

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

Thursday, November 7, 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>Pages 2 – 4</b>	4.	Action	TAC Meeting Minutes of September 5, 2024
<b>Page – 5</b>	5.	Discussion	Status of Phase 1 Reconciliation and Closeout Activities
<b>Pages 6 – 38</b>	6.	Discussion	Resilience Arena Status Reports
<b>Page 39</b>	7.	Discussion	Status of Consultant Agreements for FY2024/25
<b>Page 40</b>	8.	Discussion	Status of Program Manager Replacement Process
<b>Page 41</b>	9.	Discussion	Plans for Next Board Meeting, December 16, 2024
	10.	Information	Next Meeting, December 5, 2024
	11.		Adjournment

**North Bay Water Reuse Authority  
Technical Advisory Committee  
Zoom Meeting Minutes  
September 5, 2024**

**DRAFT**

Approved \_\_\_\_\_

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

Chair Kevin Booker called the Technical Advisory Committee (TAC) meeting to order at 2:03 p.m. on Thursday, September 5, 2024. The meeting was a Zoom meeting only and attendees participated via the following link: <https://us02web.zoom.us/j/89055428051>.

**Committee Members Present**

Kevin Booker, Chair	Sonoma Valley County Sanitation District
Andrew Damron, Vice Chair	Napa Sanitation District
Gina Benedetti-Petnic	City of Petaluma
Billy Dixon	Sonoma Water
Brad Elliott	Sonoma Water
Judd Goodman	Marin County
Dale McDonald	Las Gallinas Valley Sanitary District
Curtis Paxton	Las Gallinas Valley Sanitary District
Chelsea Thompson	City of Petaluma
Tony Williams	North Marin Water District

**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

**2. Approval of the Agenda**

The Agenda was approved with no changes. Chair Booker announced that Pam Jeane will be retiring in mid-October. Kevin is taking over her responsibilities and Billy Dixon will be assisting.

**3. Public Comments**

There were no public comments.

**4. TAC Meeting Minutes of July 11, 2024**

A motion by Andrew Damron, seconded by Tony Williams to approve the July 11, 2024 minutes was unanimously approved.

**5. Status of Phase 1 Reconciliation and Closeout Activities**

Chair Booker and Brad Elliott discussed the status of Phase 1 Closeout activities. Sonoma Water received several questions from one of the member agencies. The agenda report responded to the

questions. It was agreed that any surpluses in the account could be used by individual agencies to offset any funds owed in the reconciliation. A final report will be presented to the TAC for review and approval prior to submitting to the Board for approval.

## **6. Resilience Arena Status Reports**

Rene Guillen gave an update on the Recycled Water Resilience Arena. Petaluma is seeking funding from the Bureau of Reclamation. Unfortunately since the NEPA process had not been completed prior to construction of the Ellis Creek project they have stated that their rules will not allow funding for the construction. They may provide funding for funding and design. Petaluma needed to proceed with construction in order to gain state funding. Petaluma met with USBR and Sonoma Water to discuss revised budget and projects. As much as \$1.6M may be available from USBR.

Jim O'Toole provided an update on the NEPA process and the various reports that are required for completions. The Financial Capability Report has been submitted to USBR for review. They are expected to respond by September 20, 2024.

Rene Guillen provided an update on the Drought Contingency resilience arena project. Kevin Booker asked to be included in the email distribution list for this project.

Jim O'Toole discussed the Sea Level Rise Resilience Arena. He anticipates that final documents will be distributed next week. The draft vision document is anticipated to be completed in October.

## **7. Title XVI Funding Opportunity**

The Program Manager noted that currently there are no member agency projects ready to be submitted in a funding request application. As a consequence, this item will not be included in the agenda until the next funding opportunity is announced.

## **8. Status of Consultant Agreements for FY2024/25**

Chair Booker provided a summary of the status of the agreements. Both the Program Manager and B&E Agreements have been extended. Chair Booker will meet with Rene Guillen to discuss the new scope for FY2024/25.

## **9. Plans for Next Board Meeting**

A Board meeting has been scheduled for September 30, 2024 at 9:30 a.m. via Zoom. The Board will 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

**10. Program Manager Replacement Options (without B&C, ESA, and DI)**

At this point, the consultants left the meeting to allow the TAC to discuss options for replacing the program manager, who continued to host the meeting. Chair Booker stated that if the agreement could be kept below \$50,000 it would not need to go to the Sonoma Water Board. He also noted that using a traditional RFQ process could take up to one year for an agreement to be approved. Following discussion, it was agreed to schedule a closed session at the September 30, 2024 Board meeting to allow the Board to discuss options and agree on a process moving forward.

**11. Next Meeting**

The next meeting is scheduled for October 3, 2024.

**12. Adjournment**

There being no further business, Chair Booker adjourned the meeting was adjourned at 2:57 p.m.

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Agenda Explanation  
North Bay Water Reuse Authority  
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**ITEM NO. 5 STATUS OF PHASE 1 RECONCILIATION AND CLOSEOUT  
ACTIVITIES**

**Action Requested**

None at this time

**Summary**

At the last meeting questions from member agencies were addressed. The final reconciliation invoices and over payments should be completed by the end of the calendar year.

**Recommendation**

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

**Attachments**

None.

## **ITEM NO. 6 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**
  - The team met with Reclamation on Wednesday, November 6<sup>th</sup> to chat about what may be needed from a feasibility study revision standpoint to include new project components and potentially procure funds to cover customer connections.
  - Based on the discussion with Reclamation, the team is planning to revise the project scopes and budget and assess how to proceed with a potential feasibility study update. The revised scopes and budgets will be submitted to Reclamation for review and approval.
  
- **NEPA Status**
  - Environmental Assessment/FONSI
    - EA made available for public review August 6 to August 20, 2024.
    - No Public Comments Received
    - ESA prepared Final EA; Posted to Reclamation Webpage
    - FONSI will be filed following completion of Federal Consultations, anticipate December (See below)
  - Draft Biological Assessment – Biological Opinion
    - Biological Opinion has been issued by USFWS, copy attached.
    - NOAA Fisheries is issuing a Letter of Concurrence, which is anticipated in November.
  - Cultural Resources Section 106 Addendum
    - SHPO Concurrence Letter Issued
  
- **Financial Capability Analysis Report Status**
  - The Financial Capability Analysis (FCA) Report has been submitted to Reclamation for review and approval on September 2, 2024.
  - Reclamation review is still ongoing – they reached out with questions about Sonoma Water’s bond rating on October 17, 2024 and we provided clarification.
  
- **Next Steps:**
  - Continue to make progress on the environmental documentation
  - Plan to respond to questions or comments Reclamation might have on the FCA Report.

- **Timeline:**
  - The team hopes to have the NEPA process completed by late Summer/early Fall.
  - Reclamation is expected to provide a draft report summarizing their review and findings of the FCA Report before the end of the year.

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

- **Project Status**
  - The Consultant team has continued to review the Drought Resiliency Analysis TM that was prepared as part of the Sonoma Water Regional Water Supply Resiliency Study (Study).
  - The team developed a crosswalk that shows how the Drought Resiliency Analysis TM compares to the guidance included in Reclamation's Drought Response Framework.
  - B&C will provide an update on some of the insights they have gathered as part of the gap analysis we are currently tasked with doing.
- **Next Steps:**
  - Gather any additional documents and/or analysis that were developed for the Study and are relevant to the DCP development.
  - Work on pulling together a drought contingency document summary that highlights how existing Resiliency Study meets Reclamation's Drought Response Framework. This document summary will also be used to help augment areas that may require a bit more content to satisfy Reclamation requirements.
- **Timeline:** Team would like to confirm approach on the drought contingency document summary with the participating agencies and begin work on pulling together an outline of the document over 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.
  - June 26/July 17, Preliminary Vulnerability Mapping reviewed with individual agencies; Draft Criteria (BayWave) reviewed with individual agencies.
  - Draft Vulnerability TM2 was issued in September 2024 and was reviewed by the Member Agencies.
  - Two Adaptation Strategy Workshops with Member Agencies Held in October
  - TM3 Adaptation Strategy TM under preparation: November
  - Two Funding Opportunities/Applications:
    - FEMA BRIC Grant Notice of Intent (NOI) has been submitted for next phase of SLR planning.

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- This program provides 75% Federal Funds and requires 25% local matching funds, and has a cap of \$250,000
- The maximum local match funding obligation would be \$62,500; (\$250,000\*0.25). Split between the three Arena 4 participating agencies, that would be \$20,833 per agency, likely in fiscal year 24/25.
- Ocean Policy Council SB-1 Application
  - This is a rolling planning grant program for community based planning; ESA has had success submitting for this grant program. Its next application round is due in December.
  - This funding program is focused on community outreach, a next logical step following our NBWRA SLR Visioning Process.
- **Next Steps:** Adaptation Strategy Memo: Adaptation Vision Document 1
- **Timeline:** The target completion date for the Draft Vision Document has been revised to December 2024.

