



NOTICE OF MEETING

OPERATIONS COMMITTEE/BOARD OF DIRECTORS (OPERATIONS)

(Per paragraph 3 on page 10 under subsection *Committee Meetings* of the Board Handbook: The Board, as a practice, generally does not take final action on items during committee meetings, unless District staff determines the urgency of the item requires immediate action that cannot be delayed until a subsequent regular bi-monthly Board meeting.)

MEETING DATE: August 18, 2023

TIME: 9:30 a.m.

LOCATIONS: This meeting will be held remotely and in-person.
(Directors Larry Russell and Jed Smith will be participating remotely at other locations.)

Open Session	Outside Locations for Directors
Marin Water, Board Room 220 Nellen Avenue Corte Madera, CA 94925	Contractors State License Board First Floor Lobby 9821 Business Park Drive Sacramento, CA 95827 (Russell) 72-300 Maheawalu Drive Kailua Kona, HI 96740 (Smith)
Remotely	
URL: https://us06web.zoom.us/j/86822995553	
Webinar ID: 868 2299 5553 Phone Call: 1-669-444-9171	

EMAILED PUBLIC COMMENTS: Submit your comments in advance of the meeting to BoardComment@MarinWater.org. All emailed comments received by 7:30 a.m. on the day of the meeting will be provided to the Board of Directors prior to the meeting. Please do not include personal information in your comment that you do not want published on our website such as phone numbers and home addresses.

PARTICIPATION DURING THE MEETING:

In-person Attendee: Fill out a speaker card prior and place it next to the Board Secretary. List the number of the agenda item(s), for which you would like to provide a comment. Once you're called, proceed to the lectern to make your comment.

Remote Attendee: Click on the "raise hand" button on the bottom of the Zoom screen. If you are joining by phone and would like to comment, press *9 and staff will call on you by the last four digits of your phone number.

(Note: The board president may shorten the amount of time for public comment due to large numbers of both in-person and virtual attendees.)

AGENDA ITEMS	RECOMMENDATIONS
Call to Order and Roll Call*	
Adoption of Agenda	<i>Approve</i>
Public Comment - Items Not on the Agenda	
<p>Members of the public may comment on any items not listed on the agenda during this time. Comments will be limited to three (3) minutes per speaker, and time limits may be reduced by the board president to accommodate the number of speakers and ensure that the meeting is conducted in an efficient manner.</p>	
Calendar (9:40 a.m. – Time Approximate)	
1. Minutes of the Operations Committee Meeting/Special Meeting of the Board of Directors (Operations) of July 21, 2023 (Approximate Time 1 Minute)	<i>Approve</i>
2. Marin County Grand Jury Report Responses (Approximate Time 15 Minutes)	<i>Review and Refer for Board Approval</i>
3. Marin-Sonoma Winter Water Intertie Project (Approximate Time 20 Minutes)	<i>Review and Refer for Board Approval</i>
Adjournment (10:16 a.m. – Time Approximate)	

ADA NOTICE AND HEARING IMPAIRED PROVISIONS:

In accordance with the Americans with Disabilities Act (ADA) and California Law, it is Marin Water’s policy to offer its public programs, services, and meetings in a manner that is readily accessible to everyone, including those with disabilities. If you are an individual with a disability and require a copy of a public hearing notice, an agenda, and/or agenda packet in an appropriate alternative format, or if you require other accommodations, please contact Board Secretary Terrie Gillen at 415.945.1448, at least two days in advance of the meeting. Advance notification will enable Marin Water to make reasonable arrangements to ensure accessibility.

INFORMATION AGENDAS ARE AVAILABLE FOR REVIEW AT THE CIVIC CENTER LIBRARY, CORTE MADERA LIBRARY, FAIRFAX LIBRARY, MILL VALLEY LIBRARY, MARIN WATER OFFICE, AND ON THE MARIN WATER WEBSITE (MARINWATER.ORG)

***MARIN WATER BOARD OF DIRECTORS ORDER OF ROLL CALL:** RANJIV KHUSH, MATT SAMSON, JED SMITH, MONTY SCHMITT, AND LARRY RUSSELL

FUTURE BOARD AND COMMITTEE MEETINGS AND UPCOMING AGENDA ITEMS:

Dates	Meetings
Thursday, August 24, 2023 9:30 a.m.	<ul style="list-style-type: none">• Finance & Administration Committee Meeting/ Special Meeting of the Board of Directors
Tuesday, September 5, 2023 6:30 p.m.	<ul style="list-style-type: none">• Board of Directors' Regular Bi-Monthly Meeting with Closed Session prior to 6:30 p.m. start time

Upcoming Key Items for future Operations Committee Meetings

- At September 15, 2023 Operations Committee Meeting
 - Review of Projects for Possible Bond Funding



Board Secretary



Item Number: 01
Meeting Date: 08-18-2023
Meeting: Operations
Committee/Board of Directors
(Operations)

Approval Item

TITLE

Minutes of the Operations Committee Meeting/Special Meeting of the Board of Directors (Operations) of July 21, 2023

RECOMMENDATION

Approve the minutes

SUMMARY

The Operations Committee/Board of Directors (Operations) held its regularly scheduled monthly meeting on July 21, 2023. The minutes are attached.

DISCUSSION

None

FISCAL IMPACT

None

ATTACHMENT(S)

- 1. Minutes of the Operations Committee Meeting/Special Meeting of the Board of Directors (Operations) of July 21, 2023

DEPARTMENT OR DIVISION	DIVISION MANAGER	APPROVED
Communications & Public Affairs Department		
	<p>Terrie Gillen Board Secretary</p>	<p>Ben Horenstein General Manager</p>

**MARIN MUNICIPAL WATER DISTRICT
OPERATIONS COMMITTEE MEETING /SPECIAL MEETING OF THE
BOARD OF DIRECTORS (OPERATIONS)**

MINUTES

Friday, July 21, 2023

Held Remotely and In-Person

Open Session Location: Marin Water, Board Room, 220 Nellen Avenue, Corte Madera, CA 94925

CALL TO ORDER AND ROLL CALL:

Chair Larry Russell called the meeting to order at 9:30 a.m.

