile | Hydraulic Hose for Vac Truck ('16 Ditch Witch) | 174.38 |
| 25 | Kozik, Francis | Novato "Pool Cover Rebate" Program | 50.00 |
| 26 | KP Promotions | Sweatshirts (2), T-Shirts (3), Polo Shirts (2), Jackets (2) & Shirts (4) ($62) | 266.39 |
| 27 | Latanyszyn, Roman | Retiree Exp Reimb (Oct Health Ins) | 333.79 |
| 28 | Lemos, Kerry | Retiree Exp Reimb (Oct Health Ins) | 986.81 |
| 29 | Marin Landscape Materials | Crushed Rock (1yd) & Concrete (3 yds) ($429) | 597.85 |
| 30 | Mayfield, Christina | Novato "Toilet Rebate" Program | 200.00 |
| 31 | McMickin, Abram | Novato "Smart Irrigation Controller" Program | 220.48 |
| 32 | Micro Technology | Certification of Fume Hood (Lab) | 480.21 |
| 33 | Miller Pacific Engineering | Prog Pymt #9: Geotechnical Services- Misc Backfill Testing ($675) & Prog Pymt #10: Geotechnical Services-PRE Tank 1 ($5,049) (Balance Remaining on Contract $40,551) | 5,724.20 |
| 34 | Mountain Cascade | Refund Overpayment on Closed Account | 923.73 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 35 | North Marin Auto Parts | Purge Valve ($54), Socket, Hood Fan Belt (STP), Battery ('13 Vac Excavator) ($238), Service Parts ('18 Dodge Ram) ($65), Shop Towels (6 lbs) ($127), Lighting Plugs & Sockets | 294.39 |
| 36 | North Bay Gas | Dip Tubes (2) ($74) & September Cylinder Rental ($151) | 224.78 |
| 37 | Northbay Nissan | Bumper ('16 Nissan Frontier) | 705.52 |
| 38 | Office Depot | Copy Paper (80 reams) ($286), Toner ($66) & Misc Office Supplies ($54) | 406.40 |
| 39 | Pace Supply | Tees (2) ($181), Bolts (50) & Fire Hydrant Extensions (2) ($141) | 404.17 |
| 40 | Pape Machinery | Back-up Alarm ('09 JD Backhoe) | 242.39 |
| 41 | PES Environmental | Consulting Services: Project Communications, Correspondence and Coordinate Arrangements/Agreements for Subcontractor, Drilling & Pump Services (Balance Remaining on Contract $57,872) | 1,315.38 |
| 42 | Peterson Trucks | Window Hinge ('02 Int'l 5 yd Dump Truck) & Seat ('15 Int'l 5 Yd Dump Truck) ($709) | 788.86 |
| 43 | Pini Hardware | Misc Maint Supplies ($132), Materials to Repair Maint Office Ceiling, Hardware for P/S Maintenance ($43), Trash Bags (30), Outlets (2) ($48) (STP), Paint Supplies for Bear Valley P/S, Bleach (Lab), Caps for Hose Bibs Used for Sampling (5) & Latch/Hardware for Pacheco Tank Pump House | 384.77 |
| 44 | R & S Erection of Santa Rosa | Chain Repair on Roll-Up Door @ STP | 365.00 |
| 45 | Stafford, Vernon | Retiree Exp Reimb (Oct Health Ins) | 333.79 |
| 46 | Thatcher of California | Ferric Chloride (18 tons) (STP) | 13,740.48 |
| 47 | TPx Communications | October Telephone Charges | 531.59 |
| 48 | Waste Management | Green Waste Disposal | 115.84 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 49 | Watkins, Jeff | Exp Reimb: Hotel for Diesel Training Class on 10/14-10/16 | 262.28 |
| | | **TOTAL DISBURSEMENTS** | **$163,319.76** |

The foregoing payroll and accounts payable vouchers totaling $262.28 are hereby approved and authorized for payment.

Julie Blue 10/15/19

Auditor-Controller Date

10/15/19

General Manager Date

# *DISBURSEMENTS - DATED OCTOBER 24, 2019*

Date Prepared 10/22/19

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

| Seq | Payable To | For | Amount |
|---|---|---|---|
| P/R* | Employees | Net Payroll PPE 10/15/19 | $149,461.96 |
| EFT* | Internal Revenue Service | Federal & FICA Taxes PPE 10/15/19 | 62,125.15 |
| EFT* | State of California | State Taxes & SDI PPE 10/15/19 | 13,489.78 |
| EFT* | CalPERS | Pension Contribution PPE 9/15, 9/30/19 & 10/15/19 | 77,167.41 |
| 1 | Amazon.com | Stethoscope Kits for FSR ($24), Cordless Tool Batteries (2) ($280), Hose Fittings ('13 Vac Excavator & Trailer ($223), USB Adaptor for Laptop ($15) (STP), Pipe Expanding Tool ($167), Cordless Grease Gun ($143), Grease Coupler ($30), Circuit Breaker ($364), Patch Cables ($73) (STP), Cordless Impact Wrench ($218), New Breaker for Maint Bldg ($474) & Tool Box ($1,049) ('14 F150) | 3061.28 |
| 2 | American Family Life Insurance | October AFLAC Employee Paid Benefit | 3170.83 |
| 3 | Asbury Environmental Services | Oil Filter Disposal (2) | 150.00 |
| 4 | A.S.T.I. | Annual Fire Service Testing (41) | 4,395.00 |
| 5 | Athens Administrators | Indemnity Review Fee | 2,355.00 |
| 6 | AT&T | Leased Lines | 66.06 |
| 7 | Bank of Marin | Bank of Marin Loan Principal & Interest (Payment 96 of 240) Aqueduct Energy Efficiency Project | 46,066.67 |
| 8 | Baywork | Annual Fee FY 19/20 (Clark) (Budget $850) | 1,500.00 |
| 9 | Comcast | October Internet Connection | 143.29 |
| 10 | Core Utilities | Consulting Services: September IT Support ($6,000), West Marin IT ($125), Misc SCADA ($675), CORE Billing Maintenance ($100), Nexgen Maintenance ($1,350) & Rate Study Support ($950) | 9,200.00 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 11 | Diesel Direct West | Diesel (398 gals) ($1,538) & Gasoline (300 gals) ($1,243) | 2,781.82 |
| 12 | Eurofins Eaton Analytical | Lab Services for UCMR4 Monitoring (Balance Remaining on Contract $6,319) | 610.00 |
| 13 | Frontier Communications | Leased Lines | 1,431.41 |
| 14 | Grainger | Lights for Front Office (6), Rubber Stripping ($52) (STP), Emergency Lights for Maintenance Office, Outdoor Data Cable for Communications (1,000') ($395), Filters for Front Office HVAC (6) ($230), Canvas Tarps (3) ($161), Tubing Cutters (2) ($122), Phosphate Buffer (STP) ($82) & Sulfuric Acid (STP) | 1,128.15 |
| 15 | Grande, Leo Del | Novato "Toilet Rebate" Program | 100.00 |
| 16 | Harrington Industrial Plastics | 40" Tubing (500') (STP) | 289.59 |
| 17 | HERC Rentals | Fuel Tank Generator Rental (3) ($8,423) & Fuel Tank Rental ($1,352) | 9,775.02 |
| 18 | High-Purity Standards | Standards (Lab) | 293.42 |
| 19 | Hildebrand Consulting | Prog Pymt #4: Water Rate Study (Balance Remaining on Contract $25,485) | 9,870.00 |
| 20 | | Vision Reimbursement | 184.00 |
| 21 | Leighton Stone | Control Solenoid for Palmer Tank Valve | 127.79 |
| 22 | Lincoln Life | Deferred Compensation PPE 10/15/19 | 10,303.64 |
| 23 | Nationwide Retirement Solution | Deferred Compensation PPE 10/15/19 | 1,995.00 |
| 24 | Novato Chamber of Commerce | Membership Dues (11/19 - 10/20) (J. Blue) (Budget $1,000) | 920.00 |
| 25 | Pace Supply | Garlock Gaskets (80) ($489) & Couplings (8) | 767.44 |
| 26 | Pape Machinery | Equipment Key Sets for Foremen (3) | 196.50 |
| 27 | NMWD Petty Cash | Petty Cash Reimbursement: Safety Snacks ($96), Safety Bucks (2), Tablecloths for Patio Picnic ($4) & Ziplocks for Lab ($13) | 115.74 |
| 28 | PG&E | Power: Blgd/Yard ($5,218), Rect/Controls ($538), Pumping ($46,775), Treatment ($148) & Other ($157) | 52,836.17 |
| 29 | Point Reyes Light | Legal Notice: Salinity Intrusion Into Pt Reyes Well Supply - October 3, 2019 | 87.00 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 30 | Point Reyes Prop Mgmt Assn | October HOA Dues (25 Giacomini Rd) | 75.05 |
| 31 | PumpMan Norcal | Replacement Pumps & Motors for Olema PS | 7,270.07 |
| 32 | R & B | Traffic Blow Off Lids (2) | 245.21 |
| 33 | Roy's Sewer Service | Vac/Clean Out OM & North Lift Station | 3,100.00 |
| 34 | Skewes-Cox, Amy | Prog Pymt #2: Provide Initial Study/Mitigated Neg Dec for Old Ranch Rd Tank (Balance Remaining on Contract $26,136) | 24,590.21 |
| 35 | Soiland | Asphalt Recycle (13 tons) | 106.48 |
| 36 | Sonoma County Water Agency | September Contract Water | 476,082.10 |
| 37 | SRT Consultants | Prog Pymt#5: Consulting Services to Complete Stafford Lake Sanitary Survey (Balance Remaining on Contract $24,307) | 375.00 |
| 38 | Stompe, Brad | Exp Reimb: Power Supply for RWF Computer | 45.42 |
| 39 | Telstar Instruments | Annual Flow Meter Calibrations @ Dillon's Beach OM Lift Station and Ponds | 1,270.00 |
| 40 | Thatcher Chemical | Chlorine (4,000 lbs) (STP) | 1,705.20 |
| 41 | Thomas Scientific | Phosphate Buffers (2) (Lab) | 89.86 |
| 42 | Township Building Services | September Janitorial Services | 2,035.48 |
| 43 | United Parcel Service | Delivery Services: Sent UCMR Samples for Testing ($117) & Repair on Programmable Logic Controller (STP) | 131.53 |
| 44 | VWR International | pH Probe Storage Solution, Culture Controls (3) ($188) & Membrane Filters (1,000) ($212) (Lab) | 454.66 |
| 45 | White & Prescott | Prog Pymt#13: Plum Tank Lot Line Adjustment (Balance Remaining on Contract $19,635) | 405.00 |
| | | **TOTAL DISBURSEMENTS** | **$984,146.39** |

The foregoing payroll and accounts payable vouchers totaling $984,146.39 are hereby approved and authorized for payment.