**Recommendation**

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

**Attachment**

USFWS Biological Opinion





# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
 Sacramento Fish and Wildlife Office  
 2800 Cottage Way, Suite W-2605  
 Sacramento, California 95825-1846  
 SFWO\_mail@fws.gov



In Reply Refer to:  
 2023-0128017-S7

**October 24, 2024**  
*Sent-Electronically*

## Memorandum

**To:** Anastasia T. Leigh, Regional Environmental Officer, Bureau of Reclamation, Sacramento, California

**From:** Field Supervisor, Sacramento Fish and Wildlife Office, Sacramento, California

**Subject:** Formal Consultation on the North Bay Water Reuse Program Phase 2 Project, Marin, Sonoma, and Napa Counties, California (CGB-152 2.2.1.06)

This memorandum is in response to the Bureau of Reclamation's (Reclamation) May 7, 2024, request to initiate formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed North Bay Water Reuse Program Phase 2 Project (NBWRP), in Marin, Sonoma, and Napa Counties, California. Your request was received by the Service on May 8, 2024. At issue are the proposed project's effects on the federally endangered California freshwater shrimp (*Syncaris pacifica*), federally threatened California red-legged frog (*Rana draytonii*), federally endangered salt marsh harvest mouse (*Reithrodontomys raviventris*), federally threatened western snowy plover (*Charadrius alexandrinus nivosus*), and federally endangered California Ridgway's rail (*Rallus obsoletus obsoletus*). Critical habitat for these species has either not been designated or is not present within the action area. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*)(Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action on which we are consulting is the North Bay Water Reuse Program providing new opportunities to deliver recycled water and integrated water management systems in the North Bay Region by providing increased recycled water supply to urban, agricultural, and environmental uses. Pursuant to 50 CFR 402.12(j), you submitted a Biological Assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed action may affect, and is likely to adversely affect the California freshwater shrimp, California red-legged frog, and salt marsh harvest mouse, but is not likely to adversely affect the western snowy plover and California Ridgway's rail.

Anastasia T. Leigh

In considering your request, we based our evaluation on the following:

- 1) The April 2024, “Biological Assessment – Wildlife” prepared by Bureau of Reclamation. (2024);
- 2) The May 7, 2024, formal consultation request; and
- 3) Communications between Reclamation and the Service;
- 4) Additional information available to the Service.

The Service concurs that the proposed project is not likely to adversely affect the western snowy plover because: (1) the proposed project will occur during the non-breeding season; (2) construction will be constrained to the smallest area possible to minimize disturbance to potential nesting habitat; (3) the applicant will implement avoidance and minimization measures including worker environmental awareness training for western snowy plovers and their habitat.

The Service concurs that the proposed project is not likely to adversely affect the California Ridgway’s rail because: (1) seasonal restrictions will be implemented for work in tidal marsh habitat; (2) the proposed project will occur during the non-breeding season; (3) work will not impact the wetland and remain on the sides and top of the levee, outside the creek corridor and associated emergent vegetation zone of Novato Creek; (4) the applicant will implement avoidance and minimization measures including worker environmental awareness training for California Ridgway’s rails and their habitat.

The remainder of this document provides our biological opinion on the effects of the proposed project on the California freshwater shrimp, California red-legged frog, and salt marsh harvest mouse.

### **Consultation History**

- May 8, 2024: The Service received a letter from the Bureau of Reclamation requesting the initiation of formal consultation on the proposed project.
- May 8, 2024: The Service received a Biological Assessment dated April 2024.
- September 6, 2024: The Service requested additional information on Bay Delta species effects.
- September 16, 2024: The Service received additional information from Bureau of Reclamation regarding Bay Delta species effects.
- September 20, 2024: The Service requested additional information on temporary and permanent impact acreage.
- September 25, 2024: The Service received information from the Bureau stating that permanent impacts are not expected.
- October 8, 2024: The Service requested a total number of acres that will be temporarily affected by each project within the proposed project.
- October 9, 2024: The Service received the requested temporary effects acreage documentation.

## BIOLOGICAL OPINION

### Description of the Proposed Action

The goal of the North Bay Water Reuse Program Phase 2 proposed project is to expand the use of recycled water in Marin, Sonoma and Napa counties through a regional approach that is cooperative and sustainable. The proposed project will provide recycled water for agricultural, urban, and environmental uses as an alternative to using potable water supplies. Specific proposed project objectives include: (1) Improve local, regional, and State water supply reliability; (2) Offset demands on potable water supplies; (3) Support the sustainable management of groundwater basins; (4) Enhance local and regional ecosystems; (5) Maintain and protect public health and safety; (6) Promote sustainable practices; (7) Implement recycled water facilities in an economically viable manner. The proposed action includes (1) construction and installation of new pipelines to deliver recycled water; (2) additional storage facilities to store and pump recycled water; and (3) capacity upgrades at existing wastewater treatment plants (WWTPs).

The projects have not been fully designed, however permanent loss of suitable habitat for listed species is not expected for any of the projects with the implementation of conservation measures. A total of 66.22 acres of temporary impacts is anticipated for the North Bay Water Reuse Program Phase 2 Project, the amount of temporary impacts for each project is depicted Table 1.

#### *Pipeline Installation Techniques*

Trenchless technology will be used preferentially at channel crossings. However, geotechnical considerations may limit or prohibit its use.

**Open-cut trenching** includes clearing of the construction site, saw cutting of pavement where needed, trench excavation, pipe installation, backfill, and re-paving where needed. The estimated trench width for a 14-inch-diameter recycled water pipeline will be approximately 30 inches. In open space areas, native excavated soils will be retained for backfill. During construction, vertical wall trenches will be temporarily closed at the end of each work day, either by covering with steel trench plates, backfill material, or installing barricades to restrict access. If the area is paved prior to construction, a temporary patch or covering will be used until final repaving of the affected area occurs. Final paving will occur approximately two to six weeks after recycled water pipeline construction is complete within a given road segment.

**Jack and bore tunneling** is a trenchless construction method utilized for installing underground pipelines for short distances without disturbing the ground surface. Jack and bore tunneling could be employed in areas where open cut trenching is not feasible due to limited construction area, geotechnical conditions, railroad crossings, major road crossings, or presence of sensitive biological resources, such as wetlands or riparian habitat. This method employs a horizontal boring machine or an auger that is advanced in a tunnel bore to remove material ahead of the pipe. Powerful hydraulic jacks are used to push pipe from a launch (or jacking) pit to a receiving pit. As the tunneling auger is driven forward, a jacking pipe is added into the pipe string. Each bore and jack undercrossing will require a jacking pit measuring approximately 30 feet by 10 feet. The temporary pits typically will be excavated to a maximum depth of 20 feet. Excavated soils will be retained for backfill.

**Horizontal directional drilling** is another trenchless construction method that could be used for installing underground pipelines without disturbing the ground surface. Using a horizontal drill

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rig, the pipeline is installed in two stages: (1) a small diameter pilot hole is directionally drilled along a designed directional path; (2) the pilot hole is then enlarged to a diameter that will accommodate the pipeline and the pipeline will be pulled back through the enlarged hole.

Slurry, typically bentonite (an inert clay), is used as a drilling lubricant and processed by separating solids from the slurry and discharging the clear liquid to waterways or storm drains. Any unused excavated soils will be hauled off site.

**Pipeline suspension** is a fourth alternative for recycled water pipeline installation and will occur at locations with existing bridges that cross streams. At these crossings pipeline will be installed in the structural supports underneath or on the sides of the bridges. No excavation will be required.

*Project Components by Member Agency Service Areas:*

The regional cooperative action is comprised of 11 member agencies and multiple service areas covering the three-county North Bay Area. Table 1 identifies the Member Agencies and the proposed project elements being constructed under NBWRP Phase 2. Further information about the proposed projects in each of the member agency services follows the table.

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Table 1: Implementation Plan for NBWRP Phase 2 Projects

Projects	Project Yield (acre-foot-per-year)	Distribution Pipelines (Miles)	Pump Stations (horsepower)	New Storage (acre-feet)	WWTP Treatment Upgrades (million gallons per day)	Temporary Impacts
<b>Novato Sanitary District (Novato SD)</b>						
Recycled Water Treatment Facility Treatment Capacity Expansion	286	-	-	-	0.85	No temporary disturbance
Marin County Lower Novato Creek Project 1 - Distribution	40	1.1	-	-	-	3.3 acres, staging on Recycled Water Treatment Facility
Turnout to Wetlands	840	0.02	-	-	-	0.06 acres, staging on Recycled Water Treatment Facility
<b>Sonoma Valley County Sanitation District (SVCSD)</b>						
Napa Road Pipeline	200	0.02	-	-	-	6.67 acres + 0.5 acre staging = 7.17 ac
<b>Marin Municipal Water District (MMWD)</b>						
Recycled Water Distribution System Expansion to San Quentin Prison	153	1.1	50	0.08	0.20	3.3 acres + 0.5 acre staging + 0.02 acre pump station = 3.82 ac
<b>Napa Sanitation District (Napa SD)</b>						

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Increase Soscol Water Recycling Facility Filter Capacity	571	-	-	-	1.70	No temporary disturbance
Soscol Water Recycling Facility Covered Storage	240	0.1	-	10.0	-	No temporary disturbance
<b>Petaluma</b>						
Increase Ellis Creek Water Reclamation Facility Capacity	712	-	-	-	2.12	No temporary disturbance
Urban Recycled Water Expansion	223	8.0	-	-	-	24.27 acres + 0.5 acre staging = 24.77 acres
Agricultural Recycled Water Expansion – Phase 1	913	3.0	-	-	-	8.9 acres + 0.5 acre staging = 9.4 acres
Agricultural Recycled Water Expansion – Phase 2	530	2.1	-	-	-	6.36 acres + 0.5 acre staging = 6.86 acres
<b>American Canyon</b>						
Recycled Water Distribution System Expansion – Phase 1	102	2.5	-	-	-	7.58 acres + 0.5 acre staging = 8.08 acres
Recycled Water Distribution System Expansion – Phase 2	25	2.0	-	-	-	6.06 acres + 0.5 acre staging = 6.56 acres
Water Recycling Facility Phase 2 Treatment Plant Upgrades	168	0.2	-	-	-	No temporary disturbance
<b>Total</b>	<b>5,003</b>	<b>21.5</b>	<b>50</b>	<b>10.1</b>	<b>4.87</b>	<b>Pipelines = 63.2 acres</b>

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						<p><b>Staging Areas = 3 acres (assume same staging area for the two American Canyon pipeline projects)</b></p> <p><b>Pump Station = 0.02 acre</b></p> <p><b>TOTAL: 66.22 acres</b></p>
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Anastasia T. Leigh  
City of Petaluma

The proposed NBWRP Phase 2 includes four projects for the City of Petaluma. Of these, the Urban Recycled Water Expansion and Agricultural Recycled Water Expansion projects will have potential impacts to listed species.

