

State Water Resources Control Board

MAR 03 2016

Ms. Julianne Polanco
California State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

REQUEST FOR CONCURRENCE ON "SECTION 106" COMPLIANCE AND A FINDING OF "NO HISTORIC PROPERTIES AFFECTED" FOR THE PURE WATER MONTEREY GROUNDWATER REPLENISHMENT PROJECT (GWR PROJECT); MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY (AGENCY); MONTEREY COUNTY (COUNTY), CALIFORNIA; CLEAN WATER STATE REVOLVING FUND (CWSRF) NO. C-06-8028-110

Dear Ms. Polanco:

State Water Resources Control Board (State Water Board) staff have reviewed the cultural resources documents provided for the GWR Project and is requesting your concurrence that the enclosed cultural resources studies/information are adequate and complete, and that no historic properties will be affected by the described undertaking. We are seeking comments from your agency to complete the federal review process for the above-mentioned GWR Project under Section 106 of the National Historic Preservation Act of 1966, as amended (Section 106). Enclosed are copies of cultural resources documents prepared by the Agency for the proposed Project to comply with Section 106 requirements.

The State Water Board, Division of Financial Assistance administers the CWSRF Program pursuant to 40 Code of Federal Regulations (CFR) Part 35, and the Agency is seeking funds from this program to assist in financing the GWR Project. The CWSRF Program is partially funded by a capitalization grant from the United States Environmental Protection Agency (USEPA) and issuance of CWSRF funds is considered an undertaking pursuant to § 800.16(y), thereby necessitating compliance with Section 106 under a Nationwide Programmatic Agreement executed for the CWSRF by the USEPA, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers. The USEPA has delegated lead agency responsibility to the State Water Board for carrying out the requirements of Section 106.

The GWR Project includes two Action Areas under the jurisdiction of the United States Army Corps of Engineers (USACE) within the Area of Potential Effect (APE) for the construction of surface water diversion structures at two geographically separate areas due to discharge of fill material (soil, concrete, rip-rap). The USACE has provided formal notification of concurrence for the State Water Board (under agreement with the USEPA) to assume the role of lead federal agency in SHPO consultation for the GWR Project. The USACE will require a copy of the final SHPO concurrence letter for the issuance of a 404 permit for the GWR Project.

Proposed Action Summary and Objective

The GWR Project is a water supply project that would serve northern Monterey County. The Proposed Project would provide: 1) purified recycled water for recharge of a groundwater basin that serves as drinking water supply; and 2) recycled water to augment the existing Castroville Seawater Intrusion Project's agricultural irrigation supply. The primary objective of the GWR Project is to replenish the Seaside Groundwater Basin with 3,500 AFY of purified recycled water to replace a portion of CalAm's water supply as required by state orders. A Project vicinity map is shown in Enclosure 1 and an overview of the Proposed Action is shown in Enclosure 2.

- *Replenishment of the Seaside Groundwater Basin.* The GWR Project would enable California American Water Company (CalAm) to reduce its diversions from the Carmel River system by up to 3,500 acre feet per year by injecting the same amount of purified recycled water into the Seaside Basin. The purified recycled water would be produced at a new facility at the MRWPCA Regional Wastewater Treatment Plant (Regional Treatment Plant) and would be conveyed to and injected into the Seaside Groundwater Basin via a new pipeline and new well facilities. The injected water would then mix with the existing groundwater and be stored for future urban use by CalAm, thus enabling a reduction in Carmel River system diversions by the same amount.
- *Additional recycled water for agricultural irrigation in northern Salinas Valley.* An existing water recycling facility at the Regional Treatment Plant (the Salinas Valley Reclamation Plant) would be provided additional source waters in order to provide additional recycled water for use in the Castroville Seawater Intrusion Project's (CSIP) agricultural irrigation system. It is anticipated that in normal and wet years approximately 4,500 to 4,750 acre-feet per year of additional recycled water supply could be created for agricultural irrigation purposes. In drought conditions, the GWR Project could provide up to 5,900 acre feet per year for crop irrigation.

The GWR Project would require modifications to existing facilities and construction of new facilities, briefly listed below.

- *Source water diversion and storage.* New facilities would be required to divert and convey the new source waters through the existing municipal wastewater collection system and to the Regional Treatment Plant. *At the October 8, 2015 MRWPCA Board public hearing, the Board approved all of the diversions; however, the Tembladero Slough and the Lake El Estero Source Water Diversion Sites are not included within the CWSRF Proposed Action¹.*

¹ Although Tembladero Slough and Lake El Estero source water diversions were included as a component of the GWR Project in the EIR and in the MRWPCA's October 8, 2015 project approval action (MRWPCA Resolution 2015-24), the resolution acknowledged that MRWPCA and their partner agency may not include these facilities in the initial phase of the Project, in particular they may not be included in permit applications, loan applications, and/or grant applications. These facilities provide only a small benefit to project yields (i.e., 500 to 750 acre feet during some drought years for
(footnote continued on next page)

- *Treatment facilities at the Regional Treatment Plant.* A new advanced water treatment facility would be constructed at the Regional Treatment Plant site. This facility would include a state-of-the-art treatment system that uses multiple membrane barriers to purify the water, product water stabilization to prevent pipe corrosion due to water purity, a pump station, and brine disposal facilities. There would also be modifications to the existing Salinas Valley Reclamation Plant to optimize and enhance the delivery of recycled water for crop irrigation in the Castroville Seawater Intrusion Project area.
- *Product water conveyance.* A new pipeline, a pump station and appurtenant facilities would be constructed to transport the purified recycled (product) water from the Regional Treatment Plant to the Seaside Groundwater Basin for injection. *At the October 8, 2015 MRWPCA Board public hearing, the Board approved the pipeline alignment and booster pump station for the Regional Urban Water Augmentation Project (RUWAP) and not the Coastal pipeline alignment and booster pump station. The Proposed Action for the CWSRF application, therefore, includes only the RUWAP alignment option. The RUWAP alignment was the subject of the attached Letter of Concurrence from SHPO dated March 24, 2008, for portions of the RUWAP alignment within the Marina Coast Water District Recycled Water Project, Monterey County, California (within Enclosure 7)*
- *Injection well facilities.* The injection facilities would include new wells (in the shallow and deep aquifers), back-flush facilities, pipelines, electricity/power distribution facilities, and electrical/motor control buildings.

