

**NORTH MARIN WATER DISTRICT
MINUTES OF SPECIAL MEETING
OF THE BOARD OF DIRECTORS
January 27, 2026**

CALL TO ORDER

President Eichstaedt called the special meeting of the Board of Directors of North Marin Water District to order at 10:00 a.m. at the District Headquarters, and the agenda was accepted as presented. Present were Directors Ken Eichstaedt, Rick Fraites, Michael Joly, and Stephen Petterle. Director Jack Baker arrived at 10:20. Also, present were General Manager Tony Williams, AGM/Chief Engineer Eric Miller, and Auditor-Controller Julie Blue. District Secretary Eileen Mulliner was absent.

Staff members Tim Kennedy, Operations and Maintenance Manager, Chris Kehoe, Construction and Maintenance Superintendent, Tim Fuelle, Avram Peralman, Sebastian Rubio-Gomez, Blake Hall, Corey Reed, Rebecca Sylvester, Kent LeBrun, Jeff Corda, Pablo Ramudo, and Ryan Grisso were also in attendance.

Jeff Tarantino and Sean Chou, of Freyer & Laureta, and Rachel Lanigan, of West Yost, were also in attendance.

PUBLIC WORKSHOP

Attached are the minutes for the Board Workshop Special Meeting for the 2025 Novato Water System Master Plan taken by Freyer & Laureta.

ACTION CALENDAR

On the motion of Director Joly, seconded by Director Petterle, the Board approved the 2025 Novato Water System Master Plan – Final Report by the following vote:

AYES: Director(s) Baker, Eichstaedt, Fraites, Joly, and Petterle

NOES: None

ABSENT: None

ABSTAIN: None

ADJOURNMENT

President Eichstaedt adjourned the meeting at 12:23 p.m.

Submitted by



Eileen Mulliner
District Secretary

Novato System 2025 Master Plan Acceptance Workshop

Meeting Minutes

Date & Time: January 27, 2025, 10:00 a.m.

Location: North Marin Water District

Summary of discussions are written in *italics*. Summary of post-meeting notes, if any, are written in *italics and underlined*. Open action items are written in **bold**.

Attendees:		Organization
X	Michael Joly	North Marin Water District (District) Board of Directors
X	Ken Eichstaedt	District Board of Directors
X	Jack Baker	District Board of Directors
X	Rick Fraites	District Board of Directors
X	Stephen Petterle	District Board of Directors
X	Tony Williams	District
X	Chris Kehoe	District
X	Julie Blue	District
X	Eric Miller	District
X	Tim Fuelle	District
X	Blake Hall	District
X	Jeff Corda	District
X	Avram Pearlman	District
X	Rebecca Sylvester	District
X	Sebastian Rubio-Gomez	District
X	Kent Lebrun	District
X	Pablo Ramado	District
X	Ryan Grisso	District
X	Corey Reid	District
X	Jeffrey Tarantino	Freyer & Laureta, Inc. (F&L)
X	Sean Chou	F&L
X	Rachel Lanigan	West Yost

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Discussion Items:

1. Introduction

- *The whole group went through brief introductions. Meeting attendees are listed above.*

2. Workshop Goals

- *Learn about the types of risks facing the District as the Novato water system continues to age*
- *Consider risk levels vary and will always be present.*
- *Metrics used to develop the CIP*
- *Review potential funding strategies for future discussion.*

3. Strategic Plan Alignment

- The Master Plan aligns with five action items from the 2025-2030 Strategic Plan,
 - Action 1.1: Replace aging infrastructure using a phased approach
 - Action 1.2: Implement system redundancy as part of the overall CIP
 - Action 1.3: Leverage proven technology to establish a comprehensive asset management and preventative maintenance program
 - Action 1.5: Strengthen seismic and rural resilience
 - Action 3.2: Strengthen infrastructure resilience through assessment and contingency planning
- The Strategic Plan is an organizational document while the Master Plan is an infrastructure-focused document that develops the Capital Improvement Program (CIP) by evaluating the performance of the system given certain potential risks such as aging infrastructure and natural hazards.

4. Part 1: Risk Evaluation Framework

- *The Project Team (Team) presented the methodology and risk framework that was used to evaluate the District's assets. A two-pronged approach was described: Asset Management (risk of asset failure due to condition, non-emergency), and Natural Hazard Assessment (risk of asset failure due to natural Hazard, emergency).*
- *Both the Asset Probability Index (API) and the Asset Impact Index (AII) were described. API and AII for the District were weighed at 0.6 and 0.4, respectively.*
- *API is the probability that an asset will fail and takes factors like age, condition, performance, and maintenance into account. The API uses a 1-10 scale.*
- *AII is the impact of asset or facility failure. The Criticality/consequences of failure. It considers Social Impact, Economic Impact, and Environmental Impact. The AII uses a 1-10 scale.*

5. Asset Management Risk Review

- *Very few of the District's Pipelines fell into the High-Risk Category, roughly 2%.*
- *The Board asked about whether the aqueduct was included within this study. The Team explained that the aqueduct was included in the study and is shown as negligible or low Risk Category. The group discussed if the aqueduct was accurately presented as a crucial component of the system, especially in light of the recent landslide. The aqueduct pipeline asset management risk results do not factor natural hazards but rather they represent the risk of failure, which mostly considers age and*

condition. The aqueduct pipeline has a low likelihood of failure due to its current age and condition but a high consequence if it does fail.