Julie Blue — 10/23/19

Auditor-Controller — Date

10/23/19

General Manager — Date

# *DISBURSEMENTS - DATED OCTOBER 31, 2019*

Date Prepared 10/29/19

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

| Seq | Payable To | For | Amount |
|---|---|---|---|
| *90223 | CalPERs | November Health Insurance Premium (Employees $47,264, Retirees $11,798 & Employee Contribution $9,536) | $68,598.11 |
| 1 | Allied Heating & Air Conditioning | Quarterly Maintenance on HVAC System | 417.00 |
| 2 | Allquip Universal | Exhaust Pipe (Vac Trailer) | 239.55 |
| 3 | Alpha Analytical Labs | Lab Testing | 120.00 |
| 4 | Arrow Benefits Group | Oct Dental Admin Fee | 288.15 |
| 5 | Arrow Benefits Group | July-September Dental Expense | 9,444.35 |
| 6 | AT&T | October Internet Connection | 96.30 |
| 7 | Baker, Jack | Novato "Toilet Rebate" Program | 100.00 |
| 8 | Becker, Jennifer & Brendon | Refund Overpayment on Open Account | 371.38 |
| 9 | Bold & Polisner | Sept Legal Fees (General $2,730, Potter Valley FERC $777 & California Voting Rights Act $21) | 3,528.00 |
| 10 | CWEA | Certification Renewal Fees (Reischmann) (Budget $100) (1/20-12/20) | 94.00 |
| 11 | Daly, Mary Colleen | Novato "Cash for Grass" ($400) & Water Smart Landscape Efficiency Rebate Program Residential ($81) | 481.40 |
| 12 | Diesel Direct West | Gasoline (353 gals) | 1,441.02 |
| 13 | Doran, Emily | Refund Alternative Compliance Reg 15 Deposit | 630.00 |
| 14 | E & M | Wonderware 1 Year Support & Maintenance Agreement (STP) | 226.00 |
| 15 | Engineering News Record | Subscription Renewal (Vogler) (3/20-3/21) | 87.00 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 16 | Enterprise Fleet Management Trust | Oct Monthly Lease Charges for Nissan Rogues (2), Frontier (1) & F150 Vehicles (2) | 2,642.97 |
| 17 | Evoqua Water Technologies | Deionization System Rental (10/1/19 - 3/31/20) (Lab) | 340.26 |
| 18 | Gilardi, Fred | West Marin "Toilet" Rebate Program | 200.00 |
| 19 | Grainger | Industrial Penlight for Front Counter, Hard Hat (Sjoblom), Hose Clamps & Fittings ($629), Hip Boots ($83) (Davenport), Tubing Cutter (2) ($89), Drill & Driver Bit Set, Toaster ($61), Bucket/Tool Organizers (2) ($77), Headlamps (2), Replacement Flags (2) ($87), Reducing Coupling, Ball Valve, Nipple & Cordless Reciprocating Saw ($104) | 1,343.21 |
| 20 | Green Point Nursery | Manzanita Plants for Front Office (3) | 73.07 |
| 21 | Intellaprint Systems | Quarterly Equipment Maintenance on Engineering Scanner/Copier | 447.00 |
| 22 | Kaiser Foundation Health Plan | DMV/DOT Physicals (C. Kehoe & Reed) | 230.00 |
| 23 | LeBrun, Kent | Exp Reimb: 6-20lb Bags of Ice for Crew Until Replacement Machine Has Arrived | 38.99 |
| 24 | Madruga Iron Works | Vault Lids (4) | 8,466.16 |
| 25 | Medina, Gloria | Refund of Deposit/New Development/WC Restriction-Novato | 1,000.00 |
| 26 | Mutual of Omaha | November Group Life Insurance Premium | 973.66 |
| 27 | Neopost | Postal Meter Rental (11/1/19 - 11/30/19) | 143.09 |
| 28 | Novato Fireman's Fund Property | Refund Overpayment on Closed Account | 19,794.79 |
| 29 | Novato Sanitary District | July ($27,793) & August 2019 RW Operating Expenses ($34,285) & Semi-Annual Billing for Yard/Office Sewer Charges (2019-2020) ($2,267) | 64,345.10 |
| 30 | Office Depot | Ink Cartridges ($41), Binder Clips (12) & Rubber bands | 56.06 |
| 31 | Open Spatial | Open Spatial Suite-Standard Edition Annual Lease ($10,074) & Support Hours for Facility Map GIS/Auto Cad ($4,250) | 14,324.00 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 32 | Pace Supply | Nipples (33) ($168), Copper Pipe (2,400') ($8,551), Bell Restrainer ($138), Double Check Valves (4) ($634), Couplings (26) ($378), Fire Hydrant Buries (4) ($944), Hydrant Extensions (11) ($1,213), Adaptors (3) ($289), Weld-On Cement, Weld-On Primer, Ball Valve ($174), Elbows (4), Soc Wye, Plug, Rapid Set Concrete, Mortar Mix, Bushings (10), Reducers (10), Adaptors (40) ($915) & Epoxy Saddle Straps (3) ($194) (Less Credit of $171 Received for Misc Supplies) | 13,621.83 |
| 33 | Pacific Surfacing | Refund Security Deposit on Hydrant Meter Less Final Bill | 850.00 |
| 34 | Parkinson Accounting Systems | Accounting Software Support (10/1/19-12/31/19) | 1,500.00 |
| 35 | PumpMan Norcal | Replacement Pump for North Street Lift Station P1 | 1,592.27 |
| 36 | R & B | Couplings (4) | 1,497.30 |
| 37 | Scarbrough, Jane | Novato "Toilet" Rebate Program | 200.00 |
| 38 | Scott Technology Group | Quarterly Maintenance on Engineering Copier (7/16/19-10/15/19) | 668.72 |
| 39 | Solenis | Polymar (2,000 lbs) (STP) | 3,640.00 |
| 40 | SPG Solar | September Energy Delivered Under Solar Services Agreement | 13,603.16 |
| 41 | SRT Consultants | Prog Pymt#6: Consulting Services to Complete Stafford Lake Sanitary Survey (Balance Remaining on Contract $23,477) | 830.00 |
| 42 | Telstar Instruments | Rebuild Kit for STP Lab Titrator | 246.62 |
| 43 | Thatcher of California | Ferric Chloride (10 tons) (STP) | 7,181.87 |
| 44 | Toepfer, Laureen | Novato "Smart Irrigation Controller" ($240) & "Water Smart Landscape Efficiency" Rebate Program Residential ($69) | 309.16 |
| 45 | Township Building Services | Janitorial Supplies | 465.15 |
| 46 | Univar | Sodium Hypochlorite (200 gals) (PRTP) | 492.65 |
| 47 | USA BlueBook | Fire Hose (50') (STP) | 488.04 |

| Seq | Payable To | For | Amount |
|---|---|---|---|
| 48 | US Bank | Sept Safekeeping Treasury Securities | 142.00 |
| 49 | Van Bebber Bros | Steel for Tool Box Mounts ('14 F150) | 91.28 |
| 50 | Williamson, Nancy | Exp Reimb: Food & Drink for Crews Working During Public Safety Power Shutoff | 151.38 |
| | | **TOTAL DISBURSEMENTS** | **$248,152.05** |

The foregoing payroll and accounts payable vouchers totaling $248,152.05 are hereby approved and authorized for payment.

Julie Blue 10/30/19

Auditor-Controller Date

10/30/19

General Manager Date

NORTH MARIN
WATER DISTRICT

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

PHONE
415-897-4133

EMAIL
info@nmwd.com

WEB
www.nmwd.com

October 23, 2019

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-200

via email: commentletters@waterboards.ca.gov

**Subject: Comments on the Development of Water Loss Performance Standards**

Dear Mr. Esquivel (Chair):

On behalf of North Marin Water District (NMWD), we thank you for the opportunity to comment on the proposed framework for water loss performance standards as presented by State Water Resources Control Board (State Board) staff at the September 23, 2019 stakeholder workshop. We recognize the effort State Board staff have made over the past 18 months to develop a framework for water loss performance standards, but have concerns about the limited data available to set utility-specific targets. NMWD believes the information and assumptions included in the economic model as presented could lead to inequitable targets that require costly, ineffective actions to avoid enforcement.

Specifically, NMWD has the following concerns:

- **Assumption of inaccurate data for lower levels of loss.** The level of loss from a limited number of utilities nationwide should not be considered representative of California utilities. There are significant differences in water loss data for California when compared to the rest of the nation. If enough data has not been collected from California utilities to set a California-specific range of reasonable water loss, additional time and data is required before issuing information orders questioning the validity of real loss levels for nearly 100 suppliers.

- **Pressure reduction is unlikely to be feasible.** NMWD manages pressure to meet public health and safety standards. As a result, we are required to meet minimum pressures at critical nodes for firefighting, public health, and safety. A simple opt-out option for pressure management should be included for suppliers concerned about not meeting the basic requirements of their community.

- **Concerns about customer rates and affordability.** There has not been comprehensive analysis tying water loss reduction actions to an actual reduction in real water losses as reported in the mandatory annual water loss audit. Taking costly actions for uncertain results could increase the cost of water in our service area. The potential of raising rates without known benefits is a concern for NMWD. Additional time and resources are required to evaluate costs and benefits before agency specific targets are set.

- **Prioritizing water loss reduction over multi-benefit projects.** The use of the economic model with limited inputs could require investments in water loss over investments in other projects with multi-benefits. Water resource planning evaluates multiple benefits to prioritize projects. Requiring water loss investments could prevent other projects with water quality, health, and environment or reliability benefits from moving forward.

- **Using the retail costs of water inflates the benefits of real water loss.** Our cost of water includes fixed costs that would not be reduced with water loss. Furthermore, this performance standard conflicts with the IWA/AWWA water audit methodology, which uses variable production cost for real losses and retail unit cost only for apparent losses.

- **Using a default leak profile**. NMWD does not have a leak survey to include in the economic model. There are many variables that will impact a leak profile. Defaulting to an assigned leak profile could inflate the benefits of water loss actions. Additional study is required before it can be determined that the three leak profiles provided are representative of all utilities across the state. Inaccurately assuming a leak profile could lead to an infeasible target for NMWD and require actions that are not cost effective.

- **Consideration of preemptive pipe replacement and repair.** Water loss is rarely the sole economic factor when determining the feasibility of pipe replacement. Many factors determine the need to replace pipes and we prioritize the contents of our capital improvement plan based on the unique needs and abilities within our service area. The full resources needed for pipe replacement compared to the benefits of reduced water loss show pipe replacement to not be cost effective. Pipe replacement should not be regulated as part of a water loss standard.