In addition to excluding the Tembladero Slough and Lake El Estero Source Water Diversions, the Proposed Action for the CWSRF application would not include the CalAm Distribution System: Monterey Pipeline and Transfer Pipeline, nor the Alternative Monterey/Transfer Pipelines that are evaluated in the GWR Project Environmental Impact Report (EIR) (October 2015). These facilities would be constructed by a private water supply company, namely CalAm, and are not within the control of the Agency, therefore are not part of the proposed undertaking.

Project Location

The Proposed Action for the CWSRF application would be located within northern Monterey County and would include new facilities located within unincorporated areas of Monterey County and the cities of Salinas, Marina, and Seaside. See Enclosures 1 and 2.

Project Description and Construction Activities

The Project construction activities include all of the activities at each of the separate locations stated below and the corresponding construction area of disturbance and permanent footprint (Table 1):

1. Salinas Pump Station Diversion

- Open excavation within the existing facility, new vaults cast-in-place around existing pipelines.
- New pipelines installed by open excavation connecting the new vaults.

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CSIP irrigation); therefore, are not proposed to be built or operated within the timeframe of the remainder of the components and permits for those facilities are not being pursued.

2. Salinas Treatment Facility Storage and Recovery

Recovery Pump Station

- Open excavation within the existing facility, new pump station wet well adjacent to the existing pump station at the east end of the site.

Recovery Pipeline

- Existing 33-inch pipeline will be slip-lined with a new 18-inch pipe
- Open excavation for sending/receiving pits at each end and every 600-800 feet along the pipeline. Pits will be located in either the existing pump station sites, within existing road rights-of-way or under agricultural land, depending on the stationing.
- The Recovery Pipeline starts at the existing Salinas Industrial Wastewater Treatment Facility pump station, located on S. Davis Road and follows a straight line to the Salinas Treatment Plant 1 (TP1) site, located on Hitchcock Road.

Pond 3 pump station and inlet structure

- Open excavation within the existing facility, adding a new wet well and inlet structure at the west end of treatment pond #3.

Pipeline from Pond 3

- Open excavation within the existing facility.
- New pipeline will connect the Pond 3 pump station and the Recovery pump station, running along the north side of treatment ponds 1, 2 and 3.

3. Reclamation Ditch Diversion

- Open excavation to install new intake structure, new wet well and new pipeline to connect to existing sanitary sewer main.
- New pump station will be constructed approximately 60-ft from the receiving sanitary sewer manhole.
- Site has been previously disturbed by the adjacent railroad, construction of the Davis Road overpass, construction of the Salinas sanitary sewer siphon and realignment of the Reclamation Ditch. The Reclamation Ditch is maintained as a trapezoidal channel.

4. Blanco Drain Diversion

Diversion Pump Station

- Open excavation to install new intake structure, new wet well and new pipeline.
- New pump station will be constructed adjacent to the existing MCWRA pump station.
- The Blanco Drain is maintained as a trapezoidal channel.

Force Main and Gravity Pipeline (includes pipelines located at the Regional Treatment Plant)

- Open excavation to install the majority of the new pipeline. The segment crossing the Salinas River will be installed using trenchless methods (directional drilling), with sending/receiving pits on either side.
- The pipeline will start at the new pump station and follow the farm road on the west bank of the Blanco Drain to the point the pipeline crosses the Salinas River. On the south side of the river, the pipeline will run north-west and then south-west under existing farms roads, then cross a portion of Monterey Regional Waste Management District landfill, and finally a portion of the Agency Regional Treatment Plant to the point it joins the existing Salinas Interceptor pipeline.

5. Treatment Facilities at Regional Treatment Plant

AWT (Advanced Water Treatment) Facility (Brine Mixing Facility, Pipelines, AWT product water pump station)

- The new AWT Facility will be installed using open excavation within the existing Agency Regional Treatment Plant. The 3.5 acre site is currently a mix of paved and unpaved areas.
- Portions of the work will include cast-in-place concrete structures around existing pipelines.

Salinas Valley Reclamation Plant modifications

- Internal modifications will be made to the existing reclamation plant, which includes a mix of concrete structures, paved and unpaved areas.

Salinas Valley Reclamation Plant pipeline

- A new pipeline will be installed under the existing recycled water storage pond using open excavation, and the existing inlet and outlet structures will be modified, to allow seasonal delivery of recycled water without using the storage pond.

6. Product Water Conveyance Facilities

Product Water Pipelines

- The new product water pipeline will be installed using open excavation methods.
- The pipeline will start at the AWT Facility and proceed to the southern boundary of the Agency Regional Treatment Plant under existing roads and pavements.
- The pipeline will proceed south across undeveloped lands owned by MCWD and the Armstrong Ranch to the City of Marina. The alignment follows existing farm roads.
- The pipeline follows street rights of way through Marina: Crescent Ave, Carmel Ave, Vaughn Ave, Reindollar Ave, California Ave/5th Ave, and connects to an existing pipeline segment, previously installed in Inter-Garrison Road (3rd St) and 5th Ave on the CSUMB Campus.
- The pipeline construction resumes at 5th Ave at A Street, and proceeds southwest under unpaved roads within CSUMB to General Jim Moore Blvd. It then proceeds south in General Jim Moore Blvd to Normandy Rd, where it connects to an existing recycled water pipeline.
- The final pipeline segment will connect the recycled water main in General Jim Moore Blvd to the injection well field. The alignment considered in the Project EIR branched southeast from General Jim Moore Blvd opposite Seaside Middle School and crossed an undeveloped area before crossing Eucalyptus Road and entering the injection well field. In the final design, this pipeline may be realigned to run under Eucalyptus Road itself.

