

**NORTH BAY WATER REUSE AUTHORITY  
TECHNICAL ADVISORY COMMITTEE**

Thursday, July 11, 2024

Agenda

2:00 PM

Zoom Meeting: <https://us02web.zoom.us/j/89055428051>

	1.		Call to Order and Self Introductions
	2.	Action	Approval of Agenda
	3.		Public Comments
<b>Page 2</b>	4.	Action	Status of TAC Chair and Vice Chair
<b>Pages 3 – 5</b>	5.	Action	TAC Meeting Minutes of June 6, 2024
<b>Pages 6 – 8</b>	6.	Discussion	Status of Phase 1 Reconciliation and Closeout Activities
<b>Pages 9 – 20</b>	7.	Discussion	Resilience Arena Status Reports
<b>Pages 21 – 22</b>	8.	Discussion	Title XVI Funding Opportunity
<b>Pages 23 – 24</b>	9.	Discussion	FY2024/25 Budget and Consultant Agreements Status
<b>Page 25</b>	10.	Discussion	Plans for Next Board Meeting, September 30, 2024
	11.	Information	Next Meeting, August 1, 2024
	12.		Adjournment

**ITEM NO. 4 STATUS OF TAC CHAIR AND VICE CHAIR**

**Action Requested**

Discuss and confirm a TAC Chair and Vice Chair

**Summary**

Pam Jeane, Sonoma County Valley Sanitary District, is the current TAC Chair. There has been no Vice Chair since the retirement of Tim Healy, Napa Sanitation District. The TAC should discuss and confirm a Chair and Vice Chair.

**Recommendation**

Discuss and confirm a TAC Chair and Vice Chair.

**Attachments**

None.

**North Bay Water Reuse Authority  
Technical Advisory Committee  
Zoom Meeting Minutes  
June 6, 2024**

**DRAFT**

Approved \_\_\_\_\_

**1. Call to Order and Self Introductions**

Acting Chair Chuck Weir called the Technical Advisory Committee (TAC) meeting to order at 2:04 p.m. on Thursday, June 6, 2024. The meeting was a Zoom meeting only and attendees participated via the following link: <https://us02web.zoom.us/j/81859156246>.

Committee Members Present

Lucy Croy	Marin Water
Erik Brown	Novato Sanitation District
Andrew Damron	Napa Sanitation District
Judd Goodman	Marin County
Oriana Hart	Petaluma
Curtis Paxton	Las Gallinas Valley Sanitary District
Chelsea Thompson	Petaluma
Tony Williams	North Marin Water District

Others Present

Member Agencies	
Dale McDonald	Las Gallinas Valley Sanitary District
Gina Benedetti-Petnic	Petaluma
Public	
Charles Gardiner	Catalyst Group

Consultant Team

Chuck Weir, Program Manager	Weir Technical Services
Rene Guillen	Brown & Caldwell
Mark Millan	Data Instincts
Jim O’Toole	ESA
Michael Savage	Data Instincts
Dawn Taffler	Kennedy Jenks
Karina Yap	Kennedy Jenks

**2. Approval of the Agenda**

The Agenda was approved with no changes.

**3. Public Comments**

There were no public comments.

**4. TAC Meeting Minutes of April 4, 2024**

The TAC Meeting Minutes of April 4, 2024 were approved with one abstention.

**5. Review Directors from Each Agency**

The Program Manager and Mark Millan requested updated information from each agency for both the Director and Alternate to ensure the distribution lists and website were accurate. The Program Manager will send an email to the TAC requesting the information.

**6. Resilience Arena Status Reports**

Rene Guillen, Jim O’Toole, and Karina Yap discussed the Recycled Water Resilience Arena, including status of NEPA required items, financial capability analysis, time line, and next steps. Petaluma is interested in seeking funding.

Rene Guillen discussed the Drought Contingency Planning Resilience Arena, including scheduling a kickoff meeting. Mike Savage gave a brief history of the study including the initial efforts by Napa Sanitation District. He also stated that having a plan allows funding of identified projects through USBR.

Jim O’Toole discussed the Sea Level Rise Resilience Arena, including the three workshops that have been held and the status of Tech Memo No. 1.

**7. Title XVI Funding Opportunity**

Rene Guillen discussed the upcoming funding opportunity through Title XVI. It is applicable to all Phase 2 projects. There is budget remaining to process a grant application. Following discussion, it was agreed to send applicable descriptions of the Phase 2 projects from the Feasibility Study. It was further pointed out that timing is key for these projects to get in the queue for both Title XVI and SRF funding now, since once the Bay Area POTWs start seeking funding to comply with the Nutrients Watershed Permit there is unlikely to be funding available through the SRF. In addition, USBR is eager to distribute funds before the November election.

**8. FY2024/25 Budget**

Rene Guillen and Jim O’Toole discussed budget needs for FY2024/25. It should be noted that there was no budget for FY2023/24 Funds from FY2022/23 are still being used in FY2023/24. For FY2024/25 the following funds are required:

Recycled Water Resilience Arena	\$150,000
Sea Level Rise Resilience Arena	\$87,488
Drought Contingency Planning Resilience Arena	None at this time
Sonoma Water Administration	To be determined
Program Management	To be determined

It was noted that the cost sharing in the packet was incorrect. The cost sharing will be the same as in the FY2022/23 budget. It was also noted that the Program Manager’s agreement ends on June 30, 2024 and it will not be renewed. If funds are available in the agreement the Program Manager is willing to stay until the funds are gone. This is subject to approval by Sonoma Water. Since the level of effort is so small at this time it does not make sense to do an RFP for a new Program Manager. Instead Sonoma Water should be able to manage.

A draft budget with the correct cost sharing will be sent to the TAC after the meeting. It will include estimates for Sonoma Water administration and program management. The TAC is requested to review this with their Board member so that there will be no surprises at the Board meeting.

**9. Plans for Next Board Meeting**

A Board meeting has been scheduled for June 24, 2024 at 9:30 a.m. via Zoom. The Board last met on April 24, 2023. The Board should be updated on the following:

1. Status of Phase 1 closeout and reconciliation.
2. Status of Phase 2 projects.
3. Status of the Resilience Area projects
4. Financial Report
5. FY24/25 Budget needs to be approved
6. Other Items

In addition, since there are likely to be new participants the history of NBWRA should be reviewed.