Directors Present: Matt Samson, Monty Schmitt, Jed Smith, Ranjiv Khush, and Larry Russell

Directors Absent: None

ADOPT AGENDA:

On motion made by Director Smith and seconded by Director Schmitt, the board adopted the agenda. The board took the following roll call vote:

Ayes: Directors Samson, Schmitt, Smith, Khush, and Russell

Noes: None

There were no public comments on the adoption of the agenda.

PUBLIC COMMENT - ITEMS NOT ON THE AGENDA

There were no public comments.

CALENDAR ITEMS:

Item 1 Minutes of the Operations Committee Meeting/Special Meeting of the Board of Directors (Operations) of June 16, 2023

On motion made by Director Smith and seconded by Director Schmitt, the board approved the minutes. The board took the following roll call vote:

Ayes: Directors Samson, Smith, Schmitt, Khush, and Russell
Noes: None

There were no public comments.

Item 2 Dam Safety Program Overview

Engineering Division Manager Crystal Yezman introduced Associate Engineer Matt Steiner, who provided a presentation regarding this program. Discussion ensued.

There were no public comments.

This was an information item. There were no formal actions taken by the board.

Item 3 Fire Flow Improvement Program Update – Fiscal Years 2022 & 2023

Associate Engineer Steiner also presented this item. Discussion followed.

There was one (1) public comment.

This was an information item. There were no formal actions taken by the board.

Item 4 Department of Water Resources Funding for the San Geronimo Treatment Plant Emergency Generators

The board heard from Grant Program Coordinator Matt Sagues, who presented this item. Discussion ensued.

There were no public comments.

On motion made by Director Samson and seconded by Vice Chair Khush, they referred this item to the board for consideration at a future meeting.

Item 5 Water Resilience Roadmap – Update on Phoenix and Soulajule Projects

Engineering Division Manager Crystal Yezman introduced Engineering Planning Manager Elysha Irish, who provided a presentation on these projects. Much discussion between the board and staff occurred throughout the presentation.

There were three (3) public comments.

This was an information item. There were no formal actions taken by the board.

Item 6 On-Call Capital Maintenance and Repair Project

Engineering Division Manager Crystal Yezman introduced Engineering Construction Manager Mark Kasraie, who presented this item. Discussion between the board and staff also occurred throughout the presentation.

There were no public comments.

On motion made by Vice Chair Khush and seconded by Director Smith, they referred this item to the board for consideration at a future meeting.

Item 7 Approval of Pipeline Replacement Projects and Filing of Notices of Exemption Pursuant to the California Environmental Quality Act

Engineering Division Manager Yezman provided a presentation on this topic. Discussion ensued.

There were no public comments.

On motion made by Director Samson and seconded by Director Schmitt, they referred this item to the board for consideration at a future meeting.

Item 8 Professional Services Agreement with Vista-Vu (MA-6211)

Ms. Yezman also presented this item. Discussion followed.

There were no public comments.

On motion made by Vice Chair Khush and seconded by Director Smith, they referred this item to the board for consideration at a future meeting.

ADJOURNMENT

There being no further business, the Operations Committee Meeting/Special Meeting of the Board of Directors (Operations) adjourned at 11:09 a.m.

Board Secretary




Item Number: 02
Meeting Date: 08-18-2023
Meeting: Operations
Committee/ Special Board of Directors (Operations)

Review and Refer for Board Approval

TO: Board of Directors

FROM: Crystal Yezman, Director of Engineering 

THROUGH: Ben Horenstein, General Manager 

DIVISION NAME: Engineering

ITEM: Marin County Grand Jury Report Responses

SUMMARY

Each year the Marin County Civil Grand Jury is charged with publishing a report based on investigations conducted by volunteer members of the Civil Grand Jury under the supervision of the presiding judge. Pursuant to California Penal Code section 933, the governing body of a public agency whose operations are the subject of any report shall provide comments on this report to the presiding judge within 90 days following the final report. This is consistent with District Board Policy No. 44, which requires the Board to consider the response at a public meeting of the Board. This year the Grand Jury published two reports that touch on the operations of the Marin Municipal Water District and which will require a response: *Build More ADUs – An Rx to Increase Marin’s Housing Supply*, June 15, 2023, and *Dam and Reservoir Safety – Water May Save Us – Water May Drown Us*, June 27, 2023. Responses to these reports are due on September 15, 2023, and September 27, 2023, respectively.

Staff recommends that the Operations Committee review and refer this item to the Board of Directors at a regularly scheduled Board Meeting to approve the proposed Grand Jury responses and authorize the General Manager to execute and transmit on behalf of the District Board of Directors.

DISCUSSION

Section 933.05 of the California Penal Code prescribes the manner of response to a grand jury report. Specifically, as to each of the findings pertaining the District, the response shall indicate whether the District agrees with the finding or disagrees wholly or partially with the finding. If the latter, the response shall identify the portion with which there is disagreement and include an explanation of the reasons therefore. The response must also address each of the recommendations in the report pertaining the District by indicating (1) the recommendation has been implemented with an explanation, (2) the recommendation has not yet been implemented but will be in the future along with a timeframe, (3) the recommendation

requires further analysis along with an explanation of the scope of analysis and a timeframe, within six months, or (4) the recommendation will not be implemented along with an explanation of the reasons.

Staff has prepared proposed responses to each of the two grand jury reports and will present these to the Committee for review and referral to the September 5, 2023 Board Meeting. At the July 21st Operations Committee Meeting, staff presented an update on the District's Dam safety program, which provided the basis for developing the grand jury response on this report. At the August 1st Board of Directors' Meeting, staff presented a summary of District code relating to Accessory Dwelling Units, which provided the basis for developing the grand jury response on this report.

Staff will provide a brief overview of staff's recommended response to both Grand Jury Reports.