Booster Pump Station (5th Avenue Site)

- The new booster pump station and associated pipelines will be installed using open excavation methods. The building foundation and pump wells will be cast in place.
- The pump station is located at the existing City of Marina Corporation Yard in a paved area.

7. Injection Well Facilities

- All of the injection well facilities will be installed by open excavation, except the wells themselves which will be by conventional rotary drilling. Above-grade facilities will have cast-in-place concrete floors or pads.

- The injection well field is located in an area previously used as small arms ranges when Fort Ord was as active base. The well clusters are located along the southeast boundary of the parcel, which borders with the BLM Fort Ord National Monument.
- The pipelines and conduits will be installed under existing unpaved roads. Conduits will also be installed along General Jim Moore Blvd and/or Eucalyptus Road to reach the existing PG&E service.
- A single percolation pond for well backwash water is proposed, to be located between the second and third well cluster, adjacent to the access road and pipeline corridor.
- Groundwater monitoring wells will be installed along existing unpaved roads.

Table 1
Construction Area of Disturbance and Permanent Footprint

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Methodology Employed for the Identification of Historic Properties

The State Water Board staff reviewed the cultural resource documents submitted by the Agency.

In April 2015, the Agency, as the California Environmental Quality Act (CEQA) Lead Agency, circulated a Draft EIR prepared under CEQA, Public Resources Code §21000 et seq. The Draft EIR was prepared to provide the public and responsible and trustee agencies with information on the potential environmental effects of implementation of the GWR Project. The Draft EIR was circulated for a 45-day public review period, between April 22 and June 5, 2015, including posting the Notice of Availability with the Monterey County Clerk, emailing approximately 700 agencies, organizations and individuals, publishing legal notices with newspapers of general circulation, and providing the required number of copies to the Governor's Office of Planning and Research (OPR).

The Agency prepared a Final EIR (comprised of the Draft EIR, comments on the Draft EIR, responses to those comments, and changes to the text of the Draft EIR) and on September 25, 2015, they distributed the Final EIR consistent with the Draft EIR distribution, including sending the Final EIR to all the entities that commented on the Draft EIR. During a public hearing on October 8, 2015, the Agency Board certified the EIR (State Clearinghouse No. 2013051094), and filed a Notice of Determination with the Monterey County Clerk and with OPR.

To comply with Section 800.4(b) for the GWR Project, the Agency's environmental consultant, Denise Duffy & Associates, contracted with Archaeological Consulting² and later in 2015 with Pacific Legacy³ to complete the tasks listed below and prepare documentation required for compliance:

- An archival and records search was performed by the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS), located at Sonoma State University (response received March 19, 2014). This is included in Enclosure 5, the Doane and Breschini (2015a) survey report as Attachment 2;
- Searches of the Sacred Lands Inventory were conducted (March 2014) by the Native American Heritage Commission (NAHC) for the Project area as it was defined in 2014. A response was received on March 6, 2014 from Katie Sanchez of the NAHC (see Attachment 3 of Enclosure 5);⁴
- Written contact with the NAHC and potential Native American stakeholders was initiated for the Project area as it was originally defined (March 2014). Contact with potential stakeholders also was conducted by letter, email, and telephone (March 2014). Attachment 3 of Enclosure 5 contains the correspondence letters and maps provided during consultation.

² Resumes for staff from Archaeological Consulting are contained within Enclosure 3.

³ A Statement of Qualifications for Pacific Legacy is provided in Enclosure 4.

⁴ No specific site information found in their files regarding the project area, which lies within traditional Ohlone territory. She recommended that additional contact be made with other Native American sources of information regarding the potential for cultural resources in the project area. Because these Native American peoples are not a federally recognized tribe, there is no single person or group who represents all of them. A sample copy of the letters regarding the GWR Project were sent on March 6, 2014 to the Native American contacts on the NAHC list (see December 2014 Phase 1 Archaeological Survey Report in Appendix J of the Draft EIR for the GWR Project).

- A systematic pedestrian reconnaissance-level cultural resource field survey of the Project area that were not previously subject to archaeological survey was completed on April 3, April 21, 2014 and March 2015. The report was updated in of 2015 (Enclosure 5, Doane and Breschini 2015a); and
- Preparation of a Phase 1, Archaeological Survey Report, including documentation of Native American consultation, results of the literature review, results of survey of the Project area that was not previously subject to archeological survey, and, findings. The report was updated in April, 2015 (Enclosure 5, Doane and Breschini 2015a). In March 2015, Archaeological Consulting prepared a supplemental memorandum regarding two changes to the APE map (Enclosure 6, Doane and Breschini 2015b); and,
- A supplemental Section 106 report completed by Pacific Legacy Inc. in November, 2015 is included as Enclosure 7. This supplement included responding to specific questions and information requests from SWRCB staff regarding the GWR Project. Within Enclosure 7 are the following:
 - The October 2015 Area of Potential Effect maps (on aerial photography and topographic mapping)
 - A map showing all CHRIS site records from the Northwest Information Center at Sonoma State on USGS, 1:24,000 scale topographic base map
 - Record of recent Native American Consultation with Louise Miranda-Ramirez of the Ohlone/Costanoan-Esselen Nation on November 12, 2015, including providing her with the updated APE map.
 - SHPO letter of concurrence for the RUWAP Product Water Conveyance Pipeline (March 24, 2008).
- Two referenced archaeological reports as supporting information for the March 24, 2008 SHPO letter of concurrence for the RUWAP Product Water Conveyance Pipeline for the Marina Coast Water District (Enclosure 9).