- **Water loss is one priority area among many.** Meeting overly onerous and ineffective water loss requirements may entail redirecting funding from other priority areas like water quality, infrastructure efficiency upgrades, water resiliency projects, etc. Addressing climate change requires a portfolio approach in which suppliers apply the appropriate level of funding and actions for each solution to reach the most cost effective and beneficial result. The exact ratio of actions for each agency is different.

Thank you for considering our concerns. We believe additional data and analysis is required before individual water loss standards can be calculated. In the interim, we look forward to working with State Board staff to develop a reasonable standard for water loss.

Sincerely,

Drew McIntyre
General Manager

cc: Brian Sanders, Regional Affairs Representative
Association of California Water Agencies

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**MEMORANDUM**

To: Board of Directors November 1, 2019

From: Nancy Williamson, Senior Accountant NW

Subj: Information – FY20 1st Quarter Labor Cost Report
t:\ac\word\memo\20\1st qtr labor cost rpt.doc

**RECOMMENDED ACTION**: Information Only

**FINANCIAL IMPACT**: None

Total labor cost increased $32,753 1.6% from the prior fiscal year. Attached in graphical format is a five-year comparative summary of total labor cost (Attachment A), overtime cost (Attachment B) and temporary employee cost (Attachment C) expended during each fiscal year. Also attached is a summary of total labor cost vs. budget (Attachment D), which shows that labor was 6.6% under budget through the end of the first quarter of the fiscal year.

| Department | Increase / (Decrease) in Labor Cost vs prior FY | % Change |
|---|---|---|
| Administration | ($2,580) | (0.5%) |
| Engineering | ( $26,334) | (7.9%) |
| Operations/Maint | $26,803 | 3.6% |
| Construction/Maint | $34,864 | 8.9% |
| Net Increase/(Decrease) | $32,753 | 1.6% |

Comment on Change from Prior Year

***Administration:*** Labor Cost decreased $2,580, or 0.5%. The Accounting/Human Resource Supervisor resigned on July 24, 2018 and that position remains vacant. The decrease was offset by five 5% step increases, the 3.8% cost of living adjustment effective October 1, of 2018 and a one-time equity adjustment of 0.5% effective July 1, 2019.

***Engineering:*** Labor Cost decreased $26,334, or 7.9%. The decrease is primarily due to the retirement of an Associate Civil Engineer on October 31, 2018 and that position being filled on December 3, 2018 at a lower salary and to less temporary hours worked. The decrease was offset by one 5% step increase, the aforesaid 3.8% labor cost increase and the one-time 0.5% equity adjustment.

***Operations/Maintenance:*** Labor Cost increased $26,803, or 3.6%. The increase was primarily due to seven 5% step increases, the 3.8% labor cost increase and equity adjustments ranging from 0.5% to 10.5%.

***Construction/Maintenance:*** Labor Cost increased $34,864, or 8.9%. The increase was due to four 5% step-increases, the 3.8% labor cost increase and equity adjustments ranging from 0.5% to 6.5%.

11/1/19

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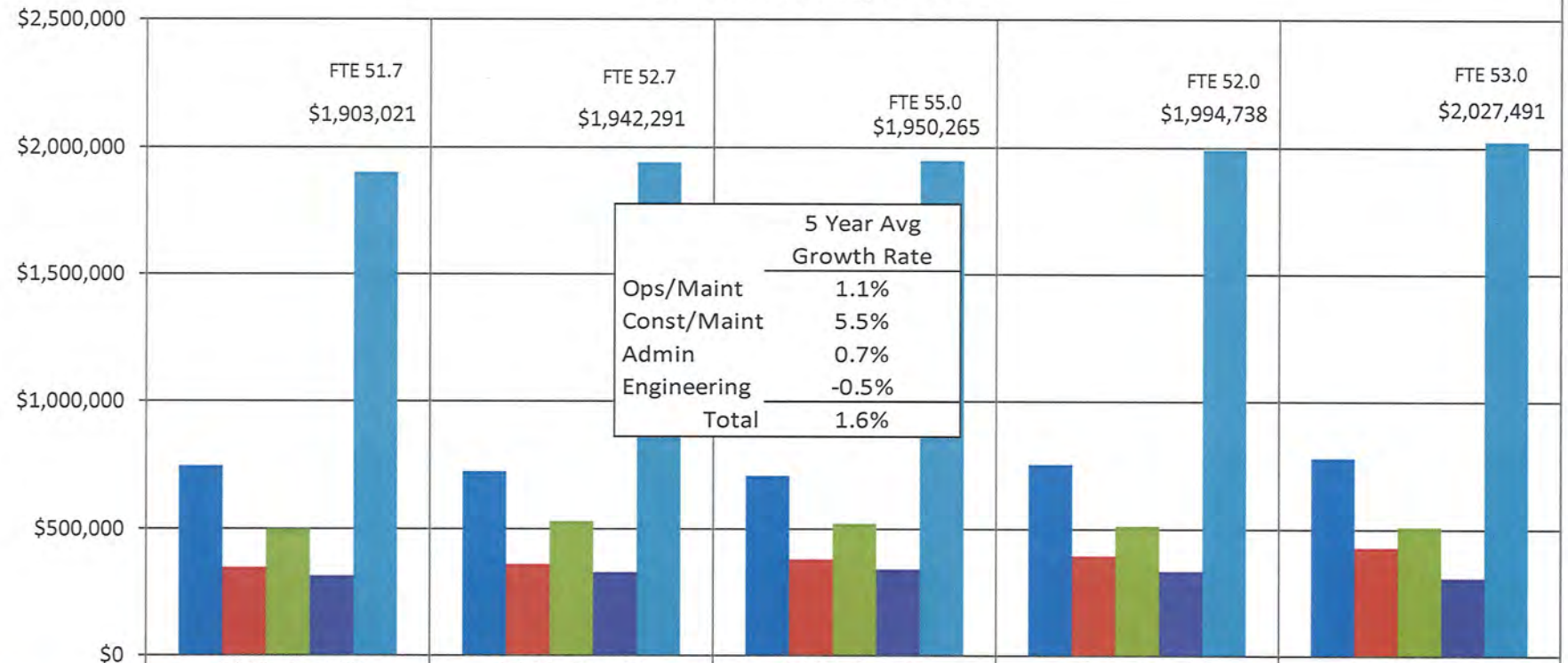
# Total Labor Cost
## NMWD Fiscal Year through September
## 5-Year Comparison




| | Jul 15 - Sept 15 | Jul 16 - Sept 16 | Jul 17 - Sept 17 | Jul 18 - Sept 18 | Jul 19 - Sept 19 |
|---|---|---|---|---|---|
| Ops/Maint | $746,810 | $725,263 | $709,107 | $754,607 | $781,410 |
| Const/Maint | $345,852 | $358,043 | $378,495 | $393,309 | $428,173 |
| Admin | $497,358 | $530,975 | $522,964 | $513,349 | $510,769 |
| Eng | $313,001 | $328,010 | $339,700 | $333,473 | $307,139 |
| Total | $1,903,021 | $1,942,291 | $1,950,265 | $1,994,738 | $2,027,491 |

Ops/Maint Const/Maint Admin Eng Total

ATTACHMENT A

11/1/19

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# Overtime Cost
## NMWD Fiscal Year through September
## 5-Year Comparison

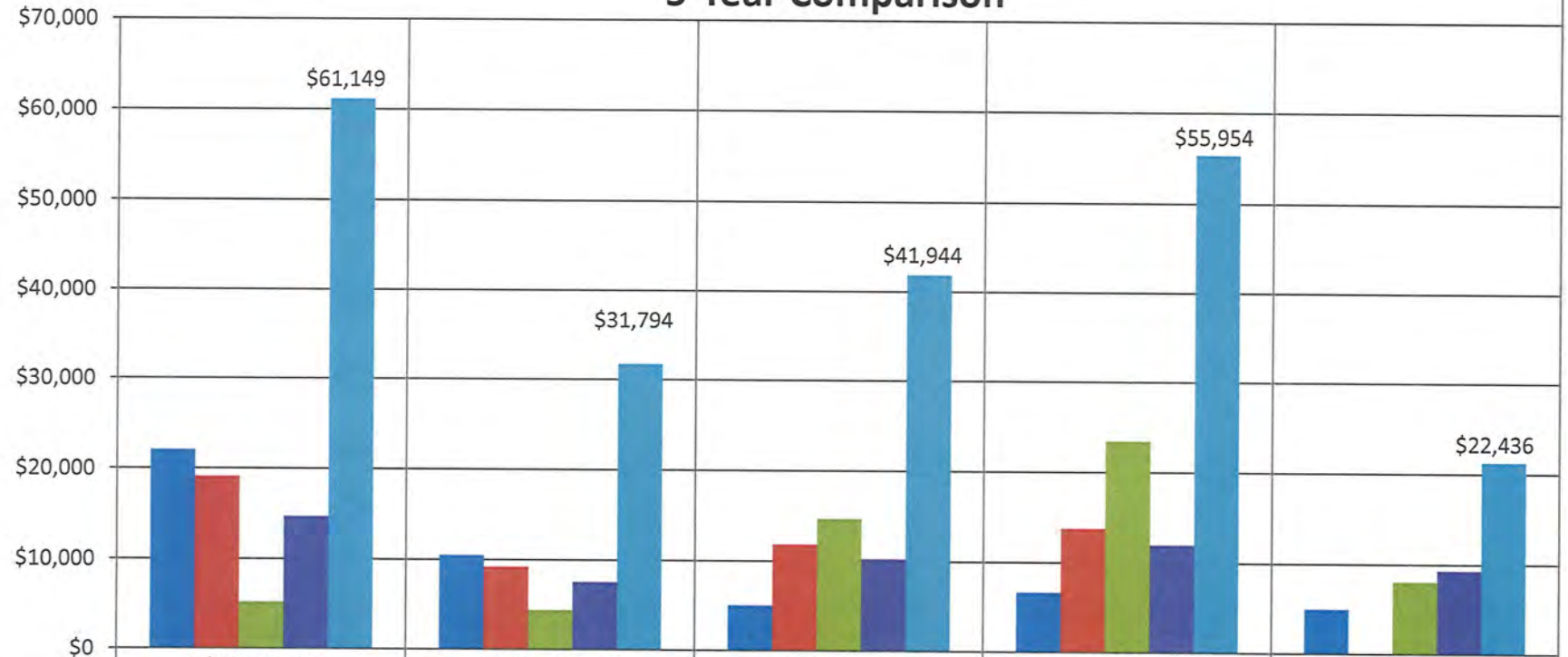

| | Jul 15 - Sept 15 | Jul 16 - Sept 16 | Jul 17 - Sept 17 | Jul 18 - Sept 18 | Jul 19 - Sept 19 |
|---|---|---|---|---|---|
| Ops/Maint | $30,231 | $26,867 | $36,708 | $36,544 | $40,540 |
| Const/Maint | $30,408 | $19,172 | $17,296 | $26,829 | $24,394 |
| Admin | $7,304 | $5,574 | $3,184 | $20,918 | $14,666 |
| Eng | $84 | $0 | $0 | $0 | $0 |
| Total | $68,026 | $51,613 | $57,188 | $84,290 | $79,599 |