**10. Next Meeting**

The next meeting is scheduled for July 4, 2024. Since this is a holiday, the meeting will be moved to July 11, 2024 at the usual time of 2:00 p.m.

**11. Adjournment**

There being no further business, the meeting was adjourned at 3:05 p.m.

**ITEM NO. 6 STATUS OF PHASE 1 RECONCILIATION AND CLOSEOUT ACTIVITIES****Action Requested**

None at this time

**Summary**

Phase 1 projects received a \$25 million federal authorization by Congress in March 2009. USBR awarded the funds to NBWRA via two federal programs.

The first \$7.3M via the American Recovery and Reinvestment Act (ARRA). The ARRA projects and funding agreement were completed and closed out in 2012.

The remaining funds under the authorization were awarded to NBWRA via the Title XVI program between 2010 and 2021. A final closeout package was submitted to USBR on February 16, 2022. This package included a final reimbursement request, Federal Financial Report, Final Project Report, Project Descriptions, and Maps and Photos for the 12 sub-projects that received funding which are listed below:

1. Novato South Service Area Recycled Water Project and Treatment Plant Expansion  
(Las Gallinas Valley Sanitary District/Marin Municipal Water District)
2. Novato South Service Area Hamilton Field (Novato South) Phase 1a  
(North Marin Water District/Las Gallinas Valley Sanitary District)
3. Novato South Service Area Hamilton Field (Novato South) Phase 1b  
(North Marin Water District/Las Gallinas Valley Sanitary District)
4. Novato South Service Area Hamilton Field (Novato South) Phase 2  
(North Marin Water District/Las Gallinas Valley Sanitary District)
5. Novato Central Service Area Pipeline Distribution Project and Norman Tank Project  
(North Marin Water District)
6. Novato Central Service Area Recycled Water Facility Expansion  
(Novato Sanitary District)
7. Novato North Service Area Recycled Water Treatment Facility Tertiary Upgrade, Pipelines, Booster Pump and Storage Tank  
(North Marin Water District and Novato Sanitary District)

8. Milliken-Sarco-Tulocay (MST) Recycled Water Pipeline Expansion, Treatment Capacity Increase, and Pump Station Modifications Project  
(Napa Sanitation District)
9. Sonoma Valley Wastewater Treatment Plant Improvement Project (Pumping and Piping Upgrades)  
(Sonoma Valley County Sanitation District)
10. Sonoma Valley 5th Street East Recycled Water Pipeline Project  
(Sonoma Valley County Sanitation District)
11. Sonoma Valley McGill Recycled Water Pipeline Project  
(Sonoma Valley County Sanitation District)
12. Napa Salt Marsh Restoration Pipeline Project  
(Sonoma Valley County Sanitation District)

The final reimbursement request, which was a part of the final closeout package, was approved by USBR on March 14, 2022. Sonoma Water issued checks to partners who had eligible expenses on our final reimbursement request shortly thereafter.

In February 2023, Sonoma Water was notified by USBR that our Phase 1 project was officially closed. Draft Phase 1 administrative reconciliation is provided in the Phase 1 Administrative Reconciliation attachment

Additional updates will be provided at the Board meeting.

**Recommendation**

None at this time.

**Attachments**

Draft Phase 1 Administrative Reconciliation.

**Attachment – Draft Phase 1 Administrative Reconciliation**

Phase 1 Reallocation is based on the total amount paid for Phase 1 work compared to the total grant funding received.

<b>Draft Phase 1 Reallocation Breakdown</b>					
<b>NBWRA Phase 1 Agencies</b>	<b>Original Assessments Paid</b>	<b>Original Phase 1 Percentage</b>	<b>Revised Assessment Totals</b>	<b><sup>1</sup> Revised Phase 1 Percentage</b>	<b><sup>2</sup> Amount Underpaid / Overpaid</b>
Las Gallinas Valley Sanitary District	475,110	10.25%	531,736	11.47%	(56,626.00)
Novato Sanitary District	429,636	9.27%	430,004	9.28%	(368.00)
North Marin Water District	990,725	21.37%	1,012,992	21.85%	(22,267.00)
Sonoma Valley County San District	802,947	17.32%	739,597	15.95%	63,350.00
Sonoma County Water Agency	165,563	3.57%	165,563	3.57%	-
Napa Sanitation District	1,606,106	34.65%	1,590,195	34.30%	15,911.00
Napa County	165,556	3.57%	165,556	3.57%	-
<b>Total</b>	<b>\$ 4,635,643</b>	<b>100.00%</b>	<b>\$ 4,635,643</b>	<b>100.00%</b>	<b>\$ -</b>

<sup>1</sup> Percentages may change once finalized

<sup>2</sup> There may be Phase 1 balances for each member agency that could be used to offset some of these underpaid costs

<b>Draft Phase 1 Grant Administration Costs</b>	
<sup>1</sup> Sonoma County Water Agency Cost	162,493.08
<sup>2</sup> Previously paid by Phase 1 Members	(99,627.30)
<b>Total Remaining</b>	<b>62,865.78</b>
<b><sup>3</sup> Total owed by Phase 1 Member Agencies:</b>	
Las Gallinas Valley Sanitary District	8,428.06
Novato Sanitary District	5,839.37
North Marin Water District	14,216.14
Sonoma Valley County San District	8,668.50
Sonoma County Water Agency	2,245.21
Napa Sanitation District	21,223.30
Napa County	2,245.20
<b>Total</b>	<b>62,865.78</b>

<sup>1</sup> Total administrative costs not reimbursed by USBR grant

<sup>2</sup> Phase 1 members previously paid a portion of admin costs in FY 18/19

<sup>3</sup> Total owed by each agency is based on revised Phase 1 percentages



## **ITEM NO. 7 RESILIENCE ARENA STATUS REPORTS**

### **Action Requested**

None at this time.

### **Summary**

The Consultant Team will provide an update on the status of the Resilience Arena Projects.