Area of Potential Effect (APE)

Enclosure 7 contains mapping and descriptions of the current APE (October 2015). The APE provided represents the Archaeological and Architectural/Structural APE determined for the GWR Project. The current APE is smaller than the November 2014 (amended in March 2015) as shown in Enclosures 5 and 6. A brief description of the APEs follows:

Archaeological APE

Depending upon the GWR Project components, the archaeological APE has been determined as the area of direct impact for the Project including areas of ground disturbance. For each Project component the horizontal and vertical APE is different. Table 1, above, summarizes the horizontal and vertical APE's for facilities within each component. This includes Source Water Diversion and Storage Sites, Treatment Facilities at Regional Treatment Plant, Product Water Conveyance Systems, and Injection Well Facilities. In general, excavation for pipelines will include an area of direct impact for installation of the pipeline (component footprint) as well as a work area (construction boundary). An approximate width has been delineated as the APE in undeveloped areas. For pipelines that will be installed below (within) existing roadways, the APE is the varying width of the road right-of-way. The vertical and horizontal APE is shown in detail on Figures M-1 through M-10 (Enclosure 7, Appendix A) and summarized in Table 1. No excavation or grading will occur in the staging areas; therefore staging area APEs, that are included in the areas shown on the figures, will include the horizontal extent and a minimal depth (less than 6 inches) from potential disturbance relating to the placement and movement of personnel and heavy equipment.

Architectural/Structural APE

The architectural/structural APE for the GWR Project within developed areas includes the area of direct impact and varying width of the road right-of-way (typically 50–75 feet from curb to curb). In the case of Project components that would be located within undeveloped areas, the architectural/structural APE is 25 feet from the centerline of the pipeline or a 25-foot buffer from a GWR Project component or staging area.

Other considerations for determining the architectural/structural APE include the potential for temporary vibration effects from excavation and construction, such as the use of equipment or construction methodologies with the potential to generate vibration levels of 0.2 inches per second peak particle velocity (PPV). Construction-related vibration, such as open-trenching, directional drilling, and vibratory rollers or compactors, can cause structural damage to historic structures (i.e., 0.2 inches PPV or greater) if activities would occur within 25 feet of such resources. No structures within the APE or within ½ mile of the APE were determined to be historic period and thus no structures would be affected.

Archival and Records Searches

A record search was performed in March 2014 at Northwest Information Center, located at Sonoma State University (dated March 19, 2014). The literature review conducted in 2014 revealed that the majority of the GWR Project area had been subject to previous cultural resources survey. Two prehistoric resources (CA-MNT-494 and CA-MNT-2246) were recorded within a ½ mile of the APE. Five historic period resources CA-MNT-1871H, CA-MNT-2079H, CA-MNT-2080H, CA-MNT-2281H, and CA-MNT-2282H, were recorded within a ½ mile of the APE. Seven structures (P-27-3088 – P-27-3094) were recorded within or adjacent to the APE primarily along the Product Water Conveyance alignment (outside the APE). All of the structures have been determined not eligible (6Y) for the National Register of Historic Places (NRHP) on April 27, 2004 (#FHWAO40419A).

Within the APE, one previously documented resource has been recorded. CA-MNT-2079H, a historic period fence line, no longer exists within the APE as noted during site surveys (see Enclosures 5 and 6). All known cultural resources within the APE and ½ mile of the APE are described in Enclosure 5 of the attached archaeological assessments. Enclosure 7, Appendix C, in the supplemental report by Pacific Legacy, provides a map of the resources within ½ mile of the APE, and site records for the resources can be found in Enclosure 7, Appendix D.

Field Survey

Archaeological Consulting determined that additional survey was not warranted for previously surveyed portions of the APE due to the lack of changes to the ground surface and physical features of the sites since the date that surveys were conducted (historical aerial photography readily available online was used in addition to local knowledge of the archaeologists).

Archaeological Consulting personnel conducted a pedestrian inventory survey of previously unsurveyed areas as reported in the 2015 survey document (see Enclosure 5). No prehistoric or historical sites were encountered within the APE for the GWR Project area. The final archaeological assessment and supplement is included in Enclosures 5 and 6. No additional study or monitoring was completed for the GWR Project area.

Native American Consultation

A search of the Sacred Lands file at the NAHC in March of 2014 indicated that no resources had been listed on the Sacred Lands file maintained by the NAHC are within the APE. The March 2014 request encompassed the GWR Project area. Contact with potential Native American stakeholders was conducted in March of 2014. Contact was via letter, email, and phone. Archaeological Consulting contacted Jakki Kehl, Linda Yamane, Valentin Lopez, Irene Zwierlein, Michelle Zimmer, Ann Marie Sayers, Ramona Garibay, Christianne Arias, and Pauline Martinez-Arias by phone. Two of the respondents suggested cultural resource sensitivity training for construction crew members while two respondents recommended monitoring in proximity to cultural resources and/or sensitive areas. Records of Native American tribal groups or individuals contacted and their responses and results of consultation with Native American groups or individuals are included in Appendix J of the Draft EIR. A phone log of conversations with the Native Americans conducted in 2014 is provided in Enclosure 5, Attachment 3. Consultation with Louise Miranda-Ramirez of the Ohlone/Costanoan-Esselen Nation also occurred in November 2015, including providing her with the updated APE map and site records for recorded sites within ½ mile radius documentation of these communications are included in Enclosure 7, Appendix E.

Effects Determination

Archival and record searches and an archaeological assessment have revealed that no known or previously documented historic properties lie within the APE of the GWR Project area. The State Water Board has reviewed the documentation for the Project and has analyzed the potential for the Project to affect historic properties within the APE. The State Water Board has determined that no known historic properties or sacred sites will be adversely affected by the Project per 36 CFR 800.5(a)(1) for the following reasons:

- No known historic properties have been identified within the GWR Project area based on documentation provided by Breschini and Doane (2015a, 2015b).
- No known sacred sites sensitive to potential Native American stakeholders were identified within the GWR Project area through a search of the Sacred Lands Inventory maintained by the NAHC.

- Native American stakeholders contacted in 2014 did not express concerns about specific locales associated with the Project, but rather expressed general concerns relating to ground disturbing activities conducted for the Project. Ongoing communication regarding the Project will be maintained with those stakeholders who have expressed an interest in receiving such information.
- Protocols also have been established to manage the inadvertent discovery of human remains and/or cultural materials as outlined in the Project Mitigation Monitoring and Reporting Program. See Enclosure 8.
- The inadvertent discovery of cultural resources in those areas will be managed according to procedures outlined in the Project's EIR.