### **Increase Ellis Creek Water Recycling Facility Capacity**

This project will include facility upgrades at the existing Ellis Creek Water Recycling Facility (Ellis Creek WRF) to increase its tertiary filtration and disinfection capacity. The existing Ellis Creek WRF is able to treat 6.8 million gallons per day (mgd) to secondary treatment standards, but only 4.68 mgd to California code of regulations Title 22 tertiary disinfection standards. The existing post-secondary process includes continuous backwash filters and an ultraviolet (UV) disinfection system. The existing UV system was constructed with a third channel not currently in use to allow for future expansion. This project will install five new filter cells that mirror the existing treatment system and will also install banks of UV lamps in the existing, unused channel. Proposed facilities will provide 2.12 mgd of new tertiary filtration capacity and a project yield of 712 mgd of recycled water based on an annual average production of 0.64 mgd. These improvements will allow the City of Petaluma to produce additional tertiary treated recycled water to meet increasing recycled water demands. The capacity upgrades will occur within the boundaries of the existing facility and will not impact any listed species or habitat.

### **Urban Recycled Water Expansion**

The Urban Recycled Water Expansion project will construct approximately 8.0 miles of recycled water pipelines throughout the eastern portion of the city. It will extend from the end of the existing 20-inch-diameter pipeline that originates from the Ellis Creek WRF to serve customers currently being served by its potable water system. The project will also extend a pipeline from the existing 8-inch-diameter pipeline near Ellis Creek WRF to serve the Oakmead Business Park. Proposed project implementation will include: 17,500 linear feet (LF) of 16-inch-diameter pipelines; 12,900 LF of 12-inch-diameter pipelines; 10,200 LF of 8-inch-diameter pipelines; 1,600 LF of 2- and 4-inch-diameter pipelines; and 60 LF of special pipeline crossings. Recycled water yield will be 223 acre-feet-per-year (AFY). This project will expand upon existing facilities to increase the distribution of recycled water. The proposed pipeline alignments will be along existing roadways within the city's rights-of-way. The number of creek crossings will be minimized and green ways will be avoided to minimize construction in undisturbed areas.

### **Agricultural Recycled Water Expansion**

The City of Petaluma's Agricultural Recycled Water Expansion project will extend recycled water pipelines from the Ellis Creek WRF eastward to serve agricultural customers along Lakeville Highway, as well as provide recycled water service along Adobe Road. Petaluma's Phase 1 project will construct 1.3 miles of pipeline from the Ellis Creek WRF to Stage Gulch Road and 2.7 miles of pipeline in Adobe Road from Freitas Road southeastward to an existing recycled water pipeline, providing 1,113 AFY of recycled water. Petaluma's Phase 2 project will extend the pipeline 2.1 miles from Stage Gulch Road to Cannon Lane, providing 530 AFY of recycled water. Combined, these two projects will include 13,900 LF of 20-inch pipeline, 14,000 LF of 16-inch pipeline, 3,600 LF of 12-inch pipeline and 450 LF of specialized pipeline crossings. The proposed pipeline alignments will be along roads in the public right-of-way, within already disturbed areas, including the Adobe Road recycled water pipeline. The number



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of creek crossings will be minimized and green ways will be avoided to minimize construction in undisturbed areas.

### Sonoma Valley County Sanitation District

#### **SVCSO Napa Road Pipeline Project**

The Napa Road Pipeline will expand the recycled water service area in the unincorporated areas of Sonoma County east of the City of Sonoma along Napa Road. Pipeline construction will have a project yield of 200 AFY and include 11,500 LF of 12-inch diameter pipeline located within the roadway or roadway shoulder. The pipeline will connect to existing pipelines and extend eastward from 5th Street East to serve additional customers.

### Napa Sanitation District

#### **Soscol Water Recycling Facility Increased Filter Capacity**

The Soscol WRF Increased Filter Capacity project will include upgrades at the existing facility to increase tertiary treatment capacity by 1.7 mgd. Filter basins for two filters (comprised of 1,000 square feet of filter area) were constructed as part of the NBWRP Phase 1 Project, but only one filter (500 square feet of filter area) was installed at that time. This NBWRP Phase 2 proposed project consists of installing the remaining filter and associated mechanical components in the existing empty filter basin and will occur within the bounds of the WRF, providing 571 AFY of recycled water based on 0.51 mgd of average annual production.

#### **Additional Soscol Water Recycling Facility Storage**

The project consists of constructing an operational storage pond at the Soscol WRF to store tertiary filtered and disinfected recycled water that will be used to meet daily peak customer demands. Similar to the existing recycled water operational storage ponds at the WRF, the new pond will have a lined clay bottom, concrete lined side slopes, and a Hypalon cover. New pipeline will connect this pond to existing facilities. This project will be located within undeveloped areas currently owned by Napa SD, will include a 10 acre-feet (AF) storage pond within a 0.25-acre footprint, membrane liner and floating cover, and approximately 600 LF of connecting pipeline. The project will yield 240 AFY by providing operational flexibility to store and deliver recycled water particularly in the high demand summer irrigation periods.

### City of American Canyon

The proposed NBWRP Phase 2 includes three projects for the City of American Canyon with a total estimated cost of \$12 million and a project yield of 295 AFY.

#### **American Canyon WRF Phase 2 Treatment Plant Upgrades**

This project will include facility upgrades at the existing American Canyon WRF to increase tertiary treatment process to improve water quality for existing and future recycled water users. The existing American Canyon WRF consists of a membrane bioreactor (MBR) that has the capacity to produce 3.75 mgd of tertiary recycled water for non-potable reuse in the City's service area. This project will construct a two-stage reverse osmosis (RO) system, modify

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existing ponds for concentrate disposal, and install new pipelines to connect the existing MBR system to the RO system and from the RO system to the modified ponds for concentrate disposal, all within the developed area of the WRF. Project yield will be 168 AFY. The proposed upgrades will benefit existing and new recycled water customers by reducing the concentration of total dissolved solids (TDS) in the effluent and providing the necessary facilities for concentrate disposal through modified evaporation ponds. This project will take place within the existing treatment facility and will have no impact on listed species or habitat.

### **Recycled Water Distribution System Expansion 1**

American Canyon has identified several pipeline extensions from its existing system to deliver recycled water to existing landscaping and industrial users currently on potable water and convert them to recycled water for non-potable uses. The customer demands associated with these extensions will be met directly from the WRF during the peak month. No seasonal storage will be needed. Collectively, City of American Canyon's Recycled Water Distribution System Expansion 1 will include 6,110 LF of 12-inch diameter pipelines and 3,070 LF of 6-inch diameter pipelines. Four recycled water pipeline extensions will be located within existing public roadways in the northern and western portions of the city. Proposed facilities will include: Tower/South Kelly Road Pipeline - 6,100 LF of 12-inch diameter pipeline; Spikerush Circle Pipeline - 800 LF of 6-inch diameter recycled water pipeline; Benton Way Pipeline - 1,670 LF of 6-inch diameter recycled water pipeline; and Dodd/Klamath Court Pipeline - 600 LF of 6-inch diameter recycled water pipeline.

### **Recycled Water Distribution System Expansion 2**

This project includes additional pipeline extensions from the existing recycled water system to provide a yield of 25 AFY recycled water and to convert existing landscaping and industrial users from potable water to recycled water for non-potable uses. The customer demands associated with these extensions will be met directly from the WRF during the peak month. No seasonal storage will be needed. These pipelines will be constructed after the Treatment Plant Upgrades described below are completed. Collectively, components will include 7,080 LF of 12-inch-diameter pipelines, 2,230 LF of 8-inch pipelines, 1,200 LF of 6-inch pipelines. The three recycled water pipeline extensions to be constructed within existing public roadways, include: Pelleria Drive Pipeline - 790 LF of 6-inch diameter recycled water pipeline; Lombard/Hess Road Pipeline - 2,230 LF of 8-inch diameter recycled water pipeline; Broadway Pipeline - 7,080 LF of 12-inch diameter recycled water pipeline.

Novato Sanitation District

### **Novato Sanitary District Recycled Water Treatment Facility Capacity Expansion**

This project will include facility upgrades at the existing Novato SD Recycled Water Treatment Facility (RWTF) to increase tertiary treatment and disinfection capacity by 0.85 mgd, yielding an additional 286 AFY of recycled water based on 0.26 mgd average annual production. This project will construct additional tertiary filters, associated pipelines and mechanical equipment, and an additional chlorine contact tank within the developed area of the District-owned facility. This project will utilize existing facilities to increase recycled water supply. The project site is located within the disturbed area at the existing RWTF and will require minimal construction in undisturbed areas. This diversion of wastewater effluent for recycled water production will

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reduce the amount of wastewater discharge into San Pablo Bay. This project will take place within the existing treatment facility and will have no impact on listed species or habitat.