### **Resiliency Arena 1: Recycled Water Support**

- **Grant Administration**
  - City of Petaluma, Sonoma Water, and members of the Consultant team met with Reclamation to discuss whether construction related costs for the Ellis Creek Tertiary Expansion project would be eligible to receive grant funds.
    - Project broke ground before the completion of NEPA.
    - The City had been awarded State grant funds that had certain timelines attached to it, the City waited as long as they could but needed to move forward with implementation activities.
  - Reclamation informed the team that grant funds could not be applied to the Ellis Creek Tertiary Expansion project since ground disturbing activities were initiated before completion of NEPA.
  - Planning and design costs should still be eligible for reimbursement.
  - City of Petaluma is working on pulling together a revised budget that accounts for all planning and design costs since the approval date of the Feasibility Study.
  - This revised budget will be submitted to Reclamation for review and approval.
- **NEPA Status**
  - Draft Biological Assessment
    - Two iterations have been prepared, both to respond to Reclamation rounds of comments and to accommodate Petaluma project changes.
    - Submitted by Reclamation in May to USFWS and NOAA Fisheries to Initiate 135-day Section 7 Consultation. Consultation initiated May 8.
    - Anticipate completion of Section 7 October 2024.
  - Environmental Assessment/FONSI
    - ESA resolving additional Reclamation Comments received 5.15. Anticipate Revised Submittal 6.7.24 for Reclamation circulation.
    - Four iterations of the EA have been prepared to address Reclamation comments and accommodate Petaluma project changes.
    - Final Revised Submittal 6.21.24 for Reclamation processing and circulation.
    - Anticipate FONSI Completion September 1, 2024.
  - Cultural Resources Section 106 Addendum

- Documentation submitted to SHPO and Tribal Representatives in May to initiate 90-day Section 106 Consultation.
  - Two iterations have been prepared to respond to Reclamation comments and accommodate Petaluma project changes.
  - Documentation submitted to SHPO and Tribal Representatives in May to initiate 90-day Section 106 Consultation.
  - Anticipate completion of Section 106 Aug 1.
- **Financial Capability Analysis Report Status**
  - Reclamation has approved the content of the Financial Capability Analysis Report and report has been updated using more recent financial information for all agencies.
  - As the agency actively seeking funding, the City of Petaluma provided additional information related to their debt service coverage ratios (DSCR) for the first five years of debt repayment (requires debt obligation and revenue projections).
  - Sonoma Water is seeking funding for grant administration only and will not have to provide DSCR projections.
  - The updated Draft NBWRP Ph2 Financial Capability Analysis Report was submitted to the TAC for review (see email from Dawn Taffler dated July 1).
  - TAC members are requested to review your respective city/agency information and share with others in your organization as appropriate and to provide one set of combined comments from your organization by Friday July 19.
- **Next Steps:**
  - Continue to make progress on the environmental documentation
  - Respond to TAC comments on the Financial Capability Analysis Report and submit for approval from Reclamation.
- **Timeline:**
  - The team hopes to have the NEPA process completed by late Summer/early Fall.
  - The updated Financial Capability Analysis Report will be submitted to Reclamation within one to two weeks from receipt of TAC comments.

### **Resiliency Arena 3: Drought Contingency Planning**

- **Project Status**
  - Agencies and Consultant Team had the project kickoff meeting on June 27<sup>th</sup>.
  - Team has started the process of reviewing the Drought Resiliency Analysis TM that was prepared as part of the Sonoma Water Regional Water Supply Resiliency Study (Study).
  - Working with the agencies to gather any other relevant Study documents to continue with the gap analysis.

- Plan to reach out to Reclamation to schedule a meeting and inform them about our approach to develop an NBWRA DCP
- Will continue to review Reclamation's drought framework and flag any instances where the Study might benefit from some additional analysis or information.
- **Next Steps:**
  - Gather any additional documents and/or analysis that were developed for the Study and are relevant to the DCP development.
  - Continue to review available Study information and compare to Reclamation's drought framework.
  - Schedule a meeting with Reclamation to get them engaged and let them know we've started the process of developing an NBWRA DCP.
- **Timeline:** Will look to have a meeting with Reclamation in the next couple of weeks.

#### **Resiliency Arena 4: Sea Level Rise Adaptation**

- **Project Status**
  - ESA has convened 4 workshop meetings with SLR Vision Agencies.
  - Final TM1 with Vision, Goals Objectives; Planning Criteria and Study Areas distributed July 9, 2024.
  - Successful Outreach to SMART, Private Property Owners, and SFEI.
  - Preliminary Vulnerability Mapping under Review with Individual Agencies
- **Next Steps:** The next meeting is planned for August.
  - Agenda Topics:
    - Criteria Review
    - Vulnerability Review
    - Draft Adaptation Strategy Review
- **Timeline:** The target completion date for the Draft Vision Document is September 2024.

#### **Recommendation**

None at this time. This is an information item only.

#### **Attachment**

Final TM1 with Vision, Goals Objectives; Planning Criteria and Study Areas



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707.795.0902 [fax](#)

# memorandum

date April 15, 2024

to NBWRA Sea Level Rise Member Agencies

cc Chuck Weir, Rene Guillen, Brown and Caldwell

from ESA

subject TM1 Draft 2: Vision, SLR Planning Scenario, and Study Area Recommendations

## Background

This Technical Memorandum has been prepared to support development of a Sea Level Rise Adaptation Vision for the North Bay Water Reuse Authority (NBWRA) and participating Member Agencies: Las Gallinas Valley Sanitation District, Marin County (Parks and Flood Control Departments), and the City of Petaluma. It provides an overview of the following elements of the Vision Document: 1) Vision, Goals and Objectives, 2) the SLR Planning Scenario, and 3) review and recommendation of various study areas. The study areas are focused on the vicinity of member agency assets and surrounding infrastructure. This visioning process incorporates elements of the San Francisco Estuary Institute’s Adaptation Framework and the California Coastal Commission’s Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits. to foster a collaborative discussion and visioning of adaptation response to sea level rise.

## Vision Goals and Objectives

The Draft Vision Goals and Objectives for the NBWRA Sea Level Rise (SLR) Adaptation Vision are provided in **Table 1**. These include an overall vision statement for the North Bay Water Reuse Authority (NBWRA) as well as a vision statement of the participating Member Agencies, Las Gallinas Valley Sanitary District (LGVSD), Marin County (Parks and Recreation and Flood Control) and the City of Petaluma.