ATTACHMENT B

11/1/19

t:\finance\hrsrpt\FY20 1stqtrlabor cost report\temp $ chart.xls

# Temporary Employee Cost
# NMWD Fiscal Year through September
# 5-Year Comparison



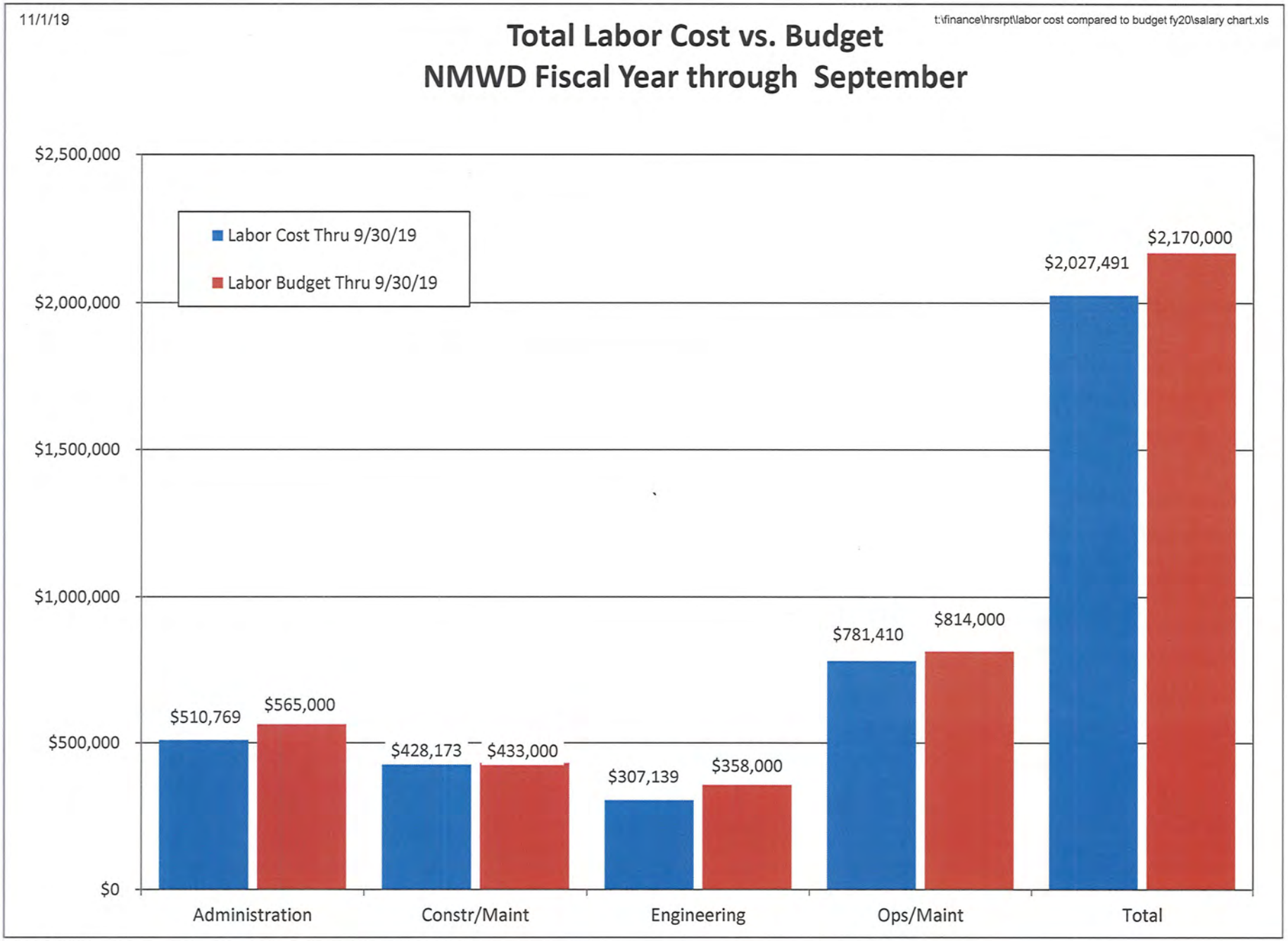

| | Jul 15 - Sept 15 | Jul 16 - Sept 16 | Jul 17 - Sept 17 | Jul 18 - Sept 18 | Jul 19 - Sept 19 |
|---|---|---|---|---|---|
| Ops/Maint | $22,088 | $10,538 | $5,060 | $6,702 | $5,010 |
| Const/Maint | $19,118 | $9,234 | $11,826 | $13,761 | $0 |
| Admin | $5,240 | $4,434 | $14,750 | $23,495 | $8,087 |
| Eng | $14,704 | $7,588 | $10,308 | $11,996 | $9,339 |
| Total | $61,149 | $31,794 | $41,944 | $55,954 | $22,436 |

ATTACHMENT C

11/1/19

t:\finance\hrsrpt\labor cost compared to budget fy20\salary chart.xls

# Total Labor Cost vs. Budget
## NMWD Fiscal Year through September




ATTACHMENT D

# California finds widespread water contamination of 'forever chemicals'

By Anna M. Phillips, Anthony Pesce, LA Times 10/4/19

WASHINGTON — Nearly 300 drinking water wells and other water sources in California have traces of toxic chemicals linked to cancer, new state testing has found.

Testing conducted this year of more than 600 wells across the state revealed pockets of contamination, where chemicals widely used for decades in manufacturing and household goods have seeped into the public's water supply. An analysis by the Los Angeles Times found that within this class of chemicals, called perfluoroalkyl and polyfluoroalkyl substances, the two most common compounds were detected in 86 water systems that serve up to 9 million Californians.

State officials released the water quality results on Monday, the first step in what's likely to be a years-long effort to track the scale of the contamination and pinpoint its sources. Only a small fraction of California's thousands of drinking water wells were tested in this initial study. Officials said they planned to examine many more, but have not committed to future statewide testing.

The results offered the clearest picture yet of California's exposure to a public health crisis that is playing out nationally.

"This has the potential of being an enormously costly issue both on the health side as well as on the mitigation and regulatory side," said Kurt Schwabe, an environmental policy professor at UC Riverside. "It's going to be one of the defining issues in California, environmentally, for decades."

About half of the wells sampled did not have the chemicals at detectable levels — a result that state officials said was a hopeful sign the contaminants may not have spread as widely as they have in other states. Yet testing found contaminated drinking water in communities across California, from densely-populated cities with large and complex water systems to mobile home parks that depend on a single private well.

Clusters of contaminated wells were found in Southern California, in Los Angeles, Orange, Riverside and San Bernardino counties. In some cases, the results had an immediate effect — the city of Anaheim has shut down three of its drinking water wells so far this year in response to elevated levels of the chemicals.

Exposure to the chemicals, commonly known as PFAS, has been traced to kidney and testicular cancer, as well as high cholesterol and thyroid disease. Mothers and young children are thought to be the most vulnerable to the chemicals, which can affect reproductive and developmental health.

Scientists have called them "forever chemicals" because they persist indefinitely and accumulate in the human body.

The chemicals were developed in the 1940s and used in countless household products, from Teflon cookware and Scotchgard to waterproof clothing and food packaging. They were also a key ingredient in firefighting foam used on military bases and, as a result, have become a major source of groundwater pollution.

A Times analysis found that California has 21 contaminated bases, more than any other state, including six where the chemicals have leached into off-base drinking water supplies.

There is no agreed-upon safe level of PFAS. The Environmental Protection Agency has classified the chemicals as an "emerging contaminant" and has delayed setting a national standard for limiting the levels in drinking water. In 2016, the agency issued a nonbinding health advisory for two of the most common types, PFOS and PFOA, recommending that water utilities notify the public if levels of the chemicals reached a combined 70 parts per trillion.

California health officials are developing their own safety standards for the contaminants.

A state law that takes effect in January will require utilities to inform customers if PFAS are found at any level. It will also force water systems to either shut down wells that test over the federal health advisory level or notify their customers of the contamination — steps that, at present, are only voluntary.

For the first round of testing, California's State Water Resources Control Board focused on hundreds of wells located within one or two miles of commercial airports, municipal landfills, and water supplies already known to have elevated levels of the chemicals. Each of these wells was tested for about a dozen different compounds within the broader PFAS family, which includes thousands of unique chemicals.

Officials plan to widen their search in the coming months to include drinking water systems near military bases, manufacturing hubs and wastewater treatment plants.

California has about 3,000 water providers, most of which have not been ordered to test for PFAS. Those that have been forced to confront the problem have looked for solutions based on what they can afford and whether they have other sources of clean water readily available.

An example of this can be found in the cities of Oroville and Chico. Both have detected PFAS in their drinking water wells, but because Oroville gets the majority of its water from Lake Oroville, in the foothills of the Sierra Nevada, local water suppliers there can reduce their reliance on groundwater without feeling pinched. Chico, on the other hand, is dependent on groundwater wells.

"Every water system is different, and that changes the options that you have," said Loni Lind, water quality manager for California Water Service, which supplies both towns.

In interviews with The Times, water district managers emphasized that having contaminated groundwater wells does not necessarily mean that residents are being exposed to dangerous levels of PFAS. Some utilities have treated the water to remove most of the chemicals, while others have started blending contaminated water with other sources to lower their concentration. Still others have closed wells or put them on emergency-use-only status.

In Orange County, where testing ordered by the state found PFAS chemicals in 10 different water systems, four groundwater wells with elevated levels of the chemicals have been shut down.

Jason Dadakis, Orange County Water District's executive director of water quality, said that based on water testing, the district concluded that the chemicals were coming from wastewater treatment plants in Riverside and San Bernardino. Those facilities discharge water into the Santa Ana River, he said, which feeds the county's groundwater basin.

Sewage treatment plants aren't designed to remove a compound like PFAS, Dadakis said. "It just passes through their system."

If the chemicals spread and the district is forced to treat the water, Orange County residents could see their water bills rise by as much as 15%, Dadakis said.

Local water suppliers in other parts of the state said they had no idea where the chemicals could be coming from, but they expected answering that question would take years of investigation.

"It's really difficult to say what's happening and where it's being generated," said Tom Moody, who oversees the city of Corona's water system, where eight wells tested above the EPA's health advisory level. Rather than close them all down, the city now sends water from these wells through an existing treatment plant.

"In my generation, we probably absorbed this chemical in everything from tennis shoes to popcorn and pizza and all that stuff," Moody said. "Now everybody is trying to point the finger at everybody else."