All components associated with the Project that were not subject to prior study and that were found to be conducive to surface examination were subject to inventory survey in April 2014. The State Water Board has determined therefore, that no historic properties will be affected by the Project. Pursuant to 36 CFR Part 800, regulations implementing Section 106, we are requesting your concurrence with our determination of "No Historic Properties Affected."

The State Water Board is respectfully requesting your response within 30 days of receiving this consultation request. Please contact Gary Scholze at (916) 341-5642 or at gary.scholze@waterboards.ca.gov if you have any questions or concerns about the Project.

Sincerely,



Gary Scholze
Associate Environmental Planner (Archaeology)
Division of Financial Assistance
State Water Resources Control Board

Enclosures: See next page

Enclosures:

1. Regional Project Location Map
2. Proposed Action Overview Map
3. Resumes for Archaeological Consulting
4. Statement of Qualifications for Pacific Legacy, including resumes for John Holson and Hannah Ballard
5. Cultural Resources Survey for the Proposed Pure Water Monterey Groundwater Replenishment Project, Northern Monterey County (Archaeological Consulting, April 10, 2015)
6. Letter Report, Subject: Monterey Peninsula Groundwater Replenishment Project Minor APE Change, Reclamation Ditch Diversion in Salinas and Blanco Drain Diversion in Marina (Archaeological Consulting, March 3, 2015)
7. Addendum Cultural Resources Inventory for the Pure Water Monterey Groundwater Replenishment Project, Monterey County (Pacific Legacy, November 2015) with the following Appendices:
 - Appendix A: Project Area of Potential Effects Maps
 - Appendix B: Survey Coverage Documentation
 - Appendix C: Cultural Resources within the Study Area and Area of Potential Effects
 - Appendix D: Confidential Resource Records
 - Appendix E: Native American Consultation Documentation
 - Appendix F: SHPO Correspondence for the Regional Urban Recycled Water
8. Project Cultural Resources Mitigation Measures applicable to Proposed Action from the Approved Mitigation Monitoring and Reporting Program (October 2015)
9. Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Ord Community, Seaside and Monterey, Monterey County, California (Archaeological Consulting, Revised May 22, 2007); and Phase 1 Archaeological Reconnaissance for Two Additional Alignments for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, in Marina, Monterey County, California (Archaeological Consulting, September 4, 2007)

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Mr. Josh Amaris M.B.A., M.S.
US EPA Region 9
Water Infrastructure Office
75 Hawthorne Street
San Francisco, CA 94105

Mr. Mike McCullough
External Governmental Affairs Coordinator
Monterey Regional Water Pollution Control Agency
5 Harris Court, Building G
Monterey, CA 93940

U.S. Army Corps of Engineers
ATTN: Janelle Leeson, Regulatory Project Manager
1455 Market Street, 16th Floor
San Francisco, CA 94103

CERTIFIED MAIL NO.: 7015 – 3010 – 0002 – 3570 - 7476
RETURN RECEIPT REQUESTED

Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington, DC 20001-2637

Enclosure 1.

Regional Project Location Map

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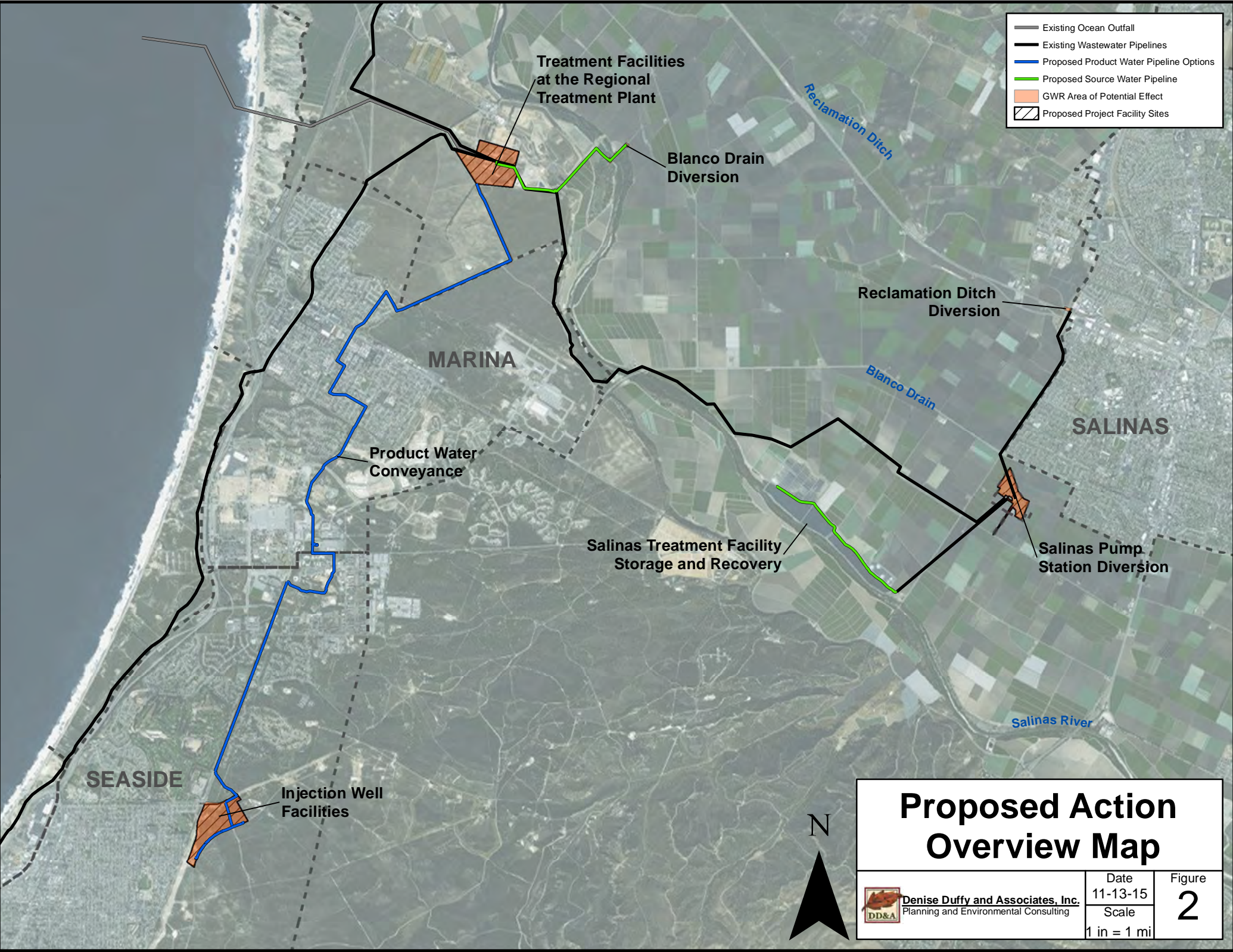
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Enclosure 2.