**TABLE 1  
NBWRA SEA LEVEL RISE VISION, GOALS, AND OBJECTIVES**

Vision	Goals	Objectives
<p><b>NBWRA:</b> <i>Cooperate with public and private entities in the North Bay to identify, fund, and implement sea level rise adaptation in a collaborative and cost effective manner.</i></p> <p><b>Member Agencies:</b> <i>Identify adaptation strategies to protect wastewater, recreational and other infrastructure to maintain function and service under future sea level rise conditions.</i></p>	1. Reduce risk to critical infrastructure and built environments	1a. Reduce risk and maintain the viability of regional critical utilities from sea level rise, groundwater intrusion and flood events
		1b. Reduce risk to recreational assets such as McGinnis Park, Schellenberger Park and the Bay Trail
		1c. Reduce risk of flood to built and underserved environments
	2. Align longer-term adaptation with regional efforts to improve resilience	2a. Coordinate, align and partner with agencies to implement integrated adaptation
		2b. Provide framework for public agency and private landowner cooperation for adaptive response to sea level rise
	3. Build Capacity for Current and Future Generations to Adapt to Climate Change	3a. Provide for education, interpretation and understanding of sea level rise impacts to the shoreline and adjacent uplands
		3b. Promote regional vision for adapting to sea level rise and climate change
	4. Create a Resilient Shoreline Environment for People and Ecology	4a. Enhance the shorelines ecological value and adapt to sea level rise
	4b. Enhance recreational opportunities and adapt to sea level rise	

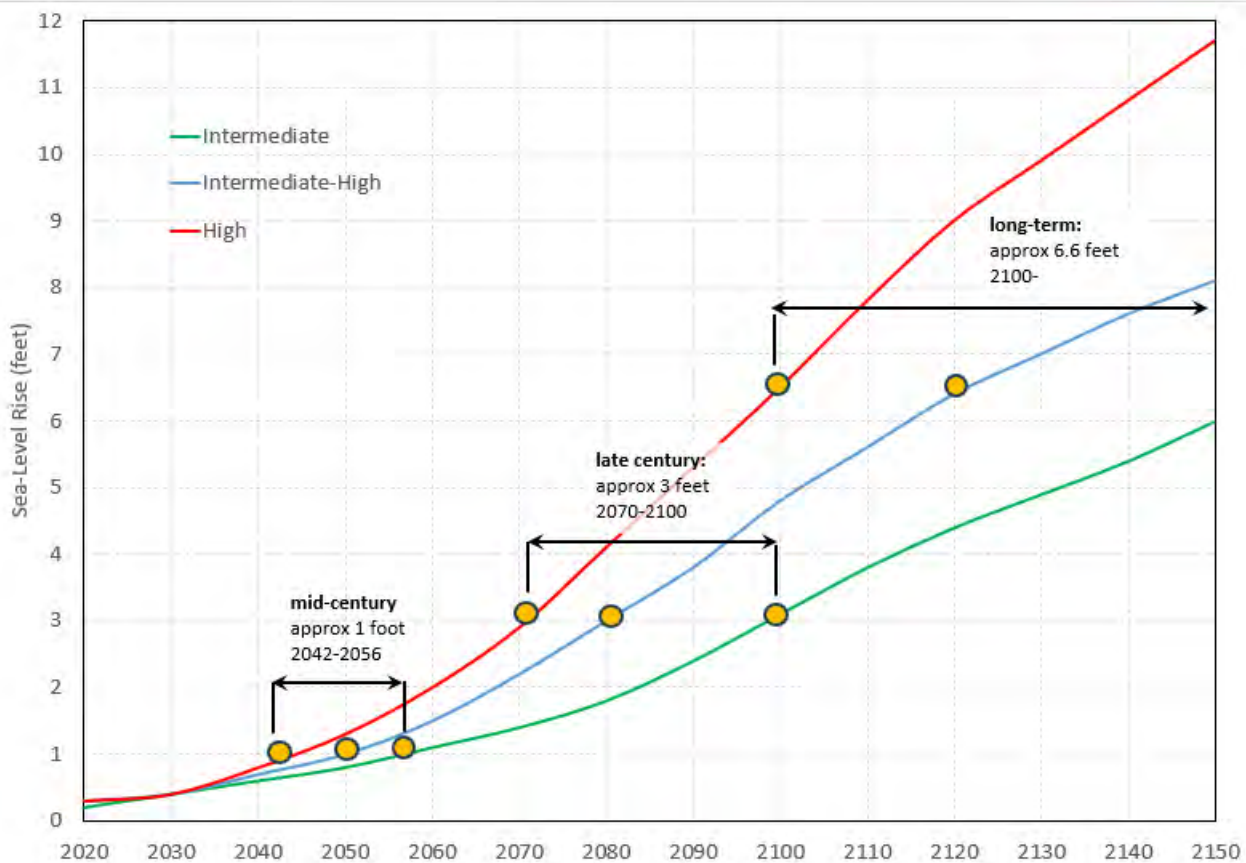
## Recommended Sea Level Rise Planning Scenario

Figure 1 shows sea-level rise curves for the San Francisco Bay region through 2150 based on recent projections from OPC (2024) . OPC (2024) is a Science Update that supersedes prior guidance from OPC (2018). It relies on updates to sea-level rise projections performed at a national level as part of the most recent update to the Intergovernmental Panel on Climate Change. Although the sea-level rise projections rely on different future emissions scenarios (as did OPC (2018)), it uses a slightly different terminology for the scenarios. For example, the ‘High’ scenario from OPC (2024) follows a similar trajectory to the ‘medium-high’ scenario from OPC (2018). The most recent guidance also removes the ‘extreme’ or ‘H++’ scenario from consideration. Based upon review of this documentation, the following scenarios are recommended.

- A **‘mid-century’** or **‘near term’** horizon is expected to correspond to about 1 foot of sea-level rise by 2050. As noted in OPC (2024), there is higher certainty of this outcome now than in previous work, although later century amounts still have a higher degree of uncertainty.
- A **‘late-century’** or **‘medium term’** horizon is expected to correspond to about 3 feet of sea-level rise as early as 2070 for the ‘High’ scenario, and as late as 2100 for the ‘Intermediate’ scenario. This is similar to prior OPC (2018) and CCC (2018) values of 3.5 feet by 2070 for the ‘medium-high risk aversion’ scenario.

- A **‘long-term’** scenario corresponding to 6.6 feet of sea-level rise as early as 2100 for the ‘High’ scenario and later than 2150 for the ‘Intermediate’ scenario. This is similar to prior OPC (2018) and CCC (2018) values of 6.9 feet by 2100 for the ‘medium-high risk aversion’ scenario.