### **Marin County Lower Novato Creek Project 1 – Distribution**

The Novato Watershed Program aims to provide a system-wide analysis of flood protection options and identify specific opportunities to integrate flood protection goals with creek and wetland restoration elements. The Lower Novato Creek component of the Watershed Program potentially consists of six related projects located downstream of the Sonoma-Marín Area Rail Transit (SMART) bridge to Highway 37. All the facilities are being designed to be adaptive to sea level rise and climate change, while also contributing to habitat restoration projects. These projects support shifting use of lands from irrigated hayfields to restored tidal marsh and ecotone levees adaptive to sea level rise. The ability to implement these projects relies on the Novato SD RWTF Capacity Expansion project.

Marin County Lower Novato Creek Project 1 is the only project that is included in the NBWRP Phase 2. This project will create habitat opportunities and create levees that could utilize recycled water from Novato SD to establish and maintain habitat. This project will construct new ecotone levees, which are horizontal levees constructed at a lower slope (typically greater than 30:1). This levee design will protect adjacent properties, including the newly upgraded treatment plant, will be adaptive to sea level rise, and will provide upland and transitional habitats adjacent to wetland areas. The ecotone levees will be able to accommodate recycled water. The NBWRP Phase 2 project will include 5,443 linear feet (LF) of 6-inch-diameter distribution pipelines and 337 LF of 4-inch-diameter distribution pipelines to deliver recycled water to the levees for habitat enhancement. Project yield will be 40 AFY.

### **Turnout to Transitional Wetlands (Hamilton-Bel Marin Keys Wetland Restoration Project)**

Novato SD worked with the Coastal Conservancy to gain approval from the San Francisco Bay Regional Water Quality Control Board (RWQCB) to include provisions in the new National Pollutant Discharge Elimination System (NPDES) permit renewal that will allow a turnout from the existing Novato SD outfall for the Coastal Conservancy to use secondary treated wastewater in the next phase of this restoration project. This project will include connecting to the existing outfall pipeline discharging into San Pablo Bay to divert water and discharge into future transitional brackish wetlands created by the Coastal Conservancy under the Hamilton-Bel Marin Keys (BMK) Wetland Restoration Project. Both the CEQA and NEPA reviews (USACE lead) for the larger BMK Wetland Restoration Project were completed in the Bel Marin Keys Unit V Expansion of the Hamilton Wetland Restoration Project Supplemental EIR/EIS (Jones and Stokes, 2003; Coastal Conservancy, 2022) and documentation (ESA, 2017). Minimal new infrastructure (i.e., a hydraulic structure with 100 feet of pipeline) will be required because the existing outfall pipeline will be utilized to convey recycled water for use to restore fresh and brackish marsh habitat along the newly-constructed shoreline. Project yield will be 840 AFY. The discharge to San Pablo Bay from Novato SD will be approximately 5,900 AFY. The restoration of fresh and brackish water marsh will provide additional habitat for wildlife, potentially including Ridgway's rail and salt marsh harvest mouse. The outfall to the mudflats adjoining San Pablo Bay does not provide potential habitat for any listed species.

This project will utilize existing infrastructure to provide recycled water to an environmental enhancement project. The proposed turnout will provide operational flexibility for Novato SD and contribute to a major increase in new tidal marsh, mudflats, and shallow sub-tidal habitat

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totaling over 1,500 acres associated with the larger Coastal Conservancy project, which will provide new marsh habitat for a variety of bird and fish species, thereby improving several beneficial uses of San Pablo Bay. This project will modify an existing pipeline in Bel Marin Keys.

Marin Municipal Water District (Central Marin Sanitation Agency, CMSA)

**Recycled Water Distribution System Expansion to San Quentin Prison**

This project includes treatment of 0.2 mgd of secondary effluent using microfiltration and chlorine disinfection, with subsequent delivery to San Quentin State Prison. Improvements at CMSA will include 0.2 mgd of microfiltration, 50 HP pump station, chlorine tank retrofit, and 0.08-million-gallon (MG) storage tank. Approximately 5,800 LF of 6-inch pipeline will be installed within Sir Francis Drake Boulevard from the treatment facility to the prison grounds.

Tertiary-treated recycled water will be used within the prison grounds for dual plumbing (121.7 AFY), boiler make-up water (14.3 AFY), landscape irrigation (16.4 AFY), use in a car wash (0.1 AFY), and at a truck fill station at CMSA (0.5 AFY) – a total of 153 AFY. The project also includes site retrofits for dual plumbing, and connection of the partially dual-plumbed North, South, East and West blocks at San Quentin.

*Conservation Measures*

The following mitigation measures will also be implemented during construction and operation of the proposed project to specifically reduce effects on listed species.

**Measures for California Freshwater Shrimp**

*The following measures will be implemented to minimize the potential for effects on California freshwater shrimp, which may be present in Arroyo Seco and an unnamed drainage on Napa Road*

1. Trenchless methods will be preferentially employed at crossings that may support California freshwater shrimp: Arroyo Seco and an unnamed crossing at Napa Road. Trenching will only be used at crossings where geotechnical conditions prohibit the use of trenchless methods;
2. All activities across waterways will be restricted to low-flow periods of June 15 through November 1. If the channel is dry, construction can occur as early as April 15. Restricting construction activities to this work window will minimize effects to California freshwater shrimp by avoiding in-water work and working when this species is absent from the work area;
3. At least 30 days prior to onset of activities, Reclamation or appropriate agency will submit the name(s) and credentials of biologists who will conduct authorized activities. No project activities will begin until Reclamation has received written approval from the Service and the California Department of Fish and Wildlife (Department) that the biologist(s) is approved to conduct the work; The biological monitor will be on site during all activities crossing wetted channels. All project personnel will be authorized to halt construction if effects to California freshwater shrimp or other listed species are evident;

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4. Reclamation will ensure the appropriate permit authorizations are secured for stream crossings, and a Service-approved biological resource monitor will be present prior to work commencing to ensure channel is dry and work limits clearly marked. The biological monitor will remain on-call for the duration of construction. If the channel retains water at the time of work, the monitor will be present at all times to alert construction crews to the possible presence of California freshwater shrimp during active construction near California freshwater shrimp habitat. At sites where California freshwater shrimp may be encountered during construction activities, a relocation plan will be prepared and approved by the Service prior to beginning work at that site. If necessary, individual shrimp may be relocated by the Service-approved biologist in accordance with the approved plan. Construction activities will cease until the area is determined to be free of California freshwater shrimp;
5. A Service-approved biologist will conduct a training session for all construction personnel working near appropriate habitat, prior to the onset of construction activities. At a minimum, the training will describe the California freshwater shrimp and their habitat, their importance, their regulatory protections, and the measures that are being implemented to conserve these species as they relate to the proposed action;
6. If trenchless methods cannot be implemented due to geotechnical conditions, and the channel is not dry, water from around the section of trench that is within the actively flowing channels will be diverted. This will reduce the potential for sediment or other pollutants to enter the waterways and to affect downstream resources. If needed to prevent disturbed sediment from being transported and deposited outside of the construction zone, sediment curtains (i.e., 4' by 50' silt fence) will be laterally installed across the drainage downstream of the construction zone;
7. If ground water is encountered, or if water remains in the channel after flows are diverted, it will be pumped out of the construction area and into a retention basin constructed of hay bales lined with filter fabric. The pump(s) will be screened with a ¼-inch mesh to avoid entrainment, and a sump will be used to reduce intake velocities.
8. Silt fencing will be installed in both areas where construction occurs within 100 feet of known or potential California freshwater shrimp habitat (i.e., Arroyo Seco and the unnamed drainage tributary to Schell Creek). The bore pit will be set back from top of bank. Silt fence at edge of work area outside the Department's jurisdictional stream area;
9. Spoil sites will be located so they do not drain directly into the waterways whenever possible. If a spoil site drains into a water body, catch basins will be constructed to intercept sediment before it reaches the channels, as will be detailed in the project's SWPPP. Spoil sites will be graded to reduce the potential for runoff;
10. A spill prevention plan for potentially hazardous materials will be prepared and implemented. The plan will include the proper handling and storage of all potentially hazardous materials, as well as the proper procedures for cleaning up and reporting of any spills. If a spill should occur, containment berms will be constructed to prevent spilled materials from reaching the creek channels;
11. Equipment and materials (except spoils) will be stored in staging areas outside of the stream channel and banks. Stationary equipment, such as motors, pumps, generators, compressors and welders, located within or adjacent to the stream will be positioned within secondary containment;
12. Maintenance and fueling will be conducted in an area and manner that meets the criteria set forth in the spill prevention plan (i.e., away from creeks);

13. Project sites will be restored to pre-construction channel conditions, including streambed composition, compaction, and gradient. Channel banks will be returned to original grade slope and appropriate bank stabilization techniques will be implemented to reduce the potential for erosion and sedimentation;
14. Project sites will be revegetated with an appropriate assemblage of native upland vegetation, and if necessary, riparian and wetland vegetation, suitable for the area. A plan describing pre-project conditions, restoration and monitoring success criteria will be prepared prior to construction subject to Service approval. If appropriate, a site revegetation plan will also be developed, including collection of onsite vegetation and replanting following construction.