Proposed Action Overview Map

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- Existing Ocean Outfall
- Existing Wastewater Pipelines
- Proposed Product Water Pipeline Options
- Proposed Source Water Pipeline
- GWR Area of Potential Effect
- Proposed Project Facility Sites



Proposed Action Overview Map



Denise Duffy and Associates, Inc.
 Planning and Environmental Consulting

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Scale	1 in = 1 mi

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Enclosure 3.

Resumes for Archaeological Consulting

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GARY S. BRESCHINI, PH.D.

ARCHAEOLOGIST

Education

- Ph.D. Washington State University, 1983 (Anthropology)
- M.A. Washington State University, 1975 (Anthropology)
- B.A. University of California, Santa Barbara, 1971 (English)

Professional Experience

Dr. Breschini is field director or principal investigator for over 4,500 archaeological reconnaissance, excavation, evaluation, overview, mitigation, and research projects. With extensive experience in archaeology, cultural resource management, rock art documentation, and human osteology in Central and Northern California, Dr. Breschini has been published and continues to publish in journals pertinent to his profession, and has written the text for the archaeology sections of environmental documents (NEPA and CEQA) since 1975.

Professional Certifications

- Accredited expertise in Archaeological Field Research (Society of Professional Archaeologists)
- Accepted for inclusion in the Directory of California Archaeological Consultants (Society for California Archaeology - 1979)
- Life Credentials in Anthropology, Board of Governors, California Community Colleges, 1975

Professional Memberships

- American Association of Physical Anthropologists
- Society for American Archaeology
- Society for California Archaeology
- Society of Professional Archaeologists

Teaching Experience

- Washington State University
 - Hartnell Community College
 - Cabrillo Community College
 - Monterey Peninsula College
-

Brief Resume of Mary Doane

Education:

Attended University of California, Berkeley, Cabrillo College, Aptos and San Jose State College, San Jose (1963-1969). Received a B.A. with honors, from San Jose State College (1969)

Graduate work, History of Consciousness Program, University of California, Santa Cruz (1969-1970). Left program without advanced degree.

Returned to Cabrillo College for technical courses including Archaeology Field Survey, Excavation, Laboratory Procedures and Special Studies, including Mission Period Glass Trade Bead Analysis (1982-1986).

Archaeological Experience:

1987-1991: Archaeological Specialist (Seasonal) with the State of California, Department of Parks and Recreation. Assigned to Wilder Ranch State Park (1987-1989) and the Monterey Regional Office (1989-1991). Performed excavations and lab work at Wilder Ranch under direction of Lee Motz, State Archaeologist. Worked as Field Lab director for Cabrillo College Summer Excavation at Wilder Ranch (1988) for Rob Edwards. Performed archaeological monitoring and reconnaissance in many park units throughout the Monterey Region, San Francisco Bay area to Santa Barbara Channel Coast under direction of Herb Dallas, Regional Archaeologist. Performed technical lab work, cleaning, sorting, identification, etc. at Wilder Ranch and in the Regional Office.

1991-present: Senior field archaeologist and project manager with Archaeological Consulting, Salinas. Began as a field crewmember and lab technician. Assumed additional responsibilities as lab supervisor (1996) and field/office supervisor and project manager (1998). Perform all aspects of laboratory processing, including cleaning, sorting, identification, cataloguing and archiving. Perform fieldwork, including excavation, reconnaissance and monitoring under the direction of the principals of the company, Gary S. Breschini, Ph.D. and Trudy Haversat, M.A. Complete field and lab documents, site records, and co-author reports on reconnaissance, monitoring, mitigation, and excavation.

During 1990's: Additional field experience as field crewmember for excavations at Wilder Ranch State Park (Biosystems Analysis) and Buena Vista Adobe (Roberta Greenwood Associates).

Archaeological Resume

Patrick H. Cave
c/o Archaeological Consulting
P.O. Box 3377
Salinas, CA 93912
(831) 422-4912 office

Education:

Attended Cabrillo College, Aptos (1988-1995). Majored in Cultural Anthropology with an emphasis in Archaeology.

Attended University of California, Santa Cruz (1995-1997). Major in Anthropology.

Archaeological Employment Experience:

1989-1996 Board member, Santa Cruz Archaeological Society. Was Survey Liason to the County of Santa Cruz. Performed reconnaissance for CEQA compliance.

1990-1993 Volunteer excavator at Mission Santa Cruz under supervision of Karen Hildebrandt, State Parks and Recreation archaeologist.

1992-1997 Field and lab archaeological technician with Archaeological Consulting, Salinas. Performed routine field and lab work, including excavation, reconnaissance and monitoring under the direction of the principals of the company, Gary S. Breschini, Ph.D. and Trudy Haversat, M.A. Experienced with burial recovery and all aspects of excavation and monitoring/data recovery.