The choice of the above three scenarios is intended to cover different types upgrades to the shoreline. The ‘near term’ scenario is intended to identify the most vulnerable assets under existing conditions, which could be addressed in the next decade with typical capital improvement funds. The ‘medium term’ scenario is intended for large projects that would likely require state and federal funds, but result in large upgrades that build resilience to end of the century. The ‘long-term’ scenario is intended to show how necessary longer-term adaptations are for improvements (e.g. need for leaving space for future raising of levees). A discussion of these scenarios relative to the Gallinas Watershed and the Petaluma River is provided below.



**Figure 1**  
Sea-level rise projections for San Francisco through 2100 and two selected time horizons

### ***Gallinas Watershed***

Since flooding already occurs along the eastern Marin shoreline, it is useful to put these projections into the context of local tide levels. The NOAA Richmond tide station<sup>1</sup> has similar levels to those measured in

<sup>1</sup> <https://tidesandcurrents.noaa.gov/stationhome.html?id=9414863>

San Rafael (ESA 2018; ESA 2020), and has a long-term record allowing for flood statistics to be tabulated. Table 2 lists the values for daily mean higher-high water (MHHW) tide levels and also the levels for the typical annual king tide event (99% annual chance), the 10-year event (10% annual chance), and 100-year event (1% annual chance). Each of these events is roughly one foot higher than the last. As the blue shading in Table 2 indicates, this implies that for one foot of sea-level rise, the annual king tide event (7.3 feet NAVD88) would be expected to occur essentially on a daily basis (MHHW = 7.1 ft). Likewise, the 10-year event (8.3 feet NAVD88) would become the annual king tide level, and the 100-year level would become the 10-year level. The same upward shift occurs for higher amounts of sea-level rise.

**TABLE 2**  
**FUTURE WATER LEVELS WITH SEA-LEVEL RISE NEAR LGVSD, IN FEET NAVD88**

Annual Chance (Return Interval)	0 ft SLR	1 ft SLR	2 ft SLR	3 ft SLR	5 ft SLR
(Daily MHHW)	6.1	7.1	8.1	9.1	11.1
99% annual chance (1-year)	7.3	8.3	9.3	10.3	12.3
10% annual chance (10-year)	8.3	9.3	10.3	11.3	13.3
1% annual chance (100-year)	9.5	10.5	11.5	12.5	14.5

Source: NOAA Richmond Station 9414863 and OPC (2018)

### ***Petaluma River Watershed***

A similar review of tidal datums for the Petaluma River is shown in Table 3, based on the AECOM 2016 tidal datum report. Table 3 lists the values for daily mean higher-high water (MHHW) tide levels and also the levels for the typical annual king tide event (99% annual chance), the 10-year event (10% annual chance), and 100-year event (1% annual chance). Each of these events is roughly one foot higher than the last. As the blue shading in Table 3 indicates, this implies that for one foot of sea-level rise, the annual king tide event (7.3 feet NAVD88) would be expected to happen on a daily basis. Likewise, the 10-year event (8.3 feet NAVD88) would become the annual king tide level, and the 100-year level would become the 10-year level. The same upward shift occurs for higher amounts of sea-level rise. There is some uncertainty regarding the flood event levels on the Petaluma River; it is anticipated that additional information from either the County or the City of Petaluma Master Plan study will provide clarification.

**TABLE 4**  
**FUTURE WATER LEVELS WITH SEA-LEVEL RISE AT PETALUMA RIVER, IN FEET NAVD88**

Annual Chance (Return Interval)	0 ft SLR	1 ft SLR	2 ft SLR	3 ft SLR	5 ft SLR
(Daily MHHW)	6.3	7.3	8.3	9.3	11.3
99% annual chance (1-year)	7.6	8.6	9.6	10.6	12.6
10% annual chance (10-year)	8.6	9.6	10.6	11.6	13.6
1% annual chance (100-year)	9.9	10.9	11.9	12.9	14.9

Source: AECOM (2016)

## Recommended Study Area

The following Study Areas were reviewed with respect to the overall objectives, scope of work resources, participating agency input, and landscape planning units.