### **Measures for California Red-legged Frog and Northwestern Pond Turtle**

*Aquatic resources will be protected by minimizing in-stream and near-stream habitat impacts and implementing protective measures. The following measures will be implemented to protect California red-legged frogs that may be present in aquatic habitat in North Slough, Arroyo Seco, and Lynch Creek. The measures will also protect northwestern pond turtle, should this species become listed.*

1. Trenchless methods will be employed at crossings presumed or known to support California red-legged frog or northwestern pond turtle. Reclamation will ensure the appropriate permit authorizations are secured for stream crossings, and a Service-approved biological resource monitor will be present at all times to alert construction crews to the possible presence of California red-legged frog and northwestern pond turtle during construction operations and ensure compliance with all conservation measures;
2. At least 30 days prior to onset of activities, Reclamation will submit the name(s) and credentials of biologists who will conduct authorized activities. No project activities will begin until Reclamation has received written approval from the Service that the biologist(s) is approved to conduct the work;
3. A Service-approved biologist will survey the project site (*i.e.*, at stream crossings where aquatic impacts are expected) including staging areas and vehicle access routes two weeks prior to the onset of earthmoving activities, and immediately prior to initial ground disturbance activities;
4. A Service-approved biologist will be present at all times to alert construction crews to the possible presence of California red-legged frog or northwestern pond turtle during construction operations near identified habitat for these species and will inspect work areas each morning prior to the onset of work. A “no mortality” approach will be taken for work activities. At sites where California red-legged frogs or northwestern pond turtle may be encountered during construction activities, a relocation plan will be prepared and approved by the Service prior to beginning work at that site. If necessary, individual frogs or turtles may be relocated by the Service-approved biologist in accordance with the approved plan. Construction activities will cease until the area is determined to be free of California red-legged frogs and northwestern pond turtles;
5. A Service-approved biologist will conduct a training session for construction personnel working near channel crossings prior to the onset of construction activities. At a minimum, the training will describe the California red-legged frog and northwestern pond turtle and their habitats, their life history, regulatory protections, the consequences of regulatory violations, the benefits of compliance, and the measures that are being implemented to conserve these species as they relate to the proposed action;

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6. All work activities within or adjacent to channel ordinary high-water marks will be completed between April 1 and November 1;
7. Project traffic will observe a 15 mile-per-hour speed limit within California red-legged frog and northwestern pond turtle habitat and remain on established roads to the extent possible. Food-related trash may attract predators and will be properly contained, removed from the work site, and disposed of daily, and no pets will be allowed on the site;
8. The spill prevention plan for the project will be adhered to in order to prevent deposition of materials into waterways. Fueling will be performed in level areas at least 50-feet distant from downslope drainage and watercourses. Staging areas will be located away from banks and channels and other sensitive habitats. All grinding and concrete waste will be stored a minimum of 150-feet from any habitat areas, culverts or drainage features. Dust control and truck watering will be part of construction best management practices.
9. All excavated holes or trenches more than two feet deep will be covered at the close of each work day by plywood or similar material, or one or more escape ramps of fill or wooden planks will be installed. Before holes or trenches are filled, they must be thoroughly inspected for trapped animals.
10. Plastic monofilament netting will not be used on the project site to avoid the possibility of entrapping California red-legged frogs or northwestern pond turtles.

### **Measures for Western Snowy Plover**

*To minimize the likelihood of project effects on western snowy plover, the following measures will be implemented at the Bel Marin Keys turnout to transitional wetlands.*

1. All work activities within 500-feet of suitable breeding habitat for western snowy plover will be completed between September 16 and February 28 to avoid the breeding season (March 1 through September 15).
2. Construction activities will be constrained to the smallest area possible to minimize disturbance to potential nesting habitat.
3. A Service-approved biologist will conduct a training session for all construction personnel working near appropriate habitat prior to the onset of construction activities. At a minimum, the training will describe western snowy plover and their habitat, life history, regulatory protections, the consequences of regulatory violations, benefits of compliance, and measures that are being implemented to conserve these species as they relate to the proposed action.

### **Measures for Ridgeway's Rail**

*The following measures will be implemented to minimize the potential for effects on Ridgeway's rail at the Bel Marin Keys turnout to transitional wetland and in lower Novato Creek.*

1. Construction activities within 700-feet of tidal marsh areas containing suitable habitat will be completed between September 1 and January 30 to avoid the breeding season (February 1 through August 31);

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2. Construction activities will be confined to within the levee access road at Bel Marin Keys, and to areas outside the Novato Creek corridor and the associated emergent vegetation zone.
3. A Service-approved biologist will conduct a training session for all construction personnel working near appropriate habitat prior to the onset of construction activities. At a minimum, the training will describe Ridgway's rails and their habitat, life history, regulatory protections, the consequences of regulatory violations, benefits of compliance, and measures that are being implemented to conserve these species as they relate to the proposed action.

### **Measures for Salt Marsh Harvest Mouse**

*To avoid adverse effects on salt marsh harvest mouse, the following measures will be performed in the Bel Marin Keys turnout to transitional wetland and lower Novato Creek areas that support emergent salt marsh vegetation.*

1. A qualified biologist will conduct specific pre-construction surveys prior to project initiation, in coordination with Service. Pre-construction surveys will include hand-clearing of any pickleweed vegetation and visual inspection of habitat;
2. Service-approved biologist will conduct a training session for construction personnel all working near appropriate habitat prior to the onset of construction activities. At a minimum, the training will describe the salt marsh harvest mouse and their habitat, their life history, regulatory protections, the consequences of regulatory violations, the benefits of compliance, and the measures that are being implemented to conserve these species as they relate to the proposed action;
3. As determined by the approved biologist, silt fencing will be installed on both sides of the access road, where emergent pickleweed (*Salicornia pacifica*) habitat is present, to deter species movement into the construction area, and to prevent spoils from entering the salt marsh. Fencing will consist of a material that does not allow salt marsh harvest mouse to pass through or over, and the bottom will be buried to a depth of at least six inches. At the close of each workday, escape ramps/boards will be provided in all open trenches. Every morning prior to the start of construction, a service-approved biologist will inspect all open trenches within 250 feet of emergent pickleweed habitat for trapped mice;
4. A Service-approved biologist will be onsite during all construction activities occurring in the Bel Marin Keys and lower Novato Creek areas, including vegetation removal and during morning trench inspections, and otherwise available during the course of the construction work. The biologist will halt work if salt marsh harvest mice are observed, document compliance with the conservation measures and will contact the Service if any sensitive species are observed. All project personnel have the authority to stop work if a potential listed species is near;
5. In the event a potential salt marsh harvest mouse is found on-site, the biologist will remove mice from trenches before the start of construction. Relocated mice will be placed in the nearest suitable habitat where exclusion fencing prevents their return to the construction site. All occurrences of salt marsh harvest mice will be reported to the Service within 3 days.



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**Action Area**

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” The proposed action area includes locations within Marin, Sonoma, and Napa counties surrounding the San Pablo Bay. the action area includes a ¼-mile buffer on either side of the pipelines in each service area in order to capture all potential direct and indirect effects. The total acreage of the action area is approximately 7,854 acres. Figure 1 below shows an action area overview.

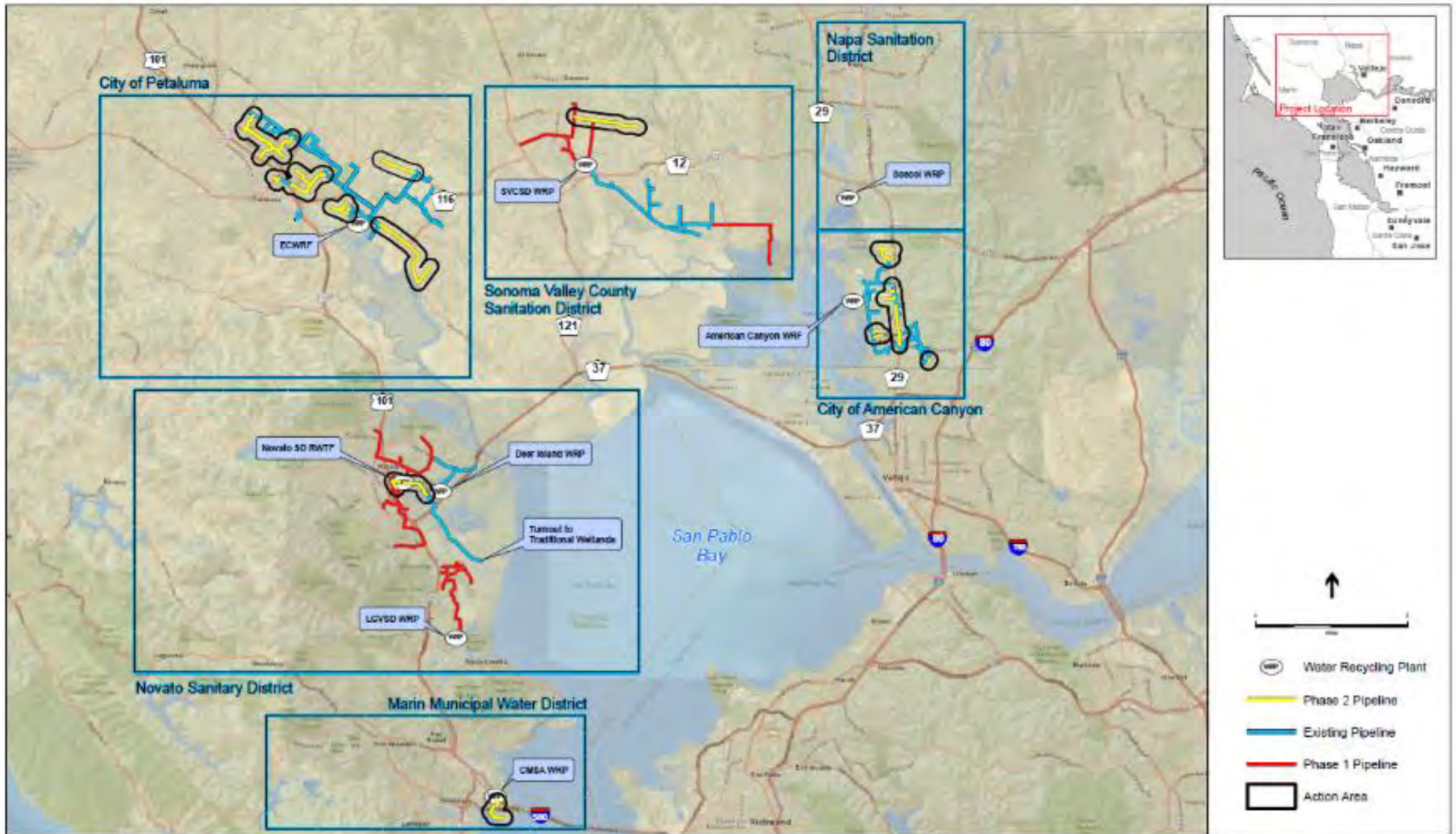


Figure 1: Action Area Overview

## Analytical Framework for the Jeopardy Determination

Section 7(a)(2) of the Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the current rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the current condition of the species in the action area without the consequences to the listed species caused by the proposed action, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines all consequences to listed species that are caused by the proposed federal action; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of the species, the Service formulates its opinion as to whether the proposed action is likely to jeopardize the continued existence of the listed species.