- A discussion related to the Ridge Road pump station and why it was shown as a high-priority item occurred. The Team noted that the ratings, as of now, are heavily reliant on facility age, so Ridge Road pump station is one of the oldest and therefore one of the highest-ranked pump stations. Additional condition assessments are needed for all pump stations and tanks to determine the actual ranking.*
- The Team presented one scenario where an age-based replacement strategy would result in the District replacing the whole system within 100 years. This equates to 1% of the system per year, or roughly 3 miles.*
- The analysis shows that 4% of the pipelines are currently “overdue” for replacement based solely on age-based risk consideration, with another 2% in the following 10 years. As time goes on, and due to the significant portion of District’s pipe being installed over a relatively short period of time, the total length of pipe coming due for replacement based on age will create a peak similar to a bell curve.*
- Industry standard is to replace roughly 1-4% of the total system per year, and the scenario presented falls right in that zone.*
- The group discussed what the study found regarding the historical value/percentage of pipeline that the District is currently replacing. The District is relatively young and has recently begun transitioning from building new systems to maintaining older ones. One Master Plan recommendation is to begin planning for expanded annual pipeline replacement moving forward.*
- A group discussion about the useful life of the pipe installed now and of the District’s system occurred. The Team explained that useful life depends on multiple factors, including the type of pipe and the soil type. Further investigation is needed to better determine the useful life of the District’s in situ pipe.*
- The Team expressed that continued enhancement of the District’s existing asset management program (NEXGEN) is needed. The more data and information that is obtained, the easier maintenance requirements forecasting will be for District staff. The group further discussed that performing additional condition assessments and incorporating the data into the NEXGEN platform can be a powerful planning tool.*
- A discussion related to concern about the tanks and pump stations in regards to replacement and whether the District is on track with replacement. The Team stated that the pump stations and tanks were assessed at a high level, but further refinement is needed. Additionally, the Lynwood Engineering Assessment aligns with the observations in this assessment.*

6. Natural Hazard Assessment

- The Natural Hazard Assessment uses the AWWA J100 Standard, which utilizes a multifaceted seven step process. District staff participated in a two-day workshop in April 2025 to develop facility ratings.*
- A question about whether Cyber Security was assessed as part of the Master Plan and it was confirmed that cybersecurity was not reviewed. The District recently completed the five year update to its Risk and Resiliency Assessment, which did include cyber security threat review.*
- Each asset was combined with each relevant natural hazard threat, called Threat-Asset Pairs. Examples like Earthquake and Lynwood Pump Station, or Wildfire and Half Moon Tank.*
- The group discussed that the lake and dam infrastructure were accounted for in natural hazard assessment but the intent of this Master Plan was to focus on pipes, pump stations, and tanks. A separate structural analysis outside of the Master Plan has been conducted and found that the dam was performing in conformance with regulatory requirements.*
- Earthquakes and liquefaction are the highest-ranked hazards.*

- *A group discussion related to sea level risk for District assets and if it should be a priority. The group discussed that the District is responsible for providing water service to its customers but other agencies are more directly impacted by sea level rise because District assets are generally located within other agencies' assets. The example being that roadways often contain all utilities, which are maintained by County or City to provide access to the communities. The District can collaborate with the County and City has those agencies consider potential sea level adaptive strategies.*
- *The group discussed that high wind events were identified as a high risk and the assets were evaluated to identify if District assets would be impacted. The largest risk related to high wind is impact to electrical infrastructure, which could cause power outages.*
- *Earthquake is another high risk. The group discussed that as projects are designed, they are designed meeting seismic requirements even if those project are not specifically selected for seismic updates. Examples include flexible joints at Bahia, Crest, and San Mateo Tank. These projects have also shown that new updated standards for the District are needed.*
- *The District may consider additional studies are needed to fully understand the high-risk critical areas; the Master Plan includes a high-level assessment of the assets. Additional studies may include:*
 - *Expand the risk assessment to include malevolent acts, proximity hazards, dependency hazards Etc.*
 - *Vegetation management at facilities prone to wildfire risk*
 - *Staff succession and training so that future staff and past staff share the same information.*