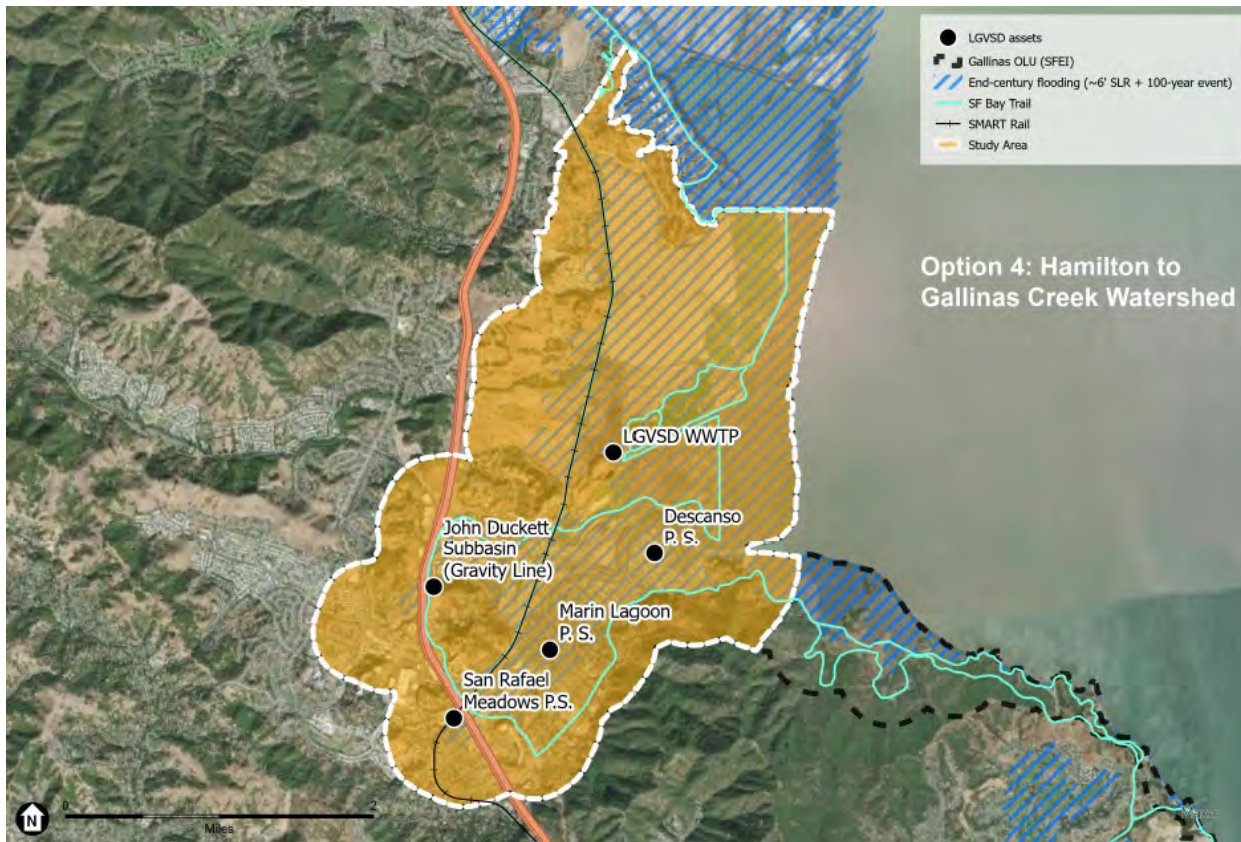
### Gallinas Study Area

Various Study Area options ranging from Member Agency Lands Only to the SFEI Operational Landscape Unit (OLU) were examined. Benefits and limitations for each Option reviewed are summarized in Table 3 below. Based upon review of ESA recommends Option 4, Hamilton Field to Mouth of Gallinas Creek, as it addresses areas both north and south of LGVSD WWTP facilities, includes pump stations within the LGVSD service area, provides the opportunity to address both SLR and regional fluvial flooding issues, provide for agency and land owner collaboration.

**TABLE 3  
LAS GALLINAS STUDY AREA OPTIONS**

Option	Benefits	Limitations
1. Member Agency Lands Only	<ul style="list-style-type: none"> <li>• Specific to Member Agency lands</li> </ul>	<ul style="list-style-type: none"> <li>• Member Agency lands only</li> <li>• Does not address south of WWTP except for Marin County lands.</li> <li>• Does not provide for landscape solutions</li> <li>• Does not provide for collaborative Vision</li> </ul>
2. Member Agency Lands + Properties in board of LGVSD.	<ul style="list-style-type: none"> <li>• Includes WWTP lands and engages inboard properties</li> <li>• Provides natural retreat/restoration opportunities</li> <li>• Provides opportunity for SMART Protection and engagement</li> <li>• Transportation funding</li> </ul>	<ul style="list-style-type: none"> <li>• Expanded stakeholders: private property: St Vincent's and Silveria – SMART</li> <li>• Does not address south of WWTP fluvial flood issues</li> </ul>
3. Hamilton to North Branch of Gallinas Creek	<ul style="list-style-type: none"> <li>• Includes WWTP, Marin County Parks and some areas south of the WWTP</li> <li>• Adaptation approaches are generally consistent</li> <li>• Avoids complexity of high-density residential property ownership</li> </ul>	<ul style="list-style-type: none"> <li>• Expanded stakeholders – private property: St Vincent's and Silveria – SMART</li> <li>• Does not address flooding in southern part of the watershed (Santa Venetia)</li> <li>• Does not include State Parks/China Camp</li> </ul>
4. Hamilton to Gallinas Creek Watershed	<ul style="list-style-type: none"> <li>• Includes WWTP, Marin County Parks and residential areas south of the WWTP</li> <li>• Includes flooding Gallinas Creek Watershed</li> <li>• Includes larger SMART alignment</li> <li>• Includes disadvantaged community census tract</li> <li>• Expanded stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Does not include State Parks/China Camp</li> <li>• Expanded stakeholders – private property: St Vincent's and Silveria – SMART</li> <li>• Complexity of private ownership</li> <li>• Flood protection complexity: existing is &lt; 20-year protection</li> </ul>
5. Full SFEI Operating Landscape Unit (OLU)	<ul style="list-style-type: none"> <li>• Includes WWTP, adjacent lands and residential areas south of the WWTP</li> <li>• Includes residential neighborhoods</li> <li>• Includes flooding within watershed</li> <li>• Includes larger SMART alignment</li> <li>• Includes disadvantaged census tract</li> <li>• Includes State Parks/China Camp</li> <li>• Consistent with SFEI OLU</li> </ul>	<ul style="list-style-type: none"> <li>• Expanded stakeholders – private property: St Vincent's and Silveria – SMART – State Parks</li> <li>• Complexity of private ownership</li> <li>• Existing flood protection is &lt; 20-year protection</li> <li>•</li> </ul>





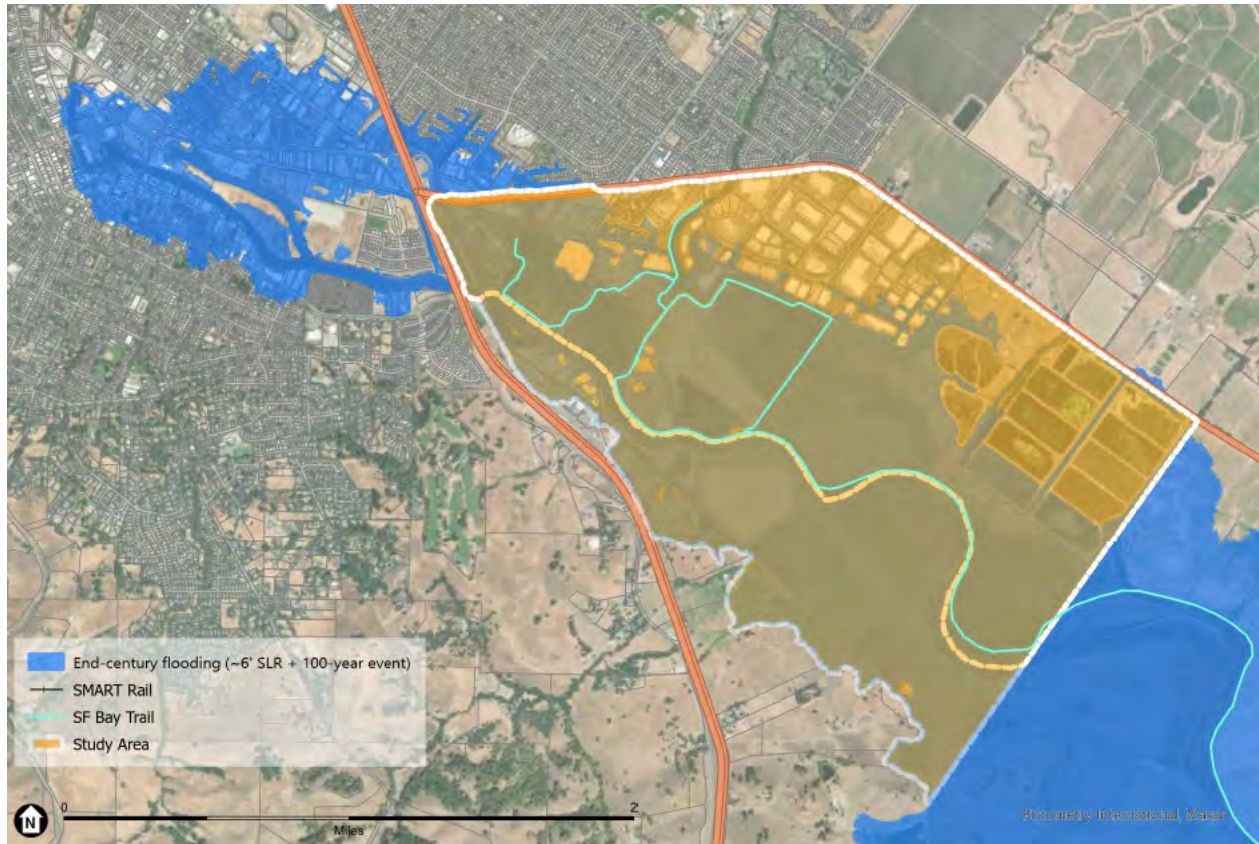
**Figure 2**  
Recommended Study Area: Hamilton to Gallinas Watershed