FISCAL IMPACT

None

ATTACHMENT(S)

- 1) Draft Grand Jury Response on *"Dam and Reservoir Safety: Water May Save Us – Water May Drown Us"*
- 2) Draft Grand Jury Response on *"Build More ADUs – An Rx to Increase Marin's Housing Supply"*

DRAFT**Response Form Continuation – Statements and Explanations****Marin Civil Grand Jury Report*****Dam and Reservoir Safety: Water May Save Us - Water May Drown Us (“Report”)***
Report Findings

F1. Climate change is increasing the atmospheric rivers’ strength and frequency which impacts communities across Marin County. Failure to include and recognize these growing threats underestimates current dam safety risks and possible preventive strategies.

Response - Partially disagree

Statement: The Marin Municipal Water District (MMWD) agrees that climate change is having an effect on the strength and frequency of weather events, including the larger storm events that are referred to as atmospheric rivers. MMWD staff have been actively participating in webinars and updates from the California-Nevada Drought Early Warning System for the last few years to better understand the timing and severity of these events. In addition, as a member of the Sonoma County Water Agency’s Technical Advisory Committee, MMWD is very familiar with atmospheric river forecasting and Forecast Informed Reservoir Operations (FIRO). MMWD is not aware, however, of any published scientific findings that the atmospheric river events associated with climate change pose a threat to dam safety. In terms of preventative strategies, MMWD is currently performing spillway condition and capacity assessments related to atmospheric river events to ensure that MMWD facilities are adequately sized to accommodate the potential for larger storm events. See response to F2 regarding what MMWD is currently doing regarding dam safety.

F2. MMWD and NMWD are in full compliance with both state DOSD (sic.), as well as all federal regulations. However, dam safety analysis and reporting would be enhanced by including current data on probable maximum precipitation (basis for risk analysis) numbers.

Response - Partially disagree

Statement: As stated in this finding, MMWD is in full compliance with all state and federal regulations and according to DSOD, all MMWD dams are determined safe for continued use. It is, however, important to distinguish between safety and risk. As MMWD continues to evaluate its dams and spillways, it will also consider storm-induced scenarios to adequately assess risks. MMWD is not aware of any published findings that point to increased risks to dam safety due to an increase in atmospheric river events.

With respect to probable maximum precipitation (PMP), MMWD will need to review available data to determine the extent to which this data would, in fact, enhance its analysis and reporting and help to inform decision making and mitigate risks. Further, MMWD will also need to do additional research, as it is not clear what “current data,” in general or specific to MMWD’s watersheds, is available and would be included in a PMP analysis. MMWD will continue to follow the relevant work done by the National

Academies of Sciences, Engineering and Medicine’s ad hoc committee project “Modernizing Probable Maximum Precipitation Estimation” and subsequent studies planned by the National Oceanic and Atmospheric Administration (NOAA) on these issues.

F3. MMWD and NMWD hazard mitigation plans fail to incorporate the latest scientific studies on climate change. They use DOSD and FEMA climate models that were last updated in 2012. This eleven-year gap may lead to an underestimation of current and future risks.

Response - Partially disagree

Statement: MMWD has a Hazard Mitigation Plan (HMP) that was adopted in 2022. This plan has a section on climate change and specifically dam failures as it relates to climate change (See section 15.4, *Marin Municipal Water District Hazard Mitigation Plan*). MMWD plans to update the HMP in 2024 to incorporate recommendations from its recently completed Strategic Water Supply Assessment. It is anticipated that the updated plan will also review the sections pertaining to dam safety and climate change to ensure that the latest information is incorporated into the HMP.

F4. FEMA and National Flood Insurance maps may not have entirely incorporated the most recent dam inundation maps and are not available on the MMWD and NMWD websites.

Response - Partially disagree

Statement: The FEMA Flood Insurance Rate Maps (FIRM) and the companion Flood Insurance Study (FIS) maintained by Marin County do not include dam inundation mapping. These flood risk products are instead based on flooding from various hydrologic scenarios and used for flood insurance purposes. Marin County may inquire with FEMA directly about the mapping criteria and other significant information that should be included in those products.

The MMWD website does provide inundation maps at marinwater.org/DamSafetyProgram (see “Inundation Maps” link). On this web page there are links pointing directly to the Department of Water Resources (DWR) Division of Safety of Dams’ (DSOD) inundation mapping portal. MMWD feels this is the most appropriate public user interface for dam inundation mapping and is the repository of the most current “approved” mapping for the District’s dams. MMWD’s website also provides a link to the County of Marin’s Marin Map website, which hosts the latest FEMA flood insurance rate maps (FIRMs). A link to these maps is housed on the MMWD’s website at marinwater.org/DamSafetyProgram (see “Marin Map webpage” link).

F5. The advancement of dam safety is greatly enhanced with the expertise of scientific institutions. They use a range of tools and practices such as FIRO, flyovers, weather balloons, radar along the coast, and collaborations between dam owners and scientific institutions. These practices, used by other water districts, serve as an example from which MMWD and NMWD can benefit.

Response - Partially disagree

Statement: It is important to note that Forecast Informed Reservoir Operations (FIRO) is

only fully practiced at one dam in California: Lake Mendocino¹. It is considered a pilot program and being studied at three other locations: Lake Oroville, New Bullards Bar, and the Prado Reservoir. Lake Mendocino is a dual-purpose reservoir, providing both water supply storage and flood control storage. FIRO practices at this dam provides better storage management within these two distinct volumes within the reservoir. Unlike the reservoirs to be served by FIRO, MMWD reservoirs are not managed for releases related to flood response, but rather are served by spillways utilized to allow overflow when the reservoirs have reached maximum holding capacity, and therefore, FIRO, though an important management tool, would not serve the same purpose at MMWD.

MMWD has been monitoring the progress of the Advanced Quantitative Precipitation Information (AQPI)² system development in the region through its partnerships with Sonoma Water as well as Marin County. As part of that project, a series of new X-band radars have been installed in the Bay Area and a new C-band radar is planned for a site in Marin County. As the project progresses MMWD will continue to evaluate its role and level of future participation. It is anticipated that AQPI may have a benefit for MMWD in regards to dam operations.

MMWD will continue to follow the guidance of state and federal agencies responsible for developing engineering criteria for dam safety. These agencies have the expertise and funding for those efforts as well as existing partnerships with other state and federal agencies with a scientific mission that allows vetted and verified scientific research to be applied to engineering criteria. MMWD anticipates that these science-based agencies will utilize the tools and practices noted in the Report's findings.