### Status of the Species

#### *California freshwater shrimp*

Please refer to the *California Freshwater Shrimp 5-Year Review: Summary and Evaluation* (Service 2022) (available at [https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/3953.pdf](https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/3953.pdf)) for the latest published status of the species. No change in the species’ listing status was recommended in the latest 5-year review for the species, which was conducted in August 2022.

#### *California red-legged frog*

Please refer to the *California Red-Legged Frog 5-Year Review: Summary and Evaluation* (Service 2022) (available at [chrome-extension://efaidnbmnnnibpcajpcgiclfefindmkaj/https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public\\_docs/species\\_nonpublish/4025.pdf](chrome-extension://efaidnbmnnnibpcajpcgiclfefindmkaj/https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/species_nonpublish/4025.pdf)) for the latest published status of the species. No change in the species’ listing status was recommended in the December 2022 5-year review.

#### *Salt marsh harvest mouse*

There are two subspecies of the salt marsh harvest mouse: the northern subspecies (*R. r. halicoetes*) and the southern subspecies (*R. r. raviventris*) both of which are listed as endangered. For the most recent comprehensive assessment of the species’ range-wide status, please refer to the *Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California*, available at: [https://ecos.fws.gov/docs/recovery\\_plan/TMRP/20130923\\_TMRP\\_Books\\_Signed\\_FINAL.pdf](https://ecos.fws.gov/docs/recovery_plan/TMRP/20130923_TMRP_Books_Signed_FINAL.pdf) (Service 2013). Critical habitat has not been designated for this species. Threats evaluated during

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the drafting of the recovery plan and discussed in the final document have continued to act on the species since its publication, with loss of habitat being the most significant effect. For the most recent comprehensive assessment of the species' range-wide status, please refer to the salt marsh harvest mouse 5-year review at: [https://ecos.fws.gov/docs/tess/species\\_nonpublish/3643.pdf](https://ecos.fws.gov/docs/tess/species_nonpublish/3643.pdf) (Service 2021). No change in the species' listing status was recommended in this 5-year review.

### **Environmental Baseline**

*Environmental baseline* refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

The proposed project is located north and west of San Pablo Bay in northern California and extends approximately 10 to 30 miles inland from San Pablo Bay. San Pablo Bay is the northernmost reach of San Francisco Bay and borders Marin, Sonoma, Napa, and Solano counties. The action area extends as far south as San Quentin in Marin County and as far north as Milliken Canyon located 28 miles to the northeast in eastern Napa County and encompasses about 318 square miles of land. Urban centers in the action area are San Rafael and Novato in Marin County, Petaluma and Sonoma in Sonoma County, and Napa and American Canyon in Napa County.

### *California Freshwater Shrimp*

Three occurrences of California freshwater shrimp occur within the proposed project service areas, with two of them in Sonoma County and one in Napa County. All occurrences are presumed extant. In the Sonoma Creek watershed, California freshwater shrimp are widely documented in the mainstem of Sonoma Creek approximately 1.5 miles north of the Napa Road pipeline location, and are also documented from a single tributary drainage, Yulupa Creek, on the edge of Annadel State Park, 7.5 miles northwest of the SVCSD action area. No other tributaries to Sonoma Creek are known to support this species. Within the Huichica Creek watershed in Napa County, this species is documented from the middle reaches of Huichica Creek approximately one mile east of the nearest proposed pipeline route. Potential habitat sites within the action area are on undercut banks in perennial creeks with overhanging vegetation where shrimp forage, shelter and reproduce.

California freshwater shrimp may occur in or near proposed project areas within SVCSD-Napa Road. As identified by the California Natural Diversity Database, California freshwater shrimp are known to inhabit the mainstem of Sonoma Creek near Maxwell Farms Regional Park, and potentially downstream reaches as well. The Napa Road Pipeline route stops approximately one mile east of Sonoma Creek. It crosses two intermittent tributary streams, Arroyo Seco and an unnamed drainage, that are tributaries to Schell Creek and hydrologically connected to Sonoma Creek, which has a known population of this species. While the species has not been detected in the action area, focused surveys for this proposed project have not been conducted. Due to the habitat present, distance from known occurrences, and presence of suitable habitat adjacent to the action area, there is potential for the species to occur. Thus, these drainages could potentially

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support California freshwater shrimp. However, habitat is marginal at these locations due to ephemeral flows. California freshwater shrimp would not be present during dry periods and may have limited ability to colonize channels which are seasonally dry.

### *California Red-legged Frog*

Local populations of California red-legged frog are restricted to the western foothills of Sonoma Valley. This species is not known from the Sonoma Valley floor or from the Mayacamas Mountains east of Sonoma; the nearest California red-legged frog occurrences are at American Canyon, approximately 0.25 miles east of the action area. California red-legged frogs are also recorded from the Sears Point area five miles south of the town of Sonoma, and two records are from the Petaluma River watershed along Lakeville Highway, between Ellis Creek and Highway 37, approximately five miles south of the action area. A population is described from a stock pond and intermittent drainage upstream from Tolay Creek, near the intersection of Highway 116 and Adobe Road, less than one mile east of the action area. A population approximately 0.8 mile west of the SVCSD action area and east of Sonoma County Transfer Station Road is described in further detail below. Additional undocumented breeding ponds for this species may be present on private lands in the vicinity of the proposed project.

California red-legged frog may occur in or near proposed project areas within the within the City of American Canyon, Novato SD, the City of Petaluma, and SVCSD-Napa Road. Occurrences from each location are described in further detail below.

### **City of American Canyon**

Several California red-legged frog occurrences are in American Canyon, in small remnant freshwater marsh and artificial pond habitats east of Highway 29, which have cattails and tules present. Two sightings are approximately 0.25 mile east of the pipeline route. An additional sighting is approximately one mile east. Farther east, California red-legged frog records are present across Interstate 80 approximately three miles east of the American Canyon pipeline, and along Highway 12 in Cordelia approximately five miles east of the pipeline. The pipeline routes in American Canyon are along existing roads, including Highway 29, within developed areas. There are two crossings of North Slough in an industrial area west of Highway 29 and south of the railroad. One additional crossing of a wetland area is along Eucalyptus Drive near the intersection with Highway 29. These areas are considered inaccessible to the action area because Highway 29 is a major highway artery that provides a barrier to frog dispersal. These crossings have intermittent flow, with high levels of traffic and human disturbance. They lack suitable breeding habitat but could provide marginal California red-legged frog aquatic dispersal habitat. Adjacent uplands would provide poor habitat due to proximity of roads that constitute barriers to dispersal, and frequent human disturbance. California red-legged frogs are not likely to occur in this area.

### **Novato SD**

The closest California red-legged frog occurrences are north of Highway 37 on the west side of Lakeville Highway, approximately 3.5 miles northeast of the Novato pipeline route. Additional potential habitat is present in Olompali State Park approximately three miles northwest of the pipeline route. While there are no confirmed records of California red-legged frog in this area, focused surveys have not been conducted. It is possible that California red-legged frogs could disperse through this area. However, the pipeline route would follow a levee alongside tidal marsh that is too saline to provide breeding habitat for the California red-legged frog and is

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isolated from existing populations by development to the north, south and west, and by Highway 37 to the east. Thus, while California red-legged frogs may occur in this area in uplands or during dispersal, this species would not breed in the proposed project area.

### **City of Petaluma**

Several California red-legged frog occurrences are recorded to the west of downtown Petaluma, in freshwater pools and marshes in ranchlands, the closest approximately one mile southwest of the Phase 2 pipeline. Additional California red-legged frog occurrences are east of Petaluma near Adobe Road in pools along Stage Gulch Road, and in Tolay Creek. These occurrences are one mile northeast of the pipeline at its closest point. Northeast of Petaluma in freshwater marsh and pools in ranchlands are additional California red-legged frog occurrences three miles or more northeast of the Phase 2 pipeline. The pipeline route in downtown Petaluma crosses two unnamed drainages and Lynch Creek. These drainages provide marginal habitat for the California red-legged frog because of limited emergent vegetation and their location in a residential, developed area. South of downtown Petaluma, the agricultural segment of the pipeline crosses several small unnamed drainages. These drainages lack wetland vegetation, thus providing little cover for frogs, and have a high level of disturbance along roadsides, which constitute partial migration barriers. While California red-legged frogs have not been detected in the vicinity of the action area, focused surveys have not been conducted. Due to the habitat present, proximity to known occurrences, and presence of suitable aquatic non-breeding habitat in Lynch Creek and other waterways, California red-legged frogs may use this area for dispersal and may use adjacent suitable uplands for cover.