1995 Archaeological technician/excavator for Holman and Associates, San Francisco. Excavated units and performed burial recovery.

1993-1995 Worked for Archaeological Resource Management, R. Cartier, Ph.D. principal, as a field technician and laboratory assistant. Monitored sites, surveyed, auger tested and made impact determinations, produced maps, performed excavation and screening.

1994 Teaching assistant/crew leader for Rob Edwards, Cabrillo College Archaeological Program. Demonstrated survey and excavation techniques.

1997-2003 Worked as field crew and lab technician for Archaeo-tec, Alan G. Pastron, Ph.D. president. Performed field investigations, monitoring and data recovery, laboratory analysis and report preparation.

2003-2011 Returned to work with Archaeological Consulting, Salinas. Works as field crew leader, performing all aspects of test excavation, survey and monitoring/data recovery as required. Handles most long-term monitoring projects, observes construction, documents graphically and photographically, recovers physical data for lab processing. Performs all aspects of laboratory processing.

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Enclosure 4.

Resumes for John Holson and Hannah Ballard

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Principal Investigator/Project Manager

Email: holson@pacificlegacy.com

<p>Summary of Qualifications</p>	<p>Mr. Holson has been a professional archaeologist since 1974 and has over 32 years experience in cultural resources management in the United States and abroad. In the United States he has worked on projects in California, Nevada, Arizona, Hawaii and Oregon. Overseas he has worked in Mexico, England, Scotland, and Serbia. He has managed his own cultural resources consulting firm (1985-1990), was an Associate Environmental Planner with the California Department of Transportation (1987-1990) and Cultural Resources Division Program Manager (1990-1994) for BioSystems Analysis, Inc. In an academic setting he was staff archaeologist for the Anthropology Laboratory, Sonoma State University and was a visiting professor at the Department of Anthropology, University of California, Berkeley in 1996 and College of Marin, Kentfield (1998-2003).</p> <p>Mr. Holson's areas of experience include:</p> <ul style="list-style-type: none"> - Cultural Resources project scoping and management - Compliance with Federal State historic preservation laws - Agency consultation and Native American coordination - Research Designs for historic and prehistoric archaeology - Principal Investigator for surveys, test and data recovery excavations - Development of Historic Property Treatment Plans - Preparation of cultural resource sections of CEQA and NEPA environmental documents <p>He is currently a principal and owner of Pacific Legacy. He has managed and participated as Principal Investigator in projects ranging from small scale reconnaissance efforts to multi-task indefinite delivery order type contracts. He directed all aspects of cultural resources management projects for such agencies as the United States Forest Service, National Park Service, U.S. Army Corps of Engineers, U.S. Army and Navy, California Department of Transportation, Oregon Department of Energy, and utilities such as Pacific Gas and Electric Company and Southern California Edison Company. He currently is manager of the Berkeley Office of Pacific Legacy and Program Manager for the current U.S. Bureau of Reclamation IDIQ held by Pacific Legacy as a subcontractor to several consulting firms.</p>						
<p>Education</p>	<p>M.A., Cultural Resources Management, Sonoma State University, California, 1990 B.A., Anthropology (Major), Humanities (Minor), San Francisco State University, California, 1976</p>						
<p>Recent Key Projects</p>	<table> <tr> <td data-bbox="381 1350 511 1381">2005-2015</td><td data-bbox="568 1350 1494 1591">Project Manager. <i>U.S. Bureau of Reclamation Environmental On-call</i>. Mr. Holson managed several cultural resource studies for various water projects in throughout California. We have completed at least 15 projects under this IDIQ and three others are in various stages of completion. Tasks included NEPA documentation, Class II archaeological surveys, Historic Properties Treatment Plans, NRHP evaluations, Agreement Documents, and Native American contact. Mr. Holson recently managed the San Joaquin Restoration Reach 4B and the San Luis Low Point cultural resource studies under this contract.</td></tr> <tr> <td data-bbox="381 1633 511 1665">2009-2014</td><td data-bbox="568 1633 1494 1791">Co-Principal Investigator. Tehachapi Renewal Transmission Line Project (TRTP), Southern California Edison Company. Assisted in management of the TRTP project which included survey, preparation of research designs and historic contexts, evaluation reports, and data recovery reports. Managed production unit which produced over 100 documents for agency review.</td></tr> <tr> <td data-bbox="381 1833 511 1864">2008-2011</td><td data-bbox="568 1833 1494 1944">Principal Investigator. CAL-AM Water. Project components include a review of the proponents PEA, survey of an additional water pipeline, record search for a proposed regional approach, and writing sections of EIR/EIS for the CPUC. He also peer reviewed client documents prepared for submittal to the U.S. Bureau of</td></tr> </table>	2005-2015	Project Manager. <i>U.S. Bureau of Reclamation Environmental On-call</i> . Mr. Holson managed several cultural resource studies for various water projects in throughout California. We have completed at least 15 projects under this IDIQ and three others are in various stages of completion. Tasks included NEPA documentation, Class II archaeological surveys, Historic Properties Treatment Plans, NRHP evaluations, Agreement Documents, and Native American contact. Mr. Holson recently managed the San Joaquin Restoration Reach 4B and the San Luis Low Point cultural resource studies under this contract.	2009-2014	Co-Principal Investigator. Tehachapi Renewal Transmission Line Project (TRTP), Southern California Edison Company. Assisted in management of the TRTP project which included survey, preparation of research designs and historic contexts, evaluation reports, and data recovery reports. Managed production unit which produced over 100 documents for agency review.	2008-2011	Principal Investigator. CAL-AM Water. Project components include a review of the proponents PEA, survey of an additional water pipeline, record search for a proposed regional approach, and writing sections of EIR/EIS for the CPUC. He also peer reviewed client documents prepared for submittal to the U.S. Bureau of
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Principal Investigator/Project Manager