Additionally, MMWD staff have been actively participating in webinars and email updates from the California-Nevada Drought Early Warning System for the last several years. MMWD is also exploring a future collaboration with Center for Western Weather and Water Extremes Water Affiliates Group likely in a joint effort with other Marin County agencies including NMWD. The Center for Western Weather and Water Extremes (CW3E) is the preeminent organization involved with the science of atmospheric rivers. See explanations for R1 and R6 below for more information on this topic.

Report Recommendations

R1. By March 15, 2024, MMWD and NMWD should establish a Climate Change and atmospheric rivers working group to consider, and begin to develop, new hazard mitigation actions. These should be based on the current scientific projections regarding atmospheric rivers and other extreme precipitation events.

Response - Requires further analysis

Explanation: The benefit of forming such a working group as compared to participation in existing groups engaged in the same issues is unclear. Examples of existing groups

¹ Overall dam safety and the flood control operation of this dam is the responsibility of the US Army Corps of Engineers, not Sonoma Water.

² <https://www.sonomawater.org/aqpi/>

include the California Extreme Precipitation Symposium, the CW3E Water Affiliates Group, and the Association of State Dam Safety Officials. In addition, climate change isn't only impacting the two main water suppliers in Marin County but also local cities, the County and other special districts. Therefore, if forming a local group is prudent, one with broader participation would likely make more sense.

Timeframe: MMWD expects to evaluate this recommendation within the next six months (December 15, 2023).

R2. By December 31, 2023, the two water districts should begin work to expand their respective hazard mitigation plans, which should include a new section dedicated to climate change, and a discussion of atmospheric rivers and their accelerating potential threats to dam and reservoir safety.

Response - Has not yet been implemented

Explanation: As noted in F3, MMWD has a Hazard Mitigation Plan (HMP) that was adopted in 2022. This plan has a section on climate change and specifically a subsection on dam failure as it relates to climate change. The District currently has plans to update the HMP in 2024 to incorporate recommendations from its Strategic Water Supply Assessment. It is anticipated that the updated plan will also review the climate change and dam safety sections to ensure that the latest information, including a discussion on atmospheric rivers and their potential threats to dam and reservoir safety, will be incorporated into the HMP.

Timeframe: MMWD anticipates this will occur prior to December 31, 2024.

R3. By January 1, 2026, the water districts (at the time of their next dam inspections, and when their hazard mitigation plans are revised) should provide the public with new information about the updated plans. This information needs to ensure that they effectively consider flood risks in light of the new science, thus ensuring that the public is aware of this.

Response - Has not yet been implemented

Explanation: When a final draft of the updated MMWD HMP is ready, it will be presented to the MMWD Board of Directors at a public meeting for consideration and discussion. The MMWD website does provide information on its dam safety program: marinwater.org/DamSafetyProgram as well as a web page that tracks current lake levels, marinwater.org/WaterWatch (see individual links for specific reservoir levels). To the extent that additional monitoring equipment is installed in the future to measure the effects of atmospheric river events on dam safety, a summary of that data would be included in annual dam instrumentation reports that are submitted to DSOD.

Timeframe: MMWD anticipates this will occur prior to January 1, 2026.

R4. By September 30, 2023, both water districts should update their websites to include links to the inundation and FEMA maps. They should also provide links to the National Flood Insurance Program.

Response - Has been implemented

Explanation: MMWD provides links to inundation maps at marinwater.org/DamSafetyProgram (see "Inundation Maps" link). This web page links directly to the Department of Water Resources (DWR) Division of Safety of Dams'

(DSOD) inundation mapping portal. MMWD feels this is the most appropriate public user interface for dam inundation mapping and is the repository of the most current “approved” mapping for its dams.

The website also provides a link to the County of Marin’s Marin Map website which hosts the latest FEMA flood insurance rate maps (FIRMs), marinwater.org/DamSafety-Program (see “Marin Map webpage” link). The FEMA FIRMs do not integrate dam inundation mapping nor do FIRMs include levee failure inundation mapping. These maps are solely based on creek and overland flooding resulting from hydrologic events and any changes to that approach should be addressed to FEMA directly. As the lead agency for flood control, the County of Marin may inquire with FEMA directly about the appropriate mapping criteria and information that should be included in those products.

MMWD participates and coordinates with the County of Marin emergency response planning and mitigation efforts, including those related to dam inundation.

R5. By December 31, 2023, dam owners should provide the public with easily accessible information on flood risks, as FEMA and National Flood Insurance may not have entirely incorporated the most recent dam inundation maps.

Response – Has been implemented

Explanation: See explanation to R4 above regarding inundation mapping and FEMA flood mapping.

R6. By December 2023, both water districts should begin to explore collaborations with scientific institutions to learn from, expand their toolkit of mitigation strategies, and thus augment the safety of their dams in light of growing risks posed by atmospheric rivers.

Response – Has not yet been implemented

Explanation: MMWD is considering participation with the Center for Western Weather and Water Extremes (CW3E), which is the preeminent organization involved with the science of atmospheric rivers. There are currently only 14 water providers in California that are active members of CW3E’s Water Affiliates Group (WAG). MMWD is exploring a future collaboration with CW3E’s WAG, likely in a joint effort with other Marin County organizations including NMWD. Additionally, MMWD currently participates in webinars and email updates from the California-Nevada Drought Early Warning System, and has participated for the last few years.

Timeframe: MMWD anticipates this will occur by December 31, 2023.

DRAFT**Response Form Continuation – Statements and Explanations****Marin Civil Grand Jury Report*****Build More ADUs – An Rx to Increase Marin’s Housing Supply (“Report”)*****Report Findings**

F7. Impact, connection, and capacity fees vary considerably throughout the County and such fees can be a disincentive to homeowners considering ADU development.

Response – Agree

Statement: The Marin Municipal Water District (MMWD) agrees that fees associated with the development of Accessory Dwelling Units may vary considerably across different jurisdictions within the County. One possible reason for variation is that each local agency faces a unique combination of operating costs, deferred maintenance and planned future improvements. Therefore, each independent agency must determine the most appropriate methodology for calculating fees to best fit their unique conditions.