Link to full article: https://www.latimes.com/politics/story/2019-10-10/california-finds-widespread-contamination-of-chemicals

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**News Update**

Data instincts
Public Outreach Consultants
**707.836.0300**

POINT REYES LIGHT

# Point Reyes wastewater feasibility study handed off

By Braden Cartwright
10/09/2019

The last of three meetings where Point Reyes Station residents discussed water-related issues ended with a punt. The county will not pursue funding for a wastewater feasibility study in favor of letting working groups convened by Supervisor Dennis Rodoni explore options for wastewater management and visitor bathrooms—two issues that rose to the top during the water meetings this year.

The series was funded by a state grant for water-resource planning and decision-making in rural communities. As part of the effort, the county created a survey after the first meeting to gauge feelings on various water-related issues. While some raised concerns around water supply and flooding, survey results showed the top-priority projects were a feasibility study for a community wastewater system and additional restrooms for visitors.

The restroom issue appears to have a solution: on Monday, a working group hosted by Supervisor Dennis Rodoni met to discuss building a new facility on a county-owned property down the street from the existing restrooms. The debate over whether the county should pursue funding for a feasibility study has been the biggest point of contention.

Residents expressed concern at last week's meeting and at a Point Reyes Station Village Association meeting on Sept. 8 that a wastewater system would solve a problem that doesn't exist. County staff revealed last week that they have recorded 21 septic repairs in the past four years in Point Reyes Station, though there may be unknown failures. "Just because you may not be having a problem with performance that you're aware of, [your system] may be leaking into the groundwater," said Lorene Jackson, the project manager for the meeting series.

She laid out what a feasibility study entails: at no cost or commitment from the town, a consultant would describe existing conditions by reviewing county septic records, doing voluntary septic inspections and taking water samples. The study would identify alternatives—such as a wastewater management district, alternative sustainable technologies, and no project—and select a preferred one. Then the community could decide whether to move forward with an environmental review of a specific project.

Ms. Jackson invited Marshall resident George Clyde to speak about the wastewater system in his community, where septic failures were linked to bacterial contamination in Tomales Bay. The project, which serves about 50 properties along Highway 1, was completed in 2016 at a cost of $3.2 million. Each homeowner paid $20,000 to connect to the new system.

"[A feasibility study] was kind of a no-brainer for us," Mr. Clyde said. "Because it wasn't going to cost us anything, it wasn't going to commit us to anything, and we were going to learn a lot about, through the study itself, what the situation was with our homes and the systems."

But residents were quick to point out the differences between Marshall and Point Reyes Station.

"That's an ideal, low-cost piece of topography," said Bob Johnston, who has been skeptical of a wastewater system because of its potential to bring more development. Adding sewers to a place with hills would cost more because the

system would require many pumps, he said.

"I know more information is good, but it's not grabbing me as the thing to do," added Laura Arndt, the village association's treasurer.

"My sense is that we are...going to punt the whole feasibility study to this wastewater group and they're going to discuss it more," Ms. Jackson responded. "And if at some point they feel like...they want to proceed with a feasibility study, then we can revisit it at that time."

A wastewater working group that is part of a larger group convened by Supervisor Rodoni early this year will attempt to gather more information about the town's wastewater situation through grants for water testing in the creek and the bay, Supervisor Rodoni said. A sewer system is not the only option, he added: Small systems using high technologies or a septic system oversight district also are possible.

A sticking point at the water meetings was that different areas of town have different needs and a wastewater system could not serve all of them. Downtown sees more visitors but has an underground gravel layer that percolates affluent effectively, while the mesa has a clay layer, making more modern systems necessary. A mixture of people on the working group ensures that all interests are represented, Supervisor Rodoni said.

He convened a group of about 10 community stakeholders representing various town interests following the passage of Measure W, which raised taxes on overnight rentals in West Marin so the county could enhance emergency services and long-term housing. The measure does not fully address the impacts of tourism, he said, so the group identified about 30 other issues facing the town as a result of the influx of visitors.

That list was narrowed down to four issues, and the working group divided into subgroups to address each: solid waste, community services, wastewater and bathrooms.

The solid waste group will look at starting a "pack it out" campaign, among other efforts around garbage disposal, while the community services group will explore recreational opportunities, such as a community kitchen or swimming pool.

The bathroom group was the first to meet, discussing building more public restrooms on an undeveloped, county-owned property on the corner of Mesa and Giacomini Roads, just a couple hundred feet from the existing bathrooms. Those bathrooms were not built to handle the current volume of visitors, so the county spends $240,160 annually to pump out the portable toilets adjacent to the stalls.

Supervisor Rodoni said that the county is open to using alternative technologies, such as composting, and including an educational component.

The Trust for Public Land will be brought on to help facilitate the discussion about what the bathrooms might look like. "I wanted to make sure that this process included someone who was skilled with planning and skilled with facilitation," Supervisor Rodoni said. The trust currently owns the San Geronimo Golf Course property and last worked with the county to re-open Rocky Graham Park in Marin City.

A new bathroom facility would aim to meet current demand with 12 to 14 stalls, and parking and other amenities could be folded into the 1.78-acre property.

Meanwhile, the county parks department is looking into ways to improve septic capacity at the existing facility, and is moving forward with adding a ramp.

**Annexing muddle prompts apology**

**Apology**

**NOVATO**

Draft review alarms unincorporated areas

**By Will Houston**

*whouston@marinij.com @Will_S_Houston on Twitter*

Five unincorporated communities near Novato will not be annexed by the city as a recent planning document seemed to imply, officials said Monday.

The document, a draft municipal service review by the Marin Local Agency Formation Commission, contained "misleading" language, said county supervisor and commission member Judy Arnold, which prompted concern among residents of Black Point, Green Point, Bel Marin Keys, Indian Valley and Loma Verde that the city would annex them.

"It should have been noted here that the City of Novato has an Urban Growth Boundary that would not allow these unincorporated neighborhoods to be annexed into the city limits," Arnold wrote in a prepared statement on Monday, "and that Marin LAFCo would not move forward with any annexation without support of the people who live in these communities."

The urban growth boundary, approved by Novato voters in 1997 and renewed for another 20 years in 2017, limits urban sprawl outside of city limits.

Susanna Mahoney, president of the Black Point Improvement Club, said she had heard from another group on Friday that annexation was being proposed and contacted Marin LAFCo to get more information.

"LAFCo states that these (municipal service re-

**APOLOGY»PAGE 4**

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**Annexing muddle prompts apology**

**Apology**

**FROM PAGE 1**

views) are frequently used by the state and other authorities for policy making so any ambiguity in that report puts us at risk," Mahoney said. "So I'm very relieved to hear that the errors in the report will be corrected and the review will now reflect the intent of those who voted for the urban growth boundary. And it sounds like annexation will be off the table, at least for now."

The Marin Local Agency Formation Commission, also known as Marin LAFCo, is a state-created

by that," Fried said Monday, adding that they plan to update the document to make the urban growth boundary restrictions more clear.

Mahoney said the strong response to the rumors of annexation is because residents in Black Point and Green Point value their unincorporated status.

"Our motto is, 'We're fiercely unincorporated' and we intend to stay that way," Mahoney said.

Responding to residents' concerns about lack of notification, Marin LAFCo has extended the public comment period for the draft municipal service review through Oct. 31. The commission is set to review the final draft at its Dec. 12 meeting. The commission is then likely to vote on

body tasked with managing local governmental boundaries, evaluating municipal services and protecting prime agriculture lands. LAFCo's municipal service review for Novato and other communities is required by state legislation and analyzes services provided by the city and special districts to determine if they could be improved.

Jason Fried, Marin LAFCo's executive officer, said the document works to inf luence decisions about changes to spheres of influence, which are areas just outside a local government agency's boundaries, such as a city limit, that the agency could potentially expand service to in the future. This latest review for Novato proposes no changes to the existing spheres of influence, Fried said, except to dissolve a now-defunct county service agency run by the Marin County Parks Department.

The source of the annexation fears came from page 14
of the draft review under a section titled "Unincorporated Islands," referring to unincorporated areas that are largely surrounded by incorporated city boundaries. The document states these islands "create governance and service delivery inefficiencies and deficiencies" and that Marin LAFCo's policy on these islands is to encourage the cities to annex them.

The document then goes on to list the five communities, which gave the impression that annexation was on the table.

Craig Knowlton, a board member of the Indian Valley Associates community organization, attended the commission's Oct. 10 meeting in Novato to voice his disagreement of their community being an "unincorporated island."

"We strongly oppose any additional influence by the city up to and including annexation," Knowlton told the commission.

Upon reading the draft review again, Fried said he could see how residents could infer their neighborhoods were up for annexation.

"I deeply apologize to anyone who got confused

any proposed changes to spheres of influence at its first regularly scheduled meeting in 2020, Fried said.

Public comments can be submitted by email to staff@marinlafco.org.

More information about the draft review can be found at bit.ly/2MdxEBH.

The Black Point neighborhood was one of five communities in unincorporated Novato at the center of confusion over an annexation document.

ALAN DEP — MARIN INDEPENDENT JOURNAL

**Marin's big rainfall year fails to reduce fire risk**

**Wa ter**

**WINTER, SPRING STORMS**

Wet weather filled reservoirs, but created more fuel to burn

**B y W il l Hou ston**

whouston@marinij.com *@Will_S_Houston on Twitter*

The ample rainfall in Marin County this past water year has acted as a double- edged sword.

While the storms that touched down in the winter and spring filled reservoirs and moistened vegetation, they also created more fire fuel that is now beginning to fully dry out during what firefighters are calling a critical period in the fire season.

"Late heavy rains can end up pushing the fire season off," Novato fire Chief Bill Tyler said Tuesday. "In that regard, it can be helpful early on in the fire season. The problem is that it's going to increase the volume of your native and non-native grasses."

At this time last year, moisture levels in live plants were at about 60% compared to about 72% this year, according to Marin County fire Chief Jason Weber. At 30% moisture or below, a plant is considered dead. The fires in Marin so far this year haven't been behaving the same as last year's, which is a good sign, Weber said.

However, a wetter-thanaverage year does not ensure a lighter fire season, as the 1995 Mount Vision fire in West Marin demonstrated, Weber said. While the moisture levels are higher this year, the multiple years of drought from years past have left behind a significant amount of dead and downed vegetation. And regardless of the moisture levels, it's the winds that have firefighters worried, Weber said.

was about 33 inches.

"So it was well above average last year," said National Weather Service meteorologist Spencer Tan-

**WATER >> PAGE 4**

Railroad tracks hang over the breached levee along the flooded Highway 37 in Novato in February. The heavy Marin rains this year have provided little comfort to firefighters.