## Petaluma Study Area

Various Study Area options ranging from Petaluma WWTP Lands Only to the WWTP Upstream to Turning were examined and reviewed with the Study Members. Benefits and limitations for each Option reviewed are summarized in Table 3 below. Note that the study area was extended to the southern side of the Petaluma River channel to provide review of the entire flood plain. Based upon this review and discussion with Member Agencies, ESA recommends Option 2, Petaluma WWTP to US 101, as it addresses areas both the WWTP facilities and SLR related flooding of City of Petaluma areas along the SR 116 corridor. Areas upstream of US 101 are the subject of additional analysis being conducted by the City to review stormwater and sea level rise issues in the downtown area.

**TABLE 3  
PETALUMA STUDY AREA OPTIONS**

Option	Pros	Cons
1. Petaluma WWTP Lands	<ul style="list-style-type: none"> <li>• Specific to WWTP lands</li> </ul>	<ul style="list-style-type: none"> <li>• WWTP Lands Only</li> <li>• Does not address SLR flooding at Schollenberger and dog park</li> <li>• Does not address SLR flooding of commercial areas along SR 116</li> <li>• Does not address SLR flood of downtown commercial areas west of US 101</li> </ul>
2. Petaluma WWTP Lands to US 101	<ul style="list-style-type: none"> <li>• Specific to WWTP lands</li> <li>• Includes flooding at Schollenberger and dog park</li> <li>• Includes flooding of commercial areas along SR 116 and Sheraton</li> <li>• Consistent with ecotone slope concept identified by SFEI</li> </ul>	<ul style="list-style-type: none"> <li>• Does not address SLR flood of downtown commercial areas west of US 101</li> </ul>
3. Petaluma WWTP Lands to Turning Basin	<ul style="list-style-type: none"> <li>• Includes WWTP lands</li> <li>• Includes flooding at Schellenberger and dog park</li> <li>• Includes flooding of commercial areas along SR 116 and Sheraton</li> <li>• Consistent with ecotone slope concept identified by SFEI</li> <li>• Includes SLR flooding of downtown commercial areas west of US 101</li> </ul>	<ul style="list-style-type: none"> <li>• May necessitate larger stakeholder process to address downtown commercial areas</li> </ul>



**Figure 3**  
Recommended Study Area: Petaluma WWTP to US 101

### Additional Stakeholders

Based upon these recommended Study Areas, ESA recommends the addition of the following stakeholders to participate in the visioning session:

Gallinas Watershed	Petaluma Watershed
SMART	SMART
St. Vincents, Silveria Land Owners	Sonoma County PRMD
Santa Venetia Neighborhood HOA	
PGE	
North Marin Water District	

**References:**

AECOM. 2016. San Francisco Bay Tidal Datums and Extreme Tides Study. Prepared for FEMA and BCDC. February 2016.

California Coastal Commission. 2018. Sea Level Rise Policy Guidance: Interpretive Guidelines for Addressing Sea Level Rise in Local Coastal Programs and Coastal Development Permits. Update adopted on November 7, 2018.

Ocean Protection Council (OPC). 2024. State of California Sea-Level Rise Guidance 2024 Science and Policy Update. Prepared by the California Natural Resources Agency and the California Ocean Protection Council.

San Francisco Estuary Institute. 2019. Sea Level Rise Adaptations Framework.

## **ITEM NO. 8 Title XVI Funding Opportunity**

### **Action Requested**

None at this time.

### **Summary**

Rene Guillen, Brown & Caldwell, will provide an update on the status of Phase 2 and its associated projects.

### Details on Title XVI Funding Opportunity

- Title XVI NOFO is currently live.
- NOFO included two submittal periods:
  - December 7, 2023 (closed)
  - **September 30, 2024**
- **Work included in the grant request would need to be completed within three years of the applications submittal deadline (i.e., September 30, 2027).**
- Non-Federal Cost-Share of 75% or more is required.
- Funding for this opportunity is being provided by the Bipartisan Infrastructure Law.

### **Status of Existing Title XVI Funding Request**

- Team is actively **working with Reclamation to finish both NEPA and the FCD Report, both items must be reviewed and approved by Reclamation before funds can be disbursed.**
- Working with City of Petaluma on refining scope of the projects to be included in the grant agreement with Reclamation.

### **Recommended Next Steps**

- **Agencies should assess willingness/readiness to proceed with Phase 2 Program projects.**
- Team was successful in procuring funds for the City of Petaluma during the last funding cycle. **NBWRA should try to capitalize on the momentum of the recent grant award to try and secure additional funds to help with the implementation of projects.**
- Both NEPA and the Financial Capability Determination should be completed by late Summer/early Fall. Reporting requirements shouldn't cause any further delay in disbursement of funds.
- **Change in political landscape always adds a level of uncertainty surrounding the availability of grant funds. If projects are ready to proceed its strongly encouraged you all consider applying during this cycle.**

Page 2

Agenda Explanation  
North Bay Water Reuse Authority  
Technical Advisory Committee  
July 11, 2024

**Recommendation**

None at this time. Please refer to the recommendations regarding the Title XVI Funding Opportunity.