MMWD also agrees that fees can be a disincentive to homeowners considering ADU development. MMWD meter installation charges are intended to recover the associated labor, equipment and material costs for the work. In order to provide pricing options to our customers, the District does allow a property owner to hire their own qualified contractor to perform water service installations. See response to R4 for more on ADU connection fees.

R4. By December 1, 2023, begin a feasibility assessment of waiving or significantly lowering impact and connection fees for units smaller than 750 square feet

Response – This recommendation has been implemented.


Statement: In consideration of fees related to all new ADU development, the Board of Directors approved changes to the District’s municipal code. First in 2019 and then again in 2020, Ordinances 445 and 446 removed requirements for separate metering and payment of connection fees for certain common types of ADUs including those units smaller than 750-square-feet. In addition, going beyond state mandates, the District established criteria upon which other types of ADUs may qualify for a waiver to the requirements of separate metering and payment of connection fees. Where a connection fee for an ADU smaller than 750-square-feet is applicable, the current average fee is approximately \$3,406.




Item Number: 03
Meeting Date: 08-18-2023
Meeting: Operations
Committee/Board of Directors
(Operations)

Review and Refer for Board Approval

TO: Operations Committee/Board of Directors (Operations)

FROM: Paul Sellier, Director of Water Resources 

THROUGH: Ben Horenstein, General Manager 

DIVISION NAME: Engineering

ITEM: Marin-Sonoma Winter Water Intertie Project

SUMMARY

On February 28, 2023, the board adopted the Integrated Water Supply Roadmap that includes a range of short term projects and more complex, long term water supply projects. Staff recently reviewed proposals from Stantec and Carollo Engineers for preliminary engineering services for the Marin-Sonoma Winter Water Intertie Project that will enable the delivery of supplemental winter water from the Russian River to a District reservoir. Carollo's proposal and interview responses reflected a deeper understanding of the project complexities. Staff is requesting that the Committee refer the item to a regular bi-monthly Board Meeting to consider approval of a professional services agreement in an amount not to exceed nine hundred thirty-six thousand three hundred eighty-six dollars (\$936,386) with Carollo Engineers.

DISCUSSION

The Marin-Sonoma Winter Water Intertie Project (Project) was developed as part of the Strategic Water Supply Assessment (SWSA) and is a key component of the District's long-term water supply strategy. Staff reviewed proposals from two engineering firms: Stantec and Carollo Engineers. In review of the proposals, Carollo demonstrated exceptional attention to detail and awareness in key areas such as coordination with other project consulting teams, the potential role and impact of stakeholders, including private landowners, as well as understanding permitting requirements and the significance of PG&E's role, particularly for rural alignments. Carollo has proposed a scope of work that addresses the engineering challenges as well as integrating environmental and stakeholder considerations. Distinct from the high-level evaluation that was conducted as part of the SWSA, this phase of work will delve into details such as hydraulic modelling, right-of-way assessments, permitting requirements, environmental and cultural impacts, as well as assessment and comparison of constructability factors such as soil types, underground utility congestion and traffic impacts. This level of detail will lead to a credible and comprehensive alternatives analysis, which will help ensure that the

Project schedule is not impacted due to insufficient data or analysis. Both proposals had similar schedules with Stantec identifying a preferred alternative in July 2024 and Carollo by May of 2024.

Carollo has a good record of timely accomplishment with the District, having delivered design drawings and bid documents for the Emergency Intertie project in just four months under very challenging conditions. The Emergency Intertie project required interface and coordination with vendors, multiple jurisdictions, and specialist consulting teams working on bridge structural components, as well as environmental consultants, natural resource agencies, and private stakeholders such as Chevron and Union Pacific, in addition to detailed coordination with Caltrans. Carollo has proposed that the same team and team-members be assigned to the Marin-Sonoma Winter Water Intertie Project. Staff is confident that the Carollo team provides the District the necessary experience, skills and resources to complete this work successfully.

ENVIRONMENTAL REVIEW

There are no environmental impacts associated with this feasibility and pre-design work.

FISCAL IMPACT

The total cost impact associated with the proposed agreement is \$936,386. Funds for the contract are included in the Adopted FY 2023-25 Budget. In addition, the District has approximately \$1.3M in remaining grant funding available to support Roadmap water supply projects from the Division of Water Resources who awarded the District \$2 million for water supply projects.

ATTACHMENT(S)

1. Carollo Scope of Work
2. Carollo Fee Proposal

Marin Municipal Water District
Conveyance Improvements Project

SCOPE OF SERVICES

TASK 1 - PROJECT MANAGEMENT

TASK 1.1 - PROJECT ADMINISTRATION

Consultant will administer the project to maintain project schedule and budget. The project progress and budget status will be included in monthly progress reports that will be attached to billing invoices submitted to the District. Additionally, the monthly progress report will include a list of work completed for the invoice period and anticipated work efforts for the next invoice period.

TASK 1.2 - DEVELOP PROJECT WORK PLAN

Consultant to develop a detailed Project Work Plan (PWP). The PWP will serve as both a project procedures manual to govern day-to-day direction, including schedules, budgets, resource utilization, and information management systems and how the project will be implemented.

TASK 1.3 - CONDUCT KICKOFF MEETING

The Consultant will attend and manage the project kickoff meeting. Topics of discussion will include communications, schedule of meetings, project schedule and coordination between all parties.

Consultant will provide an agenda prior to the meeting and provide meeting minutes and action items following the kickoff.

TASK 1.4 - CONDUCT STATUS MEETINGS (BI-WEEKLY)

Consultant will conduct bi-weekly project coordination meetings with District staff to keep the project team updated on all ongoing activities. Meetings will be conducted using a platform agreeable to the District such as MSTEams, Zoom, Skype, or Go To Meeting.

Consultant will prepare a standing agenda and meeting minutes for each meeting. Bi-weekly project coordination meetings will be one (1) hour in length on a mutually agreed upon day of the week.