JAMES CACCIATORE — MARIN INDEPENDENT JOURNAL

A woman fishes at the Nicasio reservoir in July. Marin Municipal Water District's water supply is at 82% of total capacity.

JEREMY PORTJE — MARIN INDEPENDENT JOURNAL

"We still have to get back to a healthy landscape. Not every year will be wet and it won't be wet late," Weber said. "It takes just a couple windy days to really change our perspective. ... It can offset any benefit of moist conditions in a late season."

One gauge near San Rafael listed on the Community Collaborative Rain, Hail and Snow Network recorded nearly 52 inches of rain. The 30-year average annual rainfall for the area

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**Marin's big rainfall year fails to reduce fire risk**

**Wa ter**

**FROM PAGE 1**

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In the 2017-2018 water year, only about 17 inches of rain fell at the Civic Center, which was the lowest amount since the recent drought years.

This year's rains also gave Marin and the state water reservoirs a boost for the summer months.

At Stafford Lake, the North Marin Water District recorded 38 inches of rain between July 1, 2018 and June 30, 2019, well above the average 27 inches, according to district general manager Drew McIntyre. At Stafford Lake, the district's main local reservoir near Novato, the supply was at 50% capacity with 2,150 acre-feet of water at the start of the week.

"Normally at this time of year we are around 1,800 acre-feet," McIntyre said Tuesday. "So we have more storage in the lake than a normal year because of how wet this last year was and how late in the season the rains fell."

Several reservoirs operated by Marin's largest water supplier, the Marin Municipal Water District, were filled to or were near capacity for a several months of the year. The latest storage report showed the district's supply was at 65,216 to keep our reservoirs full," district communications manager Jeanne Mariani-Belding wrote in an email. "Even as we move into the fall and winter, it's always important to conserve."

Sonoma Water, which provides about 75% of North Marin Water District's supply and about 20% of Marin Municipal Water District's supply, also reported higherthan- average reservoir levels, McIntyre said.

Statewide, reservoir storage was at 128% of average at about 29.7 million acre-feet through the end of September, according to the California Department of Water Resources.

"The significant rainfall and snowpack made for a great water year in 2019, so we start the new year in a good place," department director Karla Nemeth said in a statement earlier this month. "However, we all know too well that California's weather and precipitation are highly variable. What we have today could be gone tomorrow. Conserve, recycle, recharge — people and the environment depend on it." Drought conditions have been nonexistent in Marin since March, with only a small portion in the southeast of the state showing any dry conditions as of Oct. 10, according to the U.S. Drought Monitor.

In anticipation of the coming winter, the National Oceanic and Atmospheric Administration's Climate Prediction Center plans to present its rainwlook during a press conference Thursday.

acrefeet or 82% of total capacity as of Tuesday. The average supply for this time of year is about 67% of capacity, according to the district.

"We're appreciative of our customers' conservation efforts, which helps

**Housing for staff foiled by blooper**

**Housing**

**COLLEGE OF MARIN**

Easements revealed on Indian Valley lots

**By Keri Brenner**

*kbrenner@marinij.com @KeriWorks on Twitter*

A plan by College of Marin to buy **2**
1 taxdefaulted lots in unincorporated Novato from Marin County is in limbo following a last-minute discovery of a series of open space easements.

College officials, who had been working on the purchase for more than two years as a potential location to build affordable teacher and staff housing, said late Monday they will not be moving ahead as planned.

"We're going to take a pause," Greg Nelson, COM vice president for administrative services, said Monday afternoon. That was just after he was informed of the existence of the easements, which he said had not turned up in prior research and due diligence.

Sandra Kacharos, tax division chief for Marin County, said Monday that the easements, at the 21 parcels at the end of Fairway Drive adjacent to an open space area outside of Novato city limits, were recorded in 2010 in a settlement of earlier litigation between property owners MCCE LLC and Marin County Parks and Open Space.

Max Korten, Marin County parks and open space director, said the litigation and settlement occurred before he began working for the county, and that he was just informed of the situation himself on Monday. He said he would

**HOUSING >> PAGE 2**

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**Housing for staff foiled by blooper**

**Housing**

**FROM PAGE 1**

be meeting with the college to help provide them with more information on the situation.

"I'm not sure why it didn't come up before," Korten said. "I want to make sure we're helpful to the college and good partners with them. I feel bad that they didn't know about it before."

It was not clear what triggered the revelation of the easements on Monday. Korten said the land in question is near a popular hiking trail that leads to a waterfall.

The 21-lot purchase was to have been part of an effort by the college to offer affordable housing in Marin so that more faculty and staff could live closer to where they work. After a survey showed that fewer than half of College of Marin's 600-person staff and faculty were able to afford to live in the county, the college began scouting for properties to develop their own options.

Kacharos said the college had notified the county two years ago that college officials were interested in the lots. No official action was taken, however, until this past Sept. 17, when the college's board of trustees voted in favor of moving forward with the land purchase.

After the trustees vote in September, the county submitted the college's documentation to the state controller's office, which currently has them under review, she said.

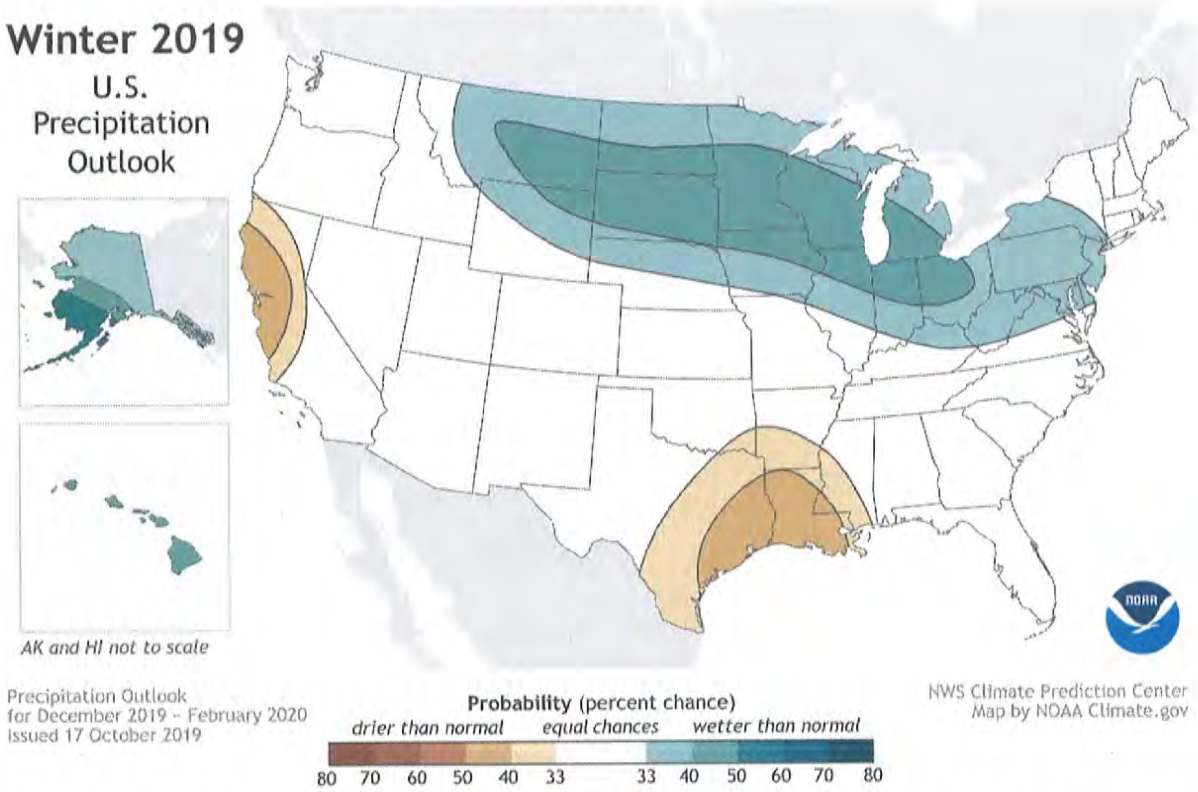
The lots were listed for sale at $167,289, Kacharos said. That amount was to cover all back taxes and the cost of the parcels, which were all in tax default for more than five years. The five-year tax default made them eligible for a special purchase option by a nonprofit or government entity, according to state tax law. If the sale had gone forward, it would have been likely completed by late January or early February, Kacharos said.

In mid-2018, the college purchased the former Kentfield Fitness Center building on Sir Francis Drake Boulevard at the southeast corner of the intersection with College Avenue, along with two other properties on Sir Francis Drake just east from the fitness center.

Nelson said Monday that renovations at the fitness center space will be completed in December, allowing the college's print shop and marketing offices to move into that space downstairs, while the two apartments above it will ultimately be offered for staff housing. The other two properties east of the fitness center building will be demolished and rebuilt as a 10-to-12-unit apartment complex, he said.

# Winter weather outlook: 'The probabilities tilt slightly toward warmer and drier than normal'

By Amy Graff, SFGATE
Updated 8:11 am PDT, Tuesday, October 22, 2019




As the San Francisco Bay Area faces another bout of balmy days in the middle of October, many are wondering what's around the corner.

Will winter be wet or dry this year?

While forecasting the weather farther than a week out with definitive accuracy is futile, the National Oceanic and Atmospheric Administration has released a prediction for the winter outlook in the United States and the prediction for parts of Northern California, including the San Francisco Bay Area, isn't going to be good for your garden.

"The probabilities tilt slightly toward a warmer and drier than normal November, December, January," says NOAA meteorologist David Miskus.

Miskus says several dynamic models, like the North American Multi-Model Ensemble, generate the long-term outlook, and these are predicting a 42 percent probability of below-average precipitation and a 43 percent chance of above-average temperatures for November, December and January for the San Francisco Bay Area.

"It's important to remember this is just the probability," says Miskus. "There's still a 25 percent chance for above normal precipitation, a 24 percent chance of below normal temperatures and a 33 percent chance for normal precipitation and temperatures."
To better understand these numbers, keep in mind NOAA's seasonal forecasts "start with the assumption that for any random summer or winter, there are three possible climate outcomes--temperature or precipitation that is well above normal, near normal, or below normal--and they are each equally likely," according to NOAA. The goal of the forecast is to estimate the probability of each outcome based on impacts of certain factors, like the presence of El Niño or La Niña.

This year, Brian Garcia with the National Weather Service office in Monterey, explains neither El Niño or La Niña look to be dominating forces with surface water temperatures in the tropical Pacific near normal.

El Niño and La Niña are "essentially like the thousand pound gorilla in driving the seasonal weather patterns," Garcia explains. "We have all these other oscillations that have smaller footprints of dominance, but when the thousand pound gorilla is out of the picture, these other primates control forces. In coming months, it looks like the Arctic Oscillation is lining up in a way that it could result in more dry weather."