**Attachment**

None.

Page 1

Agenda Explanation  
North Bay Water Reuse Authority  
Technical Advisory Committee  
July 11, 2024

**ITEM NO. 9 FY2024/25 BUDGET**

**Action Requested**

None at this time

**Summary**

The FY2024/24 Budget, copy attached, was approved by the NBWRA Board on June 24, 2024. With approval of the budget, invoices can be sent to the member agencies, and Sonoma Water can start the process for amending or issuing a new agreements to Brown & Caldwell. B&C's costs for FY2024/25 are \$237,488. It was agreed that the agreement with Weir Technical Services would be extended through December 31, 2024 with no changes in cost or terms and conditions. Sonoma Water staff can report on the status of these items.

**Recommendation**

None at this time.

**Attachment**

Approved FY2024/25 Budget.

Fiscal Year 2024/25 Proposed Budget Allocations  
 Approved by the Board June 24, 2024

Resilience Arena for Continued Recycled Water Support												
	Amount											
		LGVSD	Napa SD	Novato SD	SVCSD	SCWA	NMWD	Napa County	Petaluma	MMWD	American Canyon	Marin County
<i>Prorated Percent from Feasibility Study after removing associate members</i>		0.000%	11.925%	0.000%	10.832%	13.705%	0.000%	0.000%	32.596%	13.923%	17.020%	0.000%
<b>Brown &amp; Caldwell</b>	\$ 150,000	\$ -	\$ 17,888	\$ -	\$ 16,247	\$ 20,557	\$ -	\$ -	\$ 48,894	\$ 20,884	\$ 25,530	\$ -
<b>Sonoma Water</b>	\$ 26,121	\$ -	\$ 3,115	\$ -	\$ 2,829	\$ 3,580	\$ -	\$ -	\$ 8,514	\$ 3,637	\$ 4,446	\$ -
<b>Total</b>	\$ 176,121	\$ -	\$ 21,003	\$ -	\$ 19,076	\$ 24,137	\$ -	\$ -	\$ 57,408	\$ 24,521	\$ 29,976	\$ -

Resilience Arena for Drought Contingency Plan												
	Amount											
		LGVSD	Napa SD	Novato SD	SVCSD	SCWA	NMWD	Napa County	Petaluma	MMWD	American Canyon	Marin County
<i>Shared equally by participating agencies</i>		16.667%	0.000%	0.000%	16.667%	16.667%	16.667%	0.000%	16.667%	0.000%	0.000%	16.667%
<b>Brown &amp; Caldwell</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Sonoma Water</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Total</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Resilience Arena for Sea Level Rise Adaptation												
	Amount											
		LGVSD	Napa SD	Novato SD	SVCSD	SCWA	NMWD	Napa County	Petaluma	MMWD	American Canyon	Marin County
<i>Shared equally by participating agencies Marin County unknown at this time</i>		25.000%				25.000%			25.000%			25.000%
<b>Brown &amp; Caldwell</b>	\$ 87,488	\$ 21,872	\$ -	\$ -	\$ -	\$ 21,872	\$ -	\$ -	\$ 21,872	\$ -	\$ -	\$ 21,872
<b>Sonoma Water</b>	\$ 6,168	\$ 1,542	\$ -	\$ -	\$ -	\$ 1,542	\$ -	\$ -	\$ 1,542	\$ -	\$ -	\$ 1,542
<b>Total</b>	\$ 93,656	\$ 23,414	\$ -	\$ -	\$ -	\$ 23,414	\$ -	\$ -	\$ 23,414	\$ -	\$ -	\$ 23,414

Joint Use												
	Amount											
		LGVSD	Napa SD	Novato SD	SVCSD	SCWA	NMWD	Napa County	Petaluma	MMWD	American Canyon	Marin County
<i>Shared equally by Phase 2 agencies with \$2,500 contribution from LGVSD and Marin County</i>		4.150%	15.283%	0.000%	15.283%	15.283%	0.000%	0.000%	15.283%	15.283%	15.283%	4.150%
<b>Program Management (Budget may cover two years)</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>SCWA Administration (Budget may cover two years)</b>	\$ 60,248	\$ 2,500	\$ 9,208	\$ -	\$ 9,208	\$ 9,208	\$ -	\$ -	\$ 9,208	\$ 9,208	\$ 9,208	\$ 2,500
<b>Total</b>	\$ 60,248	\$ 2,500	\$ 9,208	\$ -	\$ 9,208	\$ 9,208	\$ -	\$ -	\$ 9,208	\$ 9,208	\$ 9,208	\$ 2,500

Summary per Agency													
	Amount												
Agency	Total	LGVSD	Napa SD	Novato SD	SVCSD	SCWA	NMWD	Napa County	Petaluma	MMWD	American Canyon	Marin County	
<b>Total</b>	\$ 330,025	\$ 25,914	\$ 30,211	\$ -	\$ 28,284	\$ 56,759	\$ -	\$ -	\$ 90,030	\$ 33,729	\$ 39,184	\$ 25,914	
		<i>Percent of Total Projects</i>	7.85%	9.15%	0.00%	8.57%	17.20%	0.00%	0.00%	27.28%	10.22%	11.87%	7.85%

<b>Associate Members</b>	
Marin County, LGVSD, Novato San, NMWD, Napa County @ \$5,000 each	
	<b>\$25,000</b>
<b>Total Billable</b>	\$ 355,025



Page 1

Agenda Explanation  
North Bay Water Reuse Authority  
Technical Advisory Committee  
July 11, 2024

**ITEM NO. 10 PLANS FOR NEXT BOARD MEETING**

**Action Requested**

The next Board meeting is scheduled for Monday, September 30, 2024 at 9:30 a.m. via Zoom.

**Summary**

The Board should be updated on the following:

1. Status of Phase 1 closeout and reconciliation.
2. Status of Phase 2 projects.
3. Status of the Resilience Area projects
4. Financial Report
5. Status of consultant agreements for FY2024/25
6. Other Items

**Recommendation**

Discuss plans for the Board meeting scheduled for September 30, 2024 at 9:30 a.m. via Zoom.

**Attachment**

None.