Email: holson@pacificlegacy.com

	<p>1999-2008 Reclamation. Managed on-call contract with Bob Booher consulting for oil and gas exploration throughout California. Pacific Legacy has conducted over 54 tasks related to cultural resources on this on-call in Sacramento, Yolo, Solano, Contra Costa and Merced Counties. The size of the projects range from single well pads less than an acre in size to large projects over 3000 acres. The majority of the work was conducted under the auspices of Section 106 of the National Historic Preservation Act due to Section 404 federal permitting by the Army Corps of Engineers.</p> <p>2006 Principal Investigator for the Monitoring and Test excavations at CA-SJO-19/H for the South Quierolo Project, Lathrop. During trenching adjacent to the San Joaquin River for a pipeline project, 21 burials were unearthed. Pacific Legacy was responsible for burial removal and subsequent pipeline construction monitoring. As a separate project, Pacific Legacy conducted test excavations at the site to aid the developer in avoiding the site during housing construction.</p> <p>2004-2012 Project Manager. <i>City of St. Helena Flood Control Project</i>. Survey, evaluation, data recovery, Native American consultation, and preparation of Programmatic Agreement for nine sites affected by flood control project.</p> <p>1997-2005 Intensive cultural resources survey of 50 miles of proposed pipeline for the <i>Pajaro Valley Water Management Agency</i> in Santa Clara, San Luis Obispo, Monterey and Santa Cruz Counties. Responsible for site documentation, existing conditions and impact/mitigation for the EIREIS. Conducted NRHP evaluations at several sites. U.S. Bureau of Reclamation oversight on distribution portion of the pipeline.</p> <p>2005-2015 Project Manager. <i>Presidio Trust On-call</i>. Tasks have included construction monitoring, write-up of previously excavated materials, data recovery on the former military base of the Presidio in San Francisco. Periods investigated include, Spanish, Mexican, and American military occupation of the Presidio.</p> <p>2001-2015 Principal Investigator. <i>City of Monterey On-call</i> contract since 2001 for cultural resources consulting services. We have completed over 40 task orders including site surveys, Phase 1 evaluations, burial removal, construction monitoring and completion of historic preservation documents such as Memorandum of Agreements, Historic Properties Treatment Plans and Inadvertent Discovery Plans.</p> <p>1995-2007 Principal Investigator. Evaluation studies for 80 miles of pipeline around Clear Lake in Lake County. Tasks included Phase II evaluations, Data Recovery, construction monitoring, negotiating agreements with three different Native American groups, preparation of several Programmatic Agreements and supporting Section 106 documentation.</p>
Selected Publications & Accomplishments	<p>Author, co-author, editor, or contributor to two hundred (200) cultural resource management reports including archaeological survey, testing and evaluation, data recovery and research design reports, three (3) international archaeological reports, fifteen (15) cultural resource management plans, and five (5) memorandum of agreements/programmatic agreements. Contributor to over forty (40) EIS/EIR's and twenty (20) professional presentations. Member of Register of Professional Archaeologists (ROPA) and participated in Polaris Oil Tanker Spill Drill in San Francisco Bay as cultural resource specialist (2011).</p>

Hannah S. Ballard

Project Manager/Senior Supervisor (History/Historical Archaeology)

Summary of Qualifications	<p>Ms Ballard is a Senior Archaeologist specializing in Historical Archaeology. In 2003, she received her M.A. in Cultural Resources Management from Sonoma State University. In 1995, she received her B.A. from the University of California, Berkeley and graduated with Highest Honors in Anthropology and High Distinction in general scholarship. Ms. Ballard has over 17 years experience in Cultural Resources Management and 20 years experience in archaeology in California and Hawai'i. Ms. Ballard has worked on numerous projects in Northern, Central, and Southern California and Hawai'i. These projects include small and large surveys, record and information searches, historical context research and writing, cultural landscape analysis, excavation at the testing and data recovery levels, and prehistoric and historical site recording, excavation, and evaluation. She has served in a supervisory capacity for over ten years. In her role as a supervisor, she has directed surveys and excavations, and trained new archaeologists in field methods, lab methods, research, and report writing.</p> <p>Hannah Ballard has expertise in the following areas:</p> <ul style="list-style-type: none"> • Supervision of cultural resource investigations including survey, recording, monitoring, test excavation, and data recovery of prehistoric and historical archaeological sites; • Historical research; • Technical report writing and production; • NEPA, NHPA, CEQA, NAGPRA regulatory compliance; • Graphic production; and • Quality control of fieldwork and documentation
Education	<p>M.A., Cultural Resources Management, Sonoma State University, 2003 Thesis Title: <i>The Hite's Cove Cultural Landscape: Where Community, Mode Of Production, And Place Intersect</i>. M.A., Sonoma State University, Rohnert Park, California.</p> <p>B.A., Anthropology, University of California, Berkeley, 1995 Senior Honor's Thesis Title: <i>Searching for Metini: Synthesis and Analysis of Unreported Archaeological Collections from Fort Ross State Historic Park, California</i>.</p>
Recent Key Projects	<p>2014-2015 Senior Historical Archaeologist. <i>San Luis Transmission Line Project (PG&E), San Joaquin Valley</i>. Class III report for 85 miles of transmission line in Contra Costa, San Joaquin, and Merced Counties. Contributed to the archaeological research design and completed NRHP evaluations of historic period cultural resources. Produced addendum Class III inventory report for the Billy Wright Corridor.</p> <p>2012-2015 Project Manager, Senior Historical Archaeologist, <i>City and County of San Francisco As-Needed Consultant Services for Historic Resources and Archaeological Review</i>. Directed numerous projects for private developers within the City of San Francisco. Tasks included completion of testing and monitoring plans, executing testing, data recovery excavations, archaeological monitoring and reporting to comply with City of San Francisco requirements under CEQA. Projects included 400 Grove, 401 Grove, Turk and Leavenworth, Boys and Girls Club, 1201 Tennessee, 388 Fulton and 800 Presidio Projects.</p> <p>2010-2015 Project Manager, Senior Historical Archaeologist, <i>San Francisco Presidio Trust On-Call</i>. Managed archaeological monitoring of construction, archaeological testing and