7. Capital Improvement Plan (CIP) Strategies and Next Steps

- *The group reviewed items originally presented during October 2025 workshop.*
 - *Customer demands from 2020 to 2024 reviewed and compared to historical demands, particularly the demands used for the 2018 Master Plan update. The most recent five years of demands were lower due to several factors including increase recycled water use, two droughts, and changes in customer behavior.*
 - *Potential future, additional demands based on potential development was also reviewed to understand if there is a significant potential increase that may affect infrastructure design criteria. However, the potential development projections within the Novato Water System service area are not projected to exceed current project demands from the District's 2020 Urban Water Management Plan (UWMP).*
 - *Based on review of historical and current demand, the Master Plan utilized Infrastructure Planning Demands that matches demands used for the 2018 Master Plan. While current demands are lower than historical demands, additional demand monitoring is required to determine whether customer behavior has permanently changed.*
 - *The Infrastructure Planning Demand was used to evaluate the performance of the Novato Water System. The analysis concluded that the District's pumping and storage capacities are adequate to meet current and future demands. Some hydraulic deficiencies were identified in the analysis, which informs design criteria for capital improvement project.*
- *The group discussed the asset management, performance, demands, and natural hazard assessment to form the basis of the CIP list. Projects were prioritized to inform distribution of available budget based on the highest risk assets identified. The highest priority for improvements were the high-risk pipelines and high-risk pipelines. The second priority for improvements is medium-risk pipelines and medium-risk pump station.*
- *The Team estimates that the total value of District's pipelines, pump stations, and tanks in 2025 dollars is approximately \$755 million. The largest asset is the pipelines with an estimated value of \$654 million.*

- *To better understand actual performance of the pipelines, the Team reviewed leak data to understand whether pipelines of a certain age and/or certain material at an elevated risk of leaks. Three types of leaks were identified: external or natural hazards (Trees, contractors, etc.), poor construction (wrong materials or construction methods), and unknown. The analysis found that very few of the leaks observed were due to material fatigue. The Team concluded that many of the installed pipelines are not exhibiting signs declining performance but, as pipelines continue to age, staff may begin to observe an increase in leaks.*
- *The group reviewed three potential funding approaches to develop a long-term Capital Improvement Program (CIP) based on the various analysis that were developed in the Master Plan. The options include:*
 - *Option A: Create CIP that implements infrastructure replacement projects based primarily on age. The group discussed that under this approach that:*
 - *Projects could be replacing a pipe that does not need to be replaced if pipeline is still performing adequately, thereby, exceeding its design life.*
 - *The approach would require a significant increase in funding and staffing for an estimated 10 years to 15 years given the age of most of the existing pipelines. The replacement program would become cyclical with periods of increased funding needs followed by periods of decreased funding needs for extended periods of time.*
 - *The estimated peak budget requirements is \$15 million but this peak budget need would be preceded and followed by annual budget needs ranging between \$5 million and \$12 million.*
 - *Option B: Create a CIP that balances age-based replacement strategy with some condition assessment informing pipeline segments that could be kept in operation for additional time. The group discussed that:*
 - *This option would extend the period to begin replacing aging pipelines to reduce the peak investment by recognizing that the existing pipelines performance is acceptable.*
 - *By extending the replacement timeline, the peak investment needs are reduced and thereby normalizing the annual CIP budget needs.*
 - *The estimated annual budget requirement is \$10 million with periods of reduced budget need between \$5 million and \$7 million.*
 - *Option C: The group discussed that a more sustainable, and perhaps more appropriate, funding strategy that can better leverage the District's current "pay/go" approach is to develop an annual CIP budget that would remain consistent year-over-year. The group discussed that:*
 - *The various technical analysis performed as part of the Master Plan show that Novato Water System continues to meet the customer needs. While the overall age of the system continues to increase, the performance data indicates that there is life remaining.*
 - *Developing a more modest annual budget increase will allow the District to begin implementing recommended high priority improvements but there would be risk that the system may begin to show signs of reduced performance as pipelines and key assets continue to age.*
 - *One advantage is that this option would develop and maintain a consistent renewal and replacement program year-over-year to align with material useful life.*
 - *The estimated annual budget is approximately \$7 million.*
- *The group discussed the three potential funding strategies including advantages and disadvantages. Although no decisions were made, the group agreed that Option C appeared to be a reasonable approach for consideration during the next rate study.*

- *The Board commented that the approximated annual budget of \$7 million in Option C seemed low based on the information presented during the workshop. The Team stated that more refined cost estimates would be developed during future rate studies to inform rate increase needs.*

8. Action and Next Steps

- *On motion of Director Joly and second of Director Petterle, the Board voted unanimously to accept the Master Plan.*
- *Next Steps*
 - *Conduct detailed condition assessments at high priority facilities.*
 - *Refine cost estimates and develop a funding strategy for future rate studies.*
 - *Incorporate final District comments into the Master Plan – Final Report.*