### **SVCS - Napa Road**

There is a California red-legged frog population in the vicinity of the Sonoma County Transfer Station on the west side of Highway 116, and from a ponded portion of adjacent Champlin Creek approximately 2.5 miles southwest of the pipeline route. Champlin Creek is an ephemeral drainage that drains to Rodgers Creek south of Watmaugh Road, which drains into Fowler Creek. The pipeline route along Napa Road crosses Arroyo Seco and one unnamed drainage. Both these drainages have habitat contiguity in high flow periods with Champlin Creek and may provide aquatic non-breeding habitat for red-legged frog dispersal. Adjacent uplands contain busy roads that constitute barriers to dispersal; thus, these areas are not suitable frog habitat. While the species has not been detected in the vicinity, focused surveys for the action area have not been conducted. Due to the habitat present, distance from known occurrences, and presence of suitable aquatic non-breeding habitat in the drainages, there is potential for California red-legged frogs to use this area for dispersal.

### *Salt Marsh Harvest Mouse*

The northern subspecies of salt marsh harvest mouse has been recorded in Novato in emergent pickleweed habitat along the bay shore; in the Petaluma, Napa and Suisun marshes; and in patchy and discontinuous populations on Contra Costa County's northern coastline. In Marin County, bay fringes at the mouth of Novato Creek supported salt marsh harvest mouse in the mid-1970s, and at the mouth of Gallinas Creek in McInnis Park in 1986. Mare Island in Sonoma County supports a high density of the species, which can also be found along the Petaluma River, in Sonoma Creek, and in Tolay Creek. In Napa County, salt marsh harvest mouse can be found in Denman, Fagan and Napa Sloughs, as well as at Coon Island.

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Salt marsh harvest mouse may occur in or near proposed project areas within the Novato SD. Salt marsh harvest mouse prefers pickleweed habitat and emergent salt marsh vegetation, which are present at the lower Novato Creek action area and at Bel Marin Keys and provide foraging habitat and refugia. Although no salt marsh harvest mice have been recorded in lower Novato Creek, high quality habitat is present and the species is assumed to be present in pickleweed habitat. The northern subspecies has been found in areas both north and south of Novato Creek, at the mouth of the Petaluma River and Tolay Creek in Sonoma County, and Gallinas Creek and San Pedro marsh in San Rafael. Thus, the Novato Creek action area and Bel Marin Keys are both considered potential habitat. Pickleweed and surrounding marshlands in this area are potential breeding and dispersal habitat for salt marsh harvest mouse.

### **Effects of the Action**

*Effects of the action* are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

#### *California freshwater shrimp*

Trenchless crossing methods will be preferentially employed at the two aquatic stream crossings in the Schell Creek watershed which have potential to support California freshwater shrimp: Arroyo Seco and an unnamed drainage. During trenchless construction activities both near and at stream crossings, the potential exists for accidental spills of drilling muds such as bentonite, gasoline, oil or other toxic substances. During directional drilling activities, drillhead lubricants sometimes escape to the surface through soil fractures and spill into upland or aquatic environments. The release of such materials into streams can be damaging to aquatic environs, depending upon the sensitivity of the receiving waters, the timing of the spill, the magnitude of the release and the promptness and scale of cleanup activities. In the event of a spill, impacts to California freshwater shrimp could also be experienced during cleanup activities. Such impacts could include direct mortality, injury or decreased fitness from contact with escaped materials or cleanup equipment, and temporary degradation or loss of habitat.

California freshwater shrimp conservation measure 9 will reduce these effects by implementing a spill prevention plan and spill containment. Measures 8, 10 and 11 will minimize the possibility of spills impacting habitat by situating materials, spoils, and refueling away from the creek. Measures 4 and 5 will also reduce effects to the shrimp by requiring a biologist onsite to train workers and monitor compliance with all conservation measures.

If geotechnical considerations prohibit the use of directional drilling or jack-and-bore technology, and the channel is not dry, water in the channel will be diverted within the construction zone. During water diversion operations, short-term alterations to the channel bed will be expected. Earthmoving adjacent to the channel could result in increased sediment loads, turbidity, and siltation. To ensure safe removal and relocation of freshwater shrimp in accordance with a Service-approved plan, and minimize potential loss of habitat, Measures 4 through 7 will be implemented to minimize impacts from dewatering and relocation by use of sediment curtains, silt fencing, and protective mesh for freshwater shrimp.

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However, due to the low likelihood for the species to be present, the timing of proposed project activities to avoid work in perennial channels, and the implementation of the conservation measures, the potential effects of the action to this species are anticipated to be minor.

*California red-legged frog*

In the absence of focused California red-legged frog surveys for action area stream crossings, this species is presumed present within available aquatic habitat and adjoining upland habitat at North Slough, Arroyo Seco, and Lynch Creek, and in Novato. If trenchless crossing is not feasible, water diversion operations will be required, which will cause temporary loss of habitat and potential for injury, mortality, or decrease in fitness of individual frogs in the work area. Breeding is not expected in the proposed project area; thus, no effects will occur to California red-legged frog breeding populations. Pre-construction surveys and biological monitoring will minimize the potential for injury. Any water diversions will use screened intakes and intake will be enclosed within a sump in potentially occupied habitat. If California red-legged frogs are identified in the work area and relocation is authorized, additional injury will be possible to frogs during handling. Injury will be avoided or minimized by adherence to the approved relocation plan.

During trenchless crossings, which will be preferentially employed at all crossings, impacts could occur through accidental spills or frac-out of drilling fluid causing degradation of habitat or injury to frogs. Impacts from these activities will be minimized through application of Measure 5, requiring a biological monitor, and Measure 9, requiring a spill prevention plan and location of staging areas away from waterways.

Upland construction methods in the vicinity of these crossing sites are expected to be minimally invasive, utilizing open trench methods either within or adjacent to existing roadways. However, there is potential impact to individual frogs transiting through roadside ditches. The Service identifies typical effects that could occur as a result of the proposed action, including:

1. injury or mortality from being crushed by earth moving equipment, debris, and worker foot traffic;
2. work activities, including noise and vibration, causing frogs to leave suitable habitat;
3. mortality as a result of the accidental spill of hazardous materials or from careless fueling or oiling of vehicles or equipment near sensitive upland or aquatic habitats;
4. injury or mortality as a result of improper handling, containment, or transport of individuals.

The above impacts will be avoided and minimized through application of Measure 5, requiring a biological monitor; Measure 6, requiring worker training; and Measure 9, requiring a spill prevention plan, and location of staging areas away from sensitive habitats.

Overall, due to the low likelihood of the species to be present, the timing of proposed project activities to avoid work in wetted channels, and the implementation of the conservation measures, the potential effects of the action on this species are expected to be minor.



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*Salt Marsh Harvest Mouse*

Due to the proximity of the Novato Sanitary District projects to salt marsh that provides potential habitat for salt marsh harvest mouse, vegetation clearing, construction and vehicle traffic may result in disturbance, injury or mortality, or reproductive failure to salt marsh harvest mouse. The pipeline will be installed within the proposed levee at lower Novato Creek, and the impact area confined to an area approximately 25-feet in width to avoid direct impacts on pickleweed vegetation. The turnout at Bel Marin Keys would involve less than ten square feet of impact on ruderal or grassland vegetation in the existing access road. With implementation of conservation measures requiring pre-construction surveys and worker education, requiring a biological monitor to be present, and installing exclusion fencing and escape ramps, the effects of the proposed project on salt marsh harvest mouse will be minor.

### **Cumulative Effects**

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

### **Conclusion**

After reviewing the current status of the California freshwater shrimp, California red-legged frog, and salt marsh harvest mouse the environmental baseline for the action area, the effects of the proposed North Bay Water Reuse Program Phase 2 Project, and the cumulative effects, it is the Service's biological opinion that the North Bay Water Reuse Program Phase 2 Project as proposed, is not likely to jeopardize the continued existence of the California freshwater shrimp, California red-legged frog, and salt marsh harvest mouse. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species based on the following: (1) successful implementation of the conservation measures described in this biological opinion will minimize the adverse effects on individual California freshwater shrimp, California red-legged frogs, and salt marsh harvest mice; and (2) the impacts to habitat for the species is temporary and limited in size.

### **INCIDENTAL TAKE STATEMENT**

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise

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lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the County so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The County has a continuing duty to regulate the activity covered by this incidental take statement. If the County (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the County must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(4)].

### **Amount or Extent of Take**

#### *California Freshwater Shrimp*

The Service anticipates that incidental take of the California freshwater shrimp will be difficult to detect due to its life history and ecology. Specifically, California freshwater shrimp can be difficult to locate due to their cryptic appearance, and finding a dead or injured individual is unlikely due to their relatively small size. Losses of California freshwater shrimp may also be difficult to quantify due to seasonal fluctuations in their numbers, random environmental events, changes in water regime, or additional environmental disturbances. Therefore, the Service anticipates that all California freshwater shrimp within the action area will be subject to incidental take in the form of non-lethal harm. The Service anticipates that no more than 3% of captured and relocated California freshwater shrimp individuals would be killed or injured as a result of project-related activities and would be detected by biological monitors. We believe that if this level of take is exceeded then likely other California freshwater shrimp have also been adversely affected by the proposed project but not detected. If more than 3% of California freshwater shrimp are injured or killed as a result of the proposed North Bay Water Reuse Program Phase 2 Project, then take is exceeded and, as provided in 50 CFR §402.16, reinitiation of formal consultation would be required to determine appropriate measures to further minimize the effect of take of listed species.