TASK 1.5 - ATTEND MMWD OUTSIDE CONSULTANT COORDINATION MEETINGS

Consultant will attend coordination meetings with the District's other in-house consultant teams as needed. This includes the environmental team (ESA) and team(s) performing other water supply planning or design efforts including storage improvements. We have provided an allowance of 60 hours for this task.

TASK 1.6 - IMPLEMENT QUALITY MANAGEMENT

Consultant will implement and maintain its standard quality management program for the project. All deliverables will be reviewed in accordance with the quality management program prior to being submitted to the District for review.

TASK 1 DELIVERABLES:

- Monthly progress reports.
- Meeting agendas and notes.

TASK 1 ASSUMPTIONS:

- Schedule to be nine (9) months.
- Kickoff meeting to be in person at District offices.

TASK 2 - DEVELOP DATA AND REQUIREMENTS

TASK 2.1 - REVIEW EXISTING DOCUMENTS

A review of existing information, related documents, and record drawings will be performed for the District's existing water facilities, Sonoma County Water Agency's (SCWA) existing water transmission system and other facilities that may be a part of the alternatives analysis. Additional documents pertinent to development of system hydraulics and alternative layouts to be evaluated will be requested from the District or other agencies as needed. An initial list of existing documents to review include the following, but not limited to:

- 2022 Strategic Water Supply Assessment Draft Report including appendices
- Water Resources 2040 Plan
- Kastania Pump Station Operations (2022) by Kennedy Jenks
- SCWA Water Supply Agreement
- MMWD's In-System "Bottleneck" Study (2022, as available)
- Water Shortage Contingency Plan (2021)
- Urban Water Management Plan (2021)
- Existing mapping data including:
 - Topography
 - Cadaster
 - Utility networks (MMWD and key SCWA facilities)
 - Biological and cultural resources
- Geologic and geotechnical information
- Record drawings of relevant District assets

TASK 2.2 - CONFIRM PROJECT GOALS, CRITERIA, AND ALTERNATIVES

TASK 2.2.1 - IDENTIFY INITIAL ALTERNATIVES

Consultant to work closely with District staff to identify project goals, constraints, assumptions, and criteria.

As part of this task, Consultant will identify the initial alternatives to be evaluated.

TASK 2.2.2 - CONDUCT PROJECT GOALS, CRITERIA, AND ALTERNATIVES WORKSHOP

Consultant will then conduct a project goals, criteria and alternatives workshop with District staff to discuss the project goals, constraints, assumptions, and criteria. The initial list of alternatives will also be discussed.

TASK 2.3 - DEVELOP DATA FOR ALTERNATIVES EVALUATION

Under this task, the Consultant will augment the data reviewed in Task 2.1 and develop data to support the Alternatives Evaluation (Task 3) including, but not limited to:

- Additional topographic and cadastral map data, whether from the public domain or surveyed by the Consultant
- Incorporation of data concerning biological and cultural resources and associated constraints (provided by ESA)
- Land use designations and restrictions including conservation easements
- Transportation networks including roads, bikeways, and mass transit
- Utility record drawings (for utilities other than MMWD)

TASK 2.4 - DEVELOP DRAFT PROJECT GOALS, CRITERIA, AND ALTERNATIVES TECHNICAL MEMORANDUM

Under this task, the Consultant will develop a draft Project Goals, Criteria, and Alternatives Technical Memorandum (TM). The TM will summarize all work developed under Task 2.

TASK 2.4.1 - CONDUCT TM REVIEW MEETING

A TM review meeting will be conducted after the District has reviewed the draft TM.

TASK 2.5 - DEVELOP FINAL PROJECT GOALS, CRITERIA, AND ALTERNATIVES TM

After the TM review meeting, Consultant will revise the draft TM and provide the District with a final Project Goals, Criteria, and Alternatives TM. A comments response log will be provided that addresses all District review comments and the log provided to the District:

TASK 2 DELIVERABLES:

- Project Goals, Criteria, and Alternatives Workshop agenda, materials, and meeting minutes.
- Draft Project Goals, Criteria, and Alternatives TM (PDF electronic copy).
- TM review meeting agenda, and meeting minutes.
- Final Project Goals, Criteria, and Alternatives TM (PDF electronic copy).
- Project Goals, Criteria, and Alternatives TM comment response log.

TASK 2 ASSUMPTIONS:

- Workshops to be in person at District offices.
- TM review meetings to be virtual.
- A total of eight (8) initial alternatives to be evaluated under this task.
- Task 2 to occur in the 2023 calendar year.

TASK 3 - EVALUATE PROJECT ALTERNATIVES

TASK 3.1 - SCREEN ALTERNATIVES

Under this task, the Consultant will develop the Screening Criteria and Evaluation Framework for the alternative's evaluation phase of the project. The Screening Criteria may include, but not limited to:

- Water Storage Benefits
- Construction Costs

- Right of Way (ROW) and Easement Requirements
- Operational Constraints and Benefits
- Environmental and stakeholder impacts and constraints
- Other criteria as needed

The Evaluation framework will also be identified and developed under this task.

TASK 3.1.1 – CONDUCT SCREENING CRITERIA AND EVALUATION WORKSHOP

Consultant will then conduct a Screening Criteria and Evaluation Workshop with District staff to discuss the project screening criteria and evaluation framework. The screening criteria and evaluation framework will include any modifications and/or additions as discussed in the workshop.

TASK 3.1.2 - DEVELOP DRAFT SCREENING CRITERIA AND EVALUATION TM

Under this task the Consultant will develop a draft Screening Criteria and Evaluation TM. The technical memorandum will summarize all work developed under Task 3.1.1.

TASK 3.1.3 - CONDUCT TM REVIEW MEETING

Under this task, the Consultant will conduct a technical memorandum review meeting after the District has reviewed the draft TM.

TASK 3.1.4 - DEVELOP FINAL SCREENING CRITERIA AND EVALUATION TM

After the TM review meeting, the Consultant will develop a Final Screening Criteria and Evaluation TM incorporating District review comments. A comments response log will be provided that addresses all District review comments and the log provided to the District.

TASK 3.2 - DEVELOP AND EVALUATE ALTERNATIVES

The Consultant will develop and evaluate alternatives not screened out to narrow the list to a preferred alternative(s) for Preliminary Design in Task 4. The preferred alternative(s) will be selected based on analyses presented in the following subtasks and presented to the District in a Preferred Alternative Selection Workshop and formalized in a Preferred Alternative Selection TM.