Garcia adds that the winter weather pattern can also easily mix up halfway through the season, and the impact of the Arctic Oscillation could lessen while another factor strengthens.

Jan Null, who runs the private forecasting service Golden Gate Weather Services, puts little stake in the long-term predictions. Null points out that last winter models predicted near-normal precipitation for most of California. Essentially the exact opposite unfolded and the Golden State was soaked by winter storms.

"That's just looking at it at a really basic level," says Null. "To miss things that broadly makes you wonder if this is a valuable product."

Null has followed the winter outlooks for the United States over the past 10 years, and says while they often get parts of forecast correct, he has yet to find at least some part of it that is not grossly missed every year.

"It's not something I would reach on my wallet and pay good cash money for," he says.
No matter the outcome, Miskus points out that California is well-equipped with water after last year's wet winter.

"California reservoirs are in good shape," he says. "We had a good winter last year and cold spring so the snow melt was slow. Things are good hydrologically going into winter."

*Amy Graff is a digital editor for SFGATE. Email her at agraff@sfgate.com.*

**Discounts considered for water fee**

**MARIN MUNICIPAL**

Customers with large meter sizes could be charged based on use

**By Will Houston**

*whouston@marinij.com @Will_S_Houston on Twitter*

At least 97 Marin Municipal Water District customers paying the new capital maintenance fee could be paying far less, district officials acknowledged Thursday.

The district is proposing allowing certain customers with larger meter sizes to pay a reduced fee based on water consumption. At the same time, consideration is being given to waiving the fee for customers who qualify for its low income and medical disability programs.

"The important thing here is to be equitable and fair," MMWD board director Cynthia Koehler said at the district's board meeting in Corte Madera Thursday.

The controversial fee, which took effect in July, is a fixed fee based on customers' water meter size, with larger meter sizes generating larger fees. The fee amounts range from $163 to $408 per year for nearly 90% of customers, but range up to $31,063 per year for 10-inch meters, of which the district currently serves none.

Marin Municipal Water District directors Larry Bragman (second from left), Jack Gibson and Cynthia Koehler listen to a speaker.

WILL HOUSTON — INDEPENDENT JOURNAL, FILE

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The district plans to use the estimated $16 million to $20 million in annual revenue from the fee to repair and replace its aging tanks, pipes, pumps and treatment facilities as well as for fire prevention.

But some ratepayers are required to have larger meters to comply with fire sprinkler standards or to address low pressure issues. Their actual water use, however, could be served by smaller meter sizes. The district has allowed this ratepayer group to reduce their fee by one meter-size tier, to installing fire suppression equipment such as sprinklers in homes.

The Coalition of Sensible Taxpayers (COST) president Mimi Willard said the organization has been saying "from Day 1" that the district is overcharging customers using this meterbased fee formula.

"In effect, today's meeting shows that they are now admitting that, but they're only tinkering around the edges," Willard said.

such as from $245 for a 3/4-inch meter to $163 for a 5/8-inch meter.

The proposal introduced Thursday would allow these customers to reduce their fee by more than one tier based on the amount of water they consume. In addition, the reduction would also apply to other meterbased fees charged by the district, including the bimonthly watershed and service charge fees. If approved, the discount would take effect at the time the customer turned in their full application.

Charles Duggan, the district's administrative services manager and treasurer, told the board the change is being proposed based on data the district collected since customers began applying for the discount. Of the 300 applications submitted so far, 246 were approved. Ninetyseven of the approved customers could have had a larger fee reduction based on their water use, Duggan said.

"We believe it would be a worthy adjustment if the board saw fit," Duggan told the board.

Marin resident Roger Roberts urged the district to inform the various planning agencies and cities throughout the county about the reduction, if approved.

"With this new initiative for wildland fire control, we're going to have some zealous response to that risk," Roberts said, "and there may be, in the future, a number of people who are going to be asked to increase the size of their water supply in order to meet (wildland urban interface) fire risk."

District General Manager Ben Horenstein said the fee issue became notable to staff after inquiries about a fee reduction came on a townhome project located on the fire-prone, wildland urban interface, or WUI. The fire marshal is requiring a 1.5-inch meter, but the customers' water consumption could be easily served by a 5/8-inch meter. The fee cost difference between the two meter sizes is nearly $650 per year. Earlier this year, the Marin County Fire Chiefs Association sent a letter to the water district expressing

The watchdog group has called for the district to base the fee on water consumption for all customers. COST filed a lawsuit in Marin County Superior Court challenging the legality of the fee.

"Until they do something more substantive to address the underlying issue that the meter-based charges are inequitable and overcharge a lot of people, the lawsuit continues," Willard said.

Some of the customers who did not qualify for the discount were found to have larger meter sizes than needed, Duggan said, and could consider reducing their meter size. This prompted board director Larry Russell to question whether the district should look into refunding the connection fee those customers paid for the larger meters if they choose to switch to the smaller size.

"It could be $10,000, $20,000 or $30,000," Russell said, phoning in for the meeting. "It could be a lot different."

Koehler said this could be more complicated because the person using the larger meter currently might not have paid for it, but rather inherited it. Horenstein also added there are complexities to Russell's proposal that would need to be reviewed.

In response, Willard said it would be dangerous for the district to encourage people to reduce their meter size during a time when fire agencies are calling for greater fire suppression efforts, such as sprinkler installations. Instead, the district should fix its "capricious fee structure," Willard said.

In addition, the board is proposing to halve or waive the capital maintenance fee for customers that qualify for low income discount and medical disability rates. The district has 800 customers under its low income program and 300 people on the medical disability program, Duggan said. Both programs already waive the district's bimonthly watershed maintenance and service charge fees.

The proposals are set to go back to the board at a future meeting.

concern about the fee structure, saying it could serve as a disincentive

**Interim director hired to oversee finance division**

**Director**

**NOVATO**

**By Will Houston**

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The latest addition to Novato's reshuffled administration is another familiar face who will take the role as interim finance director.

Acting city manager Adam McGill appointed Novato resident and longtime financier David Bentley to run the city's new finance department. He began his position on Friday.

Bentley has a long career in the Novato area, having served as auditor-controller for the North Marin Water District for 31 years before retiring in 2018. Bentley has been serving on the Novato Citizens Finance Advisory and Oversight Committee, from which he stepped down after starting his position on Friday. He also previously held positions on the Novato Chamber of Commerce board and its governmental affairs committee.

In addition, Bentley is a former certified public accountant and served as finance director for the city of Fortuna in Humboldt County from 1983 to 1987.

"We are grateful to have someone of David's integrity and experience as we work to fill this critical role," McGill said. "I look forward to the contributions he will bring to our team and our community."

"I have known David Bentley for close to 10 years and he is a respected and experienced finance professional," Mayor Eric Lucan said. "We are fortunate to have someone of his integrity stepping into the interim role."

"I want to help them get through the year-end audit for last fiscal year and then working on the budget for the upcoming year," Bentley said.

Bentley said he isn't looking to stay in the position for a long term, but will assist in finding a good candidate to fill the role. He said he expects a hire in early 2020.

Being recruited as a retired annuitant, Bentley will be paid $84.13 per hour and receive no health or retirement benefits, according to the city manager's office.

North Marin Water District general manager Drew Mc-Intyre has worked with Bentley for close to 20 years.

"He's been a pleasure to work with, he's detail oriented and he also cares about the Novato community," McIntyre said. "I think it's a wise move on the city's part to tap somebody locally with the knowledge that he has and to help them bridge the gap until they have a permanent replacement."

**DIRECTOR » PAGE 4**

**Bentley**

Bentley said he was offered the position by McGill after the last Citizens Finance Advisory and Oversight Committee hearing. On his first day Friday, Bentley said he was meeting with staff to figure out their priorities.

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**Interim director hired to oversee finance division**

**Director**

**FROM PAGE 3**

Bentley will be in charge of running the city's new finance department, which is responsible for budget preparation, financial reporting, purchases, payroll, debt administration, managing invested funds and revenue sources. The finance manager position was under the city manager's office.

Novato has long been without a finance chief. The last finance manager was Tony Clark, who was hired in 2017 and left the position in 2018. Under former city manager Regan Candelario's tenure, Clark's vacancy was filled on an interim basis by financial consultants. Consultants Mark Moses and Rickey Manbahal were listed in city staff reports as interim finance manager this year. Both were fired by Candelario in July after information about past employment controversies resurfaced in the community.

In August, the City Council ousted Candelario and appointed Mc-Gill as acting city manager. McGill has overhauled the administration during his short tenure.

The continued failure to attract suitable candidates for the city's finance manager position prompted the council to reclassify the position as finance director in September. The change included a sizable pay raise, from $139,596 per year under the former manager position to $174,996. The director position also heads a discrete department while the manager position was part of the city manager's office.

City accounting supervisor Brooke Kerrigan served briefly in the interim finance director role for about two weeks before Bentley's appointment, according to Assistant City Manager Jessica Deakyne.

**FCC finds broad failure of cellular sites in Marin County**

**Cellular**

**Report:**

**By Lisa M. Krieger**

*Bay Area News Group*

Even as California burns, the cell phones of many residents have gone mute, preventing them from giving or getting emergency information.

A report prepared by the Federal Communications Commission reveals that at least 874 of the state's cell sites were out on Monday, up from 630 on Sunday, when fires broke out all around the Bay Area.

Because these cell sites lack battery or generator backup, they're useless when PG& E cuts power.

In Marin County, more than half — 57.1 percent — of sites weren't working.

Fire-ravaged Sonoma County, where the Kincaid fire is 66,000

**CELLULAR >> PAGE 4**

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**FCC finds broad failure of cellular sites in Marin County**

**Cellular**

**FROM PAGE 1**

acres and growing, lost 17 percent of its sites. Santa Cruz, San Mateo, Napa, Contra Costa, San Mateo and Santa Clara counties lost 22.5 percent, 11.4 percent, 19.2 percent, 11.4 percent and 2.1 percent of sites, respectively. Data was not reported for Alameda County.

In addition, more than 454,722 subscribers with landline phones, cable television or Internet also lost service due to power shutoffs, according to the FCC report.

"It has been extremely isolating and worrisome," said Santa Cruz Mountains resident Sherry

This jeopardizes the safety of California residents who have cut the landline cord and rely solely on cell phones, said Johnson.

Wireless networks deliver federal and state emergency alerts, transmits 911 calls and helps police and other "first responders" make decisions about when and where to deploy resources.

"It is unacceptable for cell sites to not have backup power, when over 80 percent of our 911 calls are from wireless phones," said Johnson.

Comcast customers lose service where the power is out at their home, because the services need energy to operate, according to Comcast's Joan Hammel. Comcast service also stops if power is disrupted elsewhere in the network, she said.

McNamara. "We are cut off and thus put in danger."