#### *California Red-legged Frog*

The Service anticipates that incidental take of the California red-legged frog will be difficult to detect due to its life history and ecology. Specifically, California red-legged frogs can be difficult to locate due to their cryptic appearance, and finding a dead or injured individual is unlikely due to their relatively small size. Losses of California red-legged frogs may also be difficult to quantify due to seasonal fluctuations in their numbers, random environmental events, changes in water regime at their breeding ponds, or additional environmental disturbances. Therefore, the Service anticipates that all California red-legged frogs within the action area will be subject to incidental take in the form of non-lethal harm. The Service anticipates that no more than four (4) California red-legged frog would be killed or injured as a result of project-related activities and would be detected by biological monitors. We believe that if this level of take is exceeded then likely other California red-legged frogs have also been adversely affected by the proposed project but not detected. If more than four California red-legged frogs are injured or killed as a

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result of the proposed North Bay Water Reuse Program Phase 2 Project, then take is exceeded and, as provided in 50 CFR §402.16, reinitiation of formal consultation would be required to determine appropriate measures to further minimize the effect of take of listed species.

### *Salt Marsh Harvest Mouse*

The Service anticipates that incidental take of the salt marsh harvest mouse will be difficult to detect or quantify because of the variable, unknown size of any resident population over time, and the difficulty of finding killed or injured small mammals. In instances when take is difficult to detect, the Service may estimate take in numbers of species per acre of habitat lost or degraded as a result of the action as a surrogate measure for quantifying individuals. Therefore, the Service anticipates that all salt marsh harvest mouse inhabiting the Novato Sanitary District area will be subject to incidental take in the form of non-lethal harm and harassment. The Service anticipates that a maximum of one (1) salt marsh harvest mouse would be captured, killed, or injured as a result of project-related activities and would be detected by biological monitors. We believe that if this level of take is exceeded then likely other salt marsh harvest mice have also been adversely affected by the proposed project but not detected. If more than one salt marsh harvest mouse is injured or killed as a result of the proposed North Bay Water Reuse Program Phase 2 Project, then take is exceeded and, as provided in 50 CFR §402.16, reinitiation of formal consultation would be required to determine appropriate measures to further minimize the effect of take of listed species.

### **Effect of the Take**

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species.

### **Reasonable and Prudent Measures**

All necessary and appropriate measures to avoid or minimize effects on the California freshwater shrimp, California red-legged frog, and salt marsh harvest mouse resulting from implementation of this project have been incorporated into the project's proposed conservation measures.

Therefore, the Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the California freshwater shrimp, California red-legged frog, and salt marsh harvest mouse:

- 1) All conservation measures, as described in the biological assessment, consultation request, correspondence with the Service, and restated here in the Description of the Proposed Action section of this biological opinion, will be fully implemented and adhered to. Further, this reasonable and prudent measure will be supplemented by the terms and conditions below.

### **Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the County must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. The Bureau of Reclamation will include full implementation and adherence to the conservation measures as a condition of any permit or contract issued for the proposed project.

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2. The Bureau of Reclamation will require that all personnel associated with this project are made aware of the conservation measures and the responsibility to implement them fully.
3. If requested, the applicant will ensure the Service or their authorized agents can examine the action area for compliance with the Description of the Proposed Action, Conservation Measures, and Terms and Conditions of this biological opinion before, during, or after project completion.
4. The Bureau of Reclamation will ensure all 66.22 acres of impacts are temporary per the Biological Assessment and personal communications, reinitiation of consultation will be completed if any of the projects effects before or during construction could create permanent impacts to listed species habitat.

#### Monitoring:

1. The Bureau of Reclamation will immediately contact the Service's Sacramento Fish and Wildlife Office (SFWO) at (916) 414-6623 or the San Francisco Bay-Delta Office's (BDFWO, tidal marsh species) Assistant Field Supervisor of the Endangered Species Division at (916) 930-2664 to report direct encounters between listed species and project workers and their equipment whereby incidental take in the form of harassment, harm, injury, or death occurs. If the encounter occurs after normal working hours, the Bureau of Reclamation will contact the SFWO at the earliest possible opportunity the next working day. When injured or killed individuals of the listed species are found, the Bureau of Reclamation or applicant will follow the steps outlined in the Salvage and Disposition of Individuals section below.
2. For those components of the action that will require the capture and relocation of any listed species, the County or applicant will immediately contact the SFWO at (916) 414-6623 or BDFWO at (916) 930-2664 to report the action. If capture and relocation need to occur after normal working hours, the Bureau of Reclamation will contact the SFWO at the earliest possible opportunity the next working day.
3. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, the County or applicant will provide a precise accounting of the total acreage of habitat impacted to the Service after completion of construction.
4. To avoid transferring disease or pathogens while handling amphibians, Service-approved biologists must follow the recommendations from the Declining Amphibian Population Task Force's Code ([https://www.fws.gov/southwest/es/NewMexico/documents/SP/Declining\\_Amphibian\\_Task\\_Force\\_Fieldwork\\_Code\\_of\\_Practice.pdf](https://www.fws.gov/southwest/es/NewMexico/documents/SP/Declining_Amphibian_Task_Force_Fieldwork_Code_of_Practice.pdf)).
5. A post-project completion report will be provided to the Service documenting with photographs the successful restoration of all habitats temporarily disturbed within the action area and any observations of California freshwater shrimp, California red-legged frogs, or salt marsh harvest mice within the action area.

#### **Salvage and Disposition of Individuals:**

Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the Service-approved biologist. Dead individuals must be sealed in a resealable plastic

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bag containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instructions are received from the Service regarding the disposition of the dead specimen. The Service contact person is the Coast Bay Division Supervisor of the SFWO at (916) 414-6623 and the BDFWO Assistant Field Supervisor of the Endangered Species Division at (916) 930-2664.

### CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1. Observations of listed species should be submitted to the California Natural Diversity Database (<https://wildlife.ca.gov/Data/CNDDDB>) within sixty days of observation. A copy of the reporting form and a topographic map clearly marked with the location the animals were observed should also be provided to the Service.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

### REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the North Bay Water Reuse Program Phase 2 Project. As provided in 50 CFR §402.16(a), reinitiation of consultation is required and will be requested by the federal agency where discretionary federal involvement or control over the action has been retained or is authorized by law, and:

- 1) If the amount or extent of taking specified in the incidental take statement is exceeded;
- 2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- 3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or written concurrence, or
- 4) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this biological opinion, please contact Bridget Giblin, Fish and Wildlife Biologist ([bridget\\_giblin@fws.gov](mailto:bridget_giblin@fws.gov)) or at (916) 414-6624 or Ryan Olah, Coast Bay Division Supervisor ([ryan\\_olah@fws.gov](mailto:ryan_olah@fws.gov)), at (916) 414-6623.

**LITERATURE CITED**

Bureau of Reclamation. 2024. Biological Assessment – Wildlife. North Bay Water Reuse Authority, North Bay Water Reuse Program Phase 2

California Department of Fish and Wildlife. 2023. California Natural Diversity Database (CNDDDB). Government version dated August 2024. Occurrence Reports for California red-legged frog, California freshwater shrimp, salt marsh harvest mouse. Retrieved on August 12, 2024.

U.S. Fish and Wildlife Service (Service). 2002. Recovery plan for the California red-legged frog (*Rana aurora draytonii*). Portland, Oregon. 173 pp.

**ITEM NO. 7 STATUS OF CONSULTANT AGREEMENTS FOR FY2024/25**

**Action Requested**

None at this time

**Summary NEEDS UPDATING**

The FY2024/25 Budget was approved by the Board on June 24, 2025. The budget included the following:

<b>Contract</b>	<b>Amount</b>	<b>Project</b>
Brown & Caldwell	\$150,000	Continued Recycled Water Support
Brown & Caldwell	\$87,488	Sea Level Rise Adaptation
Weir Technical Services	\$0	Program Management (using carryover funds)
Sonoma Water	\$92,537	Administration
<b>Total</b>	<b>\$330,025</b>	

The no-cost extension of the agreement through December 31, 2024 with Weir Technical Services was approved by Sonoma Water on August 9, 2024. The extension was an administrative item that did not need to be approved by the Sonoma Water Board of Directors.

Sonoma Water will report on the status of the Brown & Caldwell agreement. The agreement also includes funds for ESA and Data Instincts.

**Recommendation**

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

**Attachment**

None.

**ITEM NO. 8 STATUS OF PROGRAM MANAGER REPLACEMENT PROCESS**

**Action Requested**

None at this time

**Summary**

The NBWRA Board authorized Kevin Booker to develop an agreement, including scope and costs, for Program Manager services with Jim O'Toole, ESA, for a not to exceed cost of \$50,000. That amount does not need to go to the Sonoma Water Board for approval. It is anticipated that the agreement will be finalized in December 2024. The TAC reviewed and agreed to fund the period through June 30, 2025 with contingency funds estimated to be \$20,000. This approach will not require a budget modification for FY2024/25. Additional costs will need to be included in the FY2025/26 Budget which will be presented to the Board in early 2026.

**Recommendation**

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

**Attachment**

None.



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Agenda Explanation  
North Bay Water Reuse Authority  
Technical Advisory Committee  
November 7, 2024

**ITEM NO. 9 PLANS FOR NEXT BOARD MEETING**

**Action Requested**

The next Board meeting is scheduled for Monday, December 16, 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. Status of Agreement with ESA for Jim O’Toole’s services as Program Manager
7. Other Items

**Recommendation**

Discuss plans for the Board meeting scheduled for December 16, 2024 at 9:30 a.m. via Zoom.

**Attachment**

None.