TASK 3.2.1 - FURTHER DEVELOP ALTERNATIVES.

Consultant will develop more detailed information as needed to support the alternatives evaluation. Such information might include:

- Exploration of potential constructability challenges including utility conflicts
- Development of conceptual plans, profiles and sections of key aspects of each alternative

TASK 3.2.2 - INCORPORATE ALTERNATIVE PERFORMANCE ANALYSIS (BY W&C)

Consultant will provide information to District's alternative performance consultant Woodard & Curran (W&C) as needed to model the key aspects of each alternative. Example inputs include flow rates and operational costs. W&C will then perform GoldSIM modeling of each screened alternative to assess project performance and establish cost/benefit metrics for inclusion in the Consultant's preferred alternative selection process.

Alternatives will be evaluated as standalone projects as well as in combination with proposed storage alternatives being evaluated under a separate effort.

Consultant will incorporate modeling results provided by W&C into the overall alternatives evaluation.

TASK 3.2.3 - ASSESS ENVIRONMENTAL & CULTURAL IMPACTS (BY ESA)

Consultant will provide information to the District's environmental consultant (ESA) to inform ESA's assessment of environmental and cultural impacts of each alternative for use by the Consultant in the preferred alternative selection process.

Consultant will environmental and cultural impact results provided by ESA into the overall alternatives evaluation.

TASK 3.2.4 - ASSESS CONSTRUCTABILITY

The Consultant will evaluate the constructability of each alternative for consideration in the selection process.

The constructability evaluation shall include, but is not limited to:

- Pipeline construction methods
- Construction access
- Construction installation risk assessment
- Right-of-Way, land acquisition requirements, and conservation easement restrictions
- Existing utility conflicts
- Material and earthwork hauling
- Electrical power requirements and PG&E availability
- Traffic impacts
- Permitting requirements
- NEPA/CEQA process impacts to project implementation (ESA will provide relevant work restrictions based on ESA's NEPA/CEQA analysis)

TASK 3.2.5 - ESTIMATE LIFE CYCLE COSTS

The consultant will estimate life-cycle cost of each alternative including, but not limited to, costs for:

- Preparation of Bid Documents
- Construction
- Annual Operation and maintenance costs
- Right-of-Way and property acquisition
- Permitting costs
- NEPA/CEQA compliance, in coordination with ESA
- Cost of increased water purchases (if applicable)

TASK 3.2.6 - IDENTIFY PERMITTING AGENCIES AND REQUIREMENTS

Under this task, the Consultant will identify permitting agencies to be coordinated with for each alternative alignment. The actual permit such as encroachment, license or easement will be identified along with permit requirements. Approximate permit fees will also be identified. A contact person for each permitting agency will be identified with full contact information for future use.

TASK 3.2.7 - CONDUCT HYDRAULIC MODELING

Consultant will conduct hydraulic modeling analysis for each alternative to identify required components. The modeling will identify components such as pipeline diameter, pump station(s), shut off valve(s), and other required hydraulic components.

TASK 3.2.8 - IDENTIFY RIGHT OF WAY AND EASEMENT REQUIREMENTS

Under this task, Consultant will identify any right-of-way (ROW) and/or private easement requirements for each alternative. The Consultant will identify both permanent and temporary construction easements and where they will be required.

TASK 3.2.9 – CONDUCT PREFERRED ALTERNATIVES SELECTION WORKSHOP

The Consultant will prepare a Draft Preferred Alternative Selection TM which presents the findings of Tasks 3.2.1 through 3.2.8, and identifies preferred alternative(s).

TASK 3.2.10 - DEVELOP DRAFT PREFERRED ALTERNATIVE SELECTION TM

Under this task the Consultant will develop a Draft Preferred Alternative Selection TM. The technical memorandum will summarize all of the work developed under Task 3.2 and identify the Preferred alternative that will be taken into the preliminary design phase at a later date.

TASK 3.2.11 - CONDUCT TM REVIEW MEETING

Under this task, the Consultant will conduct a technical memorandum review meeting after the District has reviewed the draft TM.

TASK 3.2.12 - DEVELOP FINAL PREFERRED ALTERNATIVE SELECTION TM

After the technical memorandum review meeting, Consultant will revise the draft TM and provide the District with a Final Preferred Alternative Selection TM. A comments response log will be provided that addresses all District review comments and the log provided to the District.

TASK 3.3 - MMWD BOARD OF DIRECTORS PRESENTATION

Under this task, the Consultant will coordinate with District staff to prepare presentation materials and present the findings of the draft Preferred Alternative Selection TM to the MMWD Board of Directors for approval. Feedback provided by the Board will be incorporated into a Final Preferred Alternative Selection TM.

TASK 3 DELIVERABLES:

- Screening Criteria and Evaluation Workshop agenda, materials, and meeting minutes.
- Draft Screening Criteria and Evaluation TM (PDF electronic copy).
- TM Review Meeting agenda, and meeting minutes
- Final Screening Criteria and Evaluation TM (PDF electronic copy).
- Screening Criteria and Evaluation TM comment response log.
- Preferred Alternatives Selection Workshop agenda, materials, and meeting minutes.
- Draft Preferred Alternatives Selection TM (PDF electronic copy).
- TM review meeting agenda, and meeting minutes.
- MMWD Board of Directors presentation and supporting materials.
- Final Preferred Alternatives Selection TM (PDF electronic copy).

- Preferred Alternatives Selection TM comment response log.

TASK 3 ASSUMPTIONS:

- Workshops to be in person at District offices.
- TM review meetings to be virtual.
- A total of four (4) alternatives to be evaluated under this task.
- No transient (surge) analysis to be completed under this phase of the project.
- No desktop geotechnical evaluation to be completed under this phase of the project.
- No trenchless construction evaluation to be completed under this phase of the project.

DRAFT



TASK	CAROLLO															OTHER DIRECT COSTS								COST SUMMARY					
	Prudhel	Taylor	Marshall	Kriss/Zappone	Baune	Coulter	Whitehouse	Avon	Huang	Humpherys	Shankel	Mitchell	Subtotals			PECE	Subconsultants				Sub-consultant	Misc. Costs and Printing	Travel	Total ODCs	Total Cost				
	PIC	PM	QM	TA	PE	Pipeline Engineer	Pump Station Engineer	Trenchless	Hydraulic Modeling	Transient Analysis	Permitting	AP	GIS/CADD Sr. Tech.	GIS/CADD Tech.	Clerical		Hours	Budget	Cinquini & Passorino	Miller Pacific						ARWS	W. Xairo		
	2023 Rates	\$349	\$349	\$349	\$349	\$330	\$263	\$311	\$330	\$311	\$330	\$311	\$214	\$224	\$161	\$143	\$14.00												
2024 Rates	\$366	\$366	\$366	\$366	\$347	\$276	\$327	\$347	\$327	\$347	\$327	\$225	\$235	\$169	\$160	\$15.00													
Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25				
Task 1 - Project Management																													
1.1 Project Administration	28	40	0	0	0	14	0	0	0	0	0	0	28	0	28	138	\$39,532	\$2,070	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500	\$0	\$2,570	\$42,102
1.2 Develop Project Work Plan	0	2	0	0	4	0	0	0	0	0	0	4	0	0	2	12	\$3,320	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180	\$3,500
1.3 Conduct Kickoff Meeting	2	2	0	0	4	0	0	0	0	0	0	4	0	0	2	14	\$4,052	\$210	\$0	\$0	\$0	\$0	\$0	\$0	\$100	\$150	\$0	\$460	\$4,512
1.4 Conduct Status Meetings (Bi-Weekly) (28 Meetings)	14	28	0	0	28	56	14	0	4	0	4	28	0	0	14	190	\$56,138	\$2,850	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,850	\$58,988
1.5 Conduct MMWD Outside Consultant Coordination Meetings	4	16	0	0	16	8	0	0	0	0	0	8	0	4	4	60	\$18,156	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900	\$19,056
1.6 Implement Quality Management	0	2	4	0	4	0	0	0	0	0	0	0	0	0	0	10	\$3,584	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$3,734
Task 1 Total Hours	48	90	4	0	56	78	14	0	4	0	4	44	28	4	50	424													
Task 1 Total Budget	\$17,568	\$32,940	\$1,464	\$0	\$19,432	\$21,528	\$4,578	\$0	\$1,308	\$0	\$1,308	\$9,900	\$6,580	\$676	\$7,500	\$124,782	\$6,360	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600	\$150	\$7,110	\$131,892	
Task 2 - Develop and Maintain Project Schedule																													
2.1 Review Existing Documents	0	2	0	0	8	16	4	0	2	0	0	16	0	0	0	48	\$12,836	\$672	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$672	\$13,508
2.2 Confirm Project Goals, Criteria and Alternatives	4	8	0	0	12	32	4	0	0	0	0	56	0	20	8	144	\$34,156	\$2,016	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150	\$2,316	\$36,472	
2.3 Develop Data for Alternatives Evaluation	0	4	0	0	8	16	4	0	2	0	0	32	0	4	4	74	\$18,174	\$1,036	\$15,300	\$0	\$0	\$0	\$0	\$15,300	\$1,530	\$0	\$0	\$17,866	\$36,040
2.4 Develop DRAFT Project Goals, Criteria and Alternatives TM	8	12	8	4	20	40	0	0	0	0	0	40	0	12	12	156	\$40,496	\$2,184	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,184	\$42,680
2.5 Develop FINAL Project Goals, Criteria and Alternatives TM	2	4	2	2	4	8	0	0	0	0	0	8	0	4	4	38	\$9,842	\$532	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$532	\$10,374
Task 2 Total Hours	14	30	10	6	52	112	12	0	4	0	0	152	0	40	28	460													
Task 2 Total Budget	\$4,886	\$10,470	\$3,490	\$2,094	\$17,160	\$29,456	\$3,732	\$0	\$1,244	\$0	\$0	\$32,528	\$0	\$6,440	\$4,004	\$115,504	\$6,440	\$15,300	\$0	\$0	\$0	\$0	\$15,300	\$1,530	\$150	\$150	\$23,570	\$139,074	
Task 3 - Evaluate Project Alternatives																													
3.1 Screen Alternatives	12	12	10	0	20	48	0	0	0	0	0	48	0	8	14	172	\$46,884	\$2,580	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150	\$2,880	\$49,764	
3.2 Develop and Evaluate Alternatives	26	80	44	34	184	440	100	0	68	0	52	616	4	256	136	2040	\$527,776	\$30,600	\$11,300	\$0	\$15,000	\$5,000	\$31,300	\$3,130	\$300	\$300	\$65,630	\$593,406	
3.3 MMWD Board of Directors Presentation	2	8	0	0	8	8	0	0	0	0	0	16	16	24	4	86	\$20,660	\$1,290	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150	\$1,590	\$22,250	
Task 3 Total Hours	40	100	54	34	212	496	100	0	68	0	52	680	20	288	154	2298													
Task 3 Total Budget	\$14,640	\$36,600	\$19,764	\$12,444	\$73,564	\$136,896	\$32,700	\$0	\$22,236	\$0	\$17,004	\$163,000	\$4,700	\$48,672	\$23,100	\$595,320	\$34,470	\$11,300	\$0	\$15,000	\$5,000	\$31,300	\$3,130	\$600	\$600	\$70,100	\$665,420		
Total Hours	102	220	68	40	320	686	126	0	76	0	56	876	48	332	232	3182													
Total Cost	\$ 37,094	\$ 80,010	\$ 24,718	\$ 14,538	\$ 110,156	\$ 187,880	\$ 41,010	\$ -	\$ 24,788	\$ -	\$ 18,312	\$ 195,428	\$ 11,280	\$ 55,788	\$ 34,604	\$ 835,606	\$ 47,270	\$ 26,600	\$ -	\$ 15,000	\$ 5,000	\$ 46,600	\$ 4,660	\$ 1,350	\$ 900	\$ 100,780	\$ 936,386		