Residents said even their once-reliable landlines and Internet, such as those operated by Frontier Communications, weren't working. Comcast/Xfinity also was down. Four FM radio stations — **K23** 8AF, KKLJ, KNOB, KSXY — reported being out of service. Also silent were two AM radio stations, KIHH and KYAA.

Of the outages, most were due to loss of power to the cell tower. Only about 60 were caused by wind or fire damage.

And that's only part of the problem. The new report contains only data submitted by providers in the Disaster Information Reporting System, a voluntary network used to report communications infrastructure status during times of crisis. Of California's 58 counties, 32 are included. That represents about 26,000 cell sites.

Cell towers, for instance, use antennas and base stations to connect calls from one tower to another and to other cellular and landline providers. And these systems need electricity to operate.

But there is no requirement to have backup electrical power at cell towers. The only requirement is that they deliver backup power to certain sites and at certain locations — such as an evacuation center — after an emergency, according to Ana Maria Johnson of the Public Advocate's Office of the state Public Utilities Commission..

During an emergency, they are not required to disclose which towers are down or which carriers have lost service, according to the CPUC. Nor do they need to tell authorities how close their backup power is to downed cell site. Is help an hour away, or two days away? No one knows except the company.

"Like all PG& E customers, we are also affected by this power shutdown, said Vince Bitong of AT& T. "We are aware that service for some customers may be affected and we continue to move quickly to keep our customers, FirstNet subscribers and public safety agencies connected."

Landlines used to be more reliable, because their power was sent to the phones through copper wires, which are more heatresistant. And phone company offices had extensive battery systems, as well as backup generators.

But companies' transition to Voice over Internet Protocol (VOIP) — with phone calls over the Internet — requires power. VOIP calls fail when either the company's facility or the resident's home lacks backup power.

In 2008, the Federal Communications Commission ordered carriers to install eight hours of backup power at all cell sites and 24 hours of backup power at all central switching facilities.

But when the wireless industry challenged the order in court and won on procedural grounds, the FCC dropped the effort.

In 2007, California also considered stronger reliability standards but declined to impose them.

Fearing blackouts in future natural disasters, CPUC's advocates filed a legal motion urging the Commission to immediately require carriers provide backup battery or generator power and network redundancy in designated high fire risk zones to ensure that emergency alerts are received and that 911 calls are answered. They are hopeful that new CPUC president Marybel Batjer will demand accountability.

"The companies need to provide safe and reliable service," said Johnson.

**PG&E restores power to approximately 99% of customers**

**County**

**County:**

**By Adrian Rodriguez and Matthew Pera**

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Pacific Gas and Electric Co. has restored power to approximately 99% of the Marin customers whose power was shut off in recent days, the county said Wednesday night.

As of 6 p.m., the remaining deenergized meters included 434 in Dillon Beach, 234 in Tomales, 122 in Marshall, 76 in Fallon, 46 in Fairfax, 12 in Mill Valley and two in Stinson Beach, said Laine Hendricks, a spokeswoman for the county.

"Full restoration has been achieved in Kentfield, Lagunitas, Muir Beach, Nicasio, Novato, San Anselmo, San Geronimo, Sausalito, and Woodacre," Hendricks said.

The utility cut power to nearly 1 million homes and businesses throughout 38 California counties over the weekend, including about 118,000 in Marin. The power shutoff was aimed at preventing PG& E's electric equipment from sparking more wildfires as fierce winds ravaged portions of the state, the utility said.

According to PG& E spokeswoman Deanna Contreras, inspection crews found 83 equipment problems throughout the 38 counties that were hit by the shutoffs this week. It was unknown how many problems were found in Marin.

**COUNTY» PAGE2**

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**PG&E restores power to approximately 99% of customers**

**County**

**FROM PAGE 1**

Another round of blackouts swept the state Tuesday, cutting power to 516,000 homes and businesses in 26 counties. That shutoff was initially expected to cut power for thousands in Marin, but PG& E announced Tuesday afternoon that it had removed Marin from the list of counties that would be affected.

"We were able to reconfigure the scope of the (shutdown) and isolate portions of the grid," Contreras said. No new shutoffs are expected this week for Marin, she said.

**Lingering blackouts**

online Wednesday, some said their phones lit up with delayed messages that warned of a second power shutoff for Marin.

Marin County Office of Emergency Services had sent out that message on Saturday, when it still believed that PG& E would roll out another round of outages on Tuesday.

Hendricks, the county spokeswoman, said the Marin OES used what's called a "wireless emergency alert," the same type of system that sends out Amber Alerts to mobile devices.

"This is a critical communication tool," Hendricks said, noting that the messaging system casts a wide net, sending messages to hundreds of thousands of devices at once.

Hendricks apologized for any confusion and said emergency officials will be working with cell

Late Wednesday morning, PG& E still hadn't restored power to a large swath of Fairfax. Downtown businesses south of Sir Francis Drake Boulevard were lit up and bustling, while shops across the street had no electricity.

G Liquor Wine and Grocery was on the dark side of town.

"It's frustrating," said shop owner Kamaljeet Singh, who spent the morning scooping a puddle of liquified ice cream out of a freezer.

Ray Martin, meanwhile, had fired up his ice cream maker and was mixing a batch of mocha chip at his shop, Fairfax Scoop. The electricity had kicked back on Tuesday night and Martin was busy restocking flavors that were running low.

Despite the blackouts, it had been a busy few days at Fairfax Scoop, in part because several local schools had canceled classes, Martin said. To keep his shop open during the shutoffs, Martin made daily trips to San Francisco, where he bought 150 pounds of dry ice each day to keep his inventory cold. "A couple really nice people brought lanterns for us," Martin said. "People were super nice and helpful."

A few doors down, Rachel Humphrey sat eating breakfast at a table outside Taste Kitchen & Table. Humphrey had come from her home in Woodacre, which was cold and powerless, hoping to find someplace where she could connect to the internet for a morning business call. Though there was electricity inside the cafe, she struggled to connect to its Wi-Fi. It was clear that not everything had returned to normal just yet, she said.

"I was driving back from work in Oakland last night, and it was really interesting just seeing the little patches of life coming back," she said.

Charles Fonseca raced home in a fit of glee Tuesday evening, thinking he'd be returning, at long last, to life on the grid.

Riding his bike around Fairfax, Fonseca had seen lights come on inside several downtown

companies to stop errant messages. She said officials weren't aware of issues with the system that they observed during the shutdown.

**Back in service**

With temperatures expected to drop drastically overnight, the National Weather Service issued a frost advisory for 2 to 9 a.m. Thursday. Temperatures were expected to dip between 26 and 35 degrees.

All Marin County public schools were closed Wednesday, with a majority of schools planning to re-open Thursday, according to the Marin County Office of Education.

"Following site inspections to ensure that our students and staff are safe, we are confident that all schools with power can resume normal operations on Thursday," said Marin County Superintendent of Schools Mary Jane Burke. "We know that this unprecedented situation has been challenging for families and we are grateful for their flexibility and patience.

"For the few schools currently without power, families can expect to receive direct messages with school specific information from their school district leaders," Burke said.

College of Marin and Dominican University were also scheduled to resume classes Thursday.

The outage created a traffic mess in Central Marin during the Wednesday morning commute. Signal lights on Sir Francis Drake Boulevard at the Highway 101 interchange between Greenbrae and Larkspur Landing were out, clogging the freeway and city traffic.

businesses. But his excitement quickly faded when he arrived at his house, only a few blocks from downtown, and learned that his power was still out.

He found himself back at Fairfax Town Hall on Wednesday, where a handful of residents who were still waiting for their electricity to return at home crowded around power outlets, charging up their devices.

Parts of Mill Valley were also in the dark on Wednesday.

"We're hoping to get some kind of a resolution today," said Mayor Jim Wickham.

Jim Welte, director of membership for the city's Chamber of Commerce, said he called around to Mill Valley businesses on Wednesday to find out which were up and running. Most said they were open, but others were still struggling, he said.

"It's a little hard to decipher between those that are closed because they have no power and those that are closed for whatever other litany of circumstances that might have prevented them from being open today," Welte said.

**Cell towers down**

As cell towers came back

Charles Fonseca makes use of electrical outlets in the lobby of the town hall in Fairfax on Wednesday.

ALAN DEP — MARIN INDEPENDENT JOURNAL

*Cell towers need to work during outages*

**Editorial**

A Federal Communications Commission report on the state's cellular sites losing power during recent wildland fires is reason for deep concern — especially in Marin.

Across our county, more than half of the local cell sites stopped working because they lacked battery or generator backup. When Pacific Gas and Electric Co. turned off power to large swaths of Northern California, the cell sites stopped operating and cell phones went silent.

This dilemma should be of primary concern to local and state lawmakers.

A reflection of the severity of Marin's cell outage is that, during the same period, while the Kincade fire raged, only 17% of the sites in Sonoma County went dead.

Across the Bay Area, the percentages were similarly low compared to Marin.

It is time that Marin and other jurisdictions that approve permits for cell sites start requiring longer or permanent backup sources during outages.

During public hearings on these proposals, cellular firm representatives have routinely stressed the need for new sites and towers, emphasizing the critical role cell phones might play in making "911" calls.

That promised public service was lost for six in 10 Marin users because of the lack of backup power. Not only that, some of the emergency alert texts meant to inform residents before Saturday's outage began didn't send until after cell towers came back on line Monday or Tuesday — sending incorrect information about an upcoming outage that already happened.

That cannot be tolerated.

not impose any requirements.

Twelve years later we learned the folly of that decision.

Over the past week, Marin residents have had to deal with unreliability of a service that routinely boasts of its reliability. Many local residents relied on their cellphones to stay in touch with family members or work during this trying time. Or they relied on their phones to keep abreast of emergency alerts.

But some couldn't rely on their cell service because the cell sites lacked backup power.

They may be private companies, but they are relied on to provide vital, if not potentially life-saving, public service.

Wireless services are relied on to deliver federal, state and local emergency alerts.

That more than half of the sites serving Marin went offline because they lacked modern emergency power backup is an emergency in itself.

It is 2019, not 2007. Public reliance on cell service is far greater today. Federal, state and local officials need to make sure these companies for governmental agencies have provided approvals for cell service and sites for towers and antennae are equipped and maintained so they can be relied on.

Public oversight holding service providers accountable has been lacking.

That nearly 60% of cell sites in Marin became useless and phones went mute when customers needed them the most is good reason for tougher rules.

State lawmakers and the FCC should establish standards for protecting the service, especially in the face of a power outage. Local officials need to put heat on the communications companies to shore up the dependability of their service.

Power outages are going to happen again. If not a manmade strategy to prevent fires, there will be storms, fires and earthquakes that create large and long-term outages.

California officials in 2007 considered establishing strong reliability standards for cell sites, but did

Local and state officials need to address it as an emergency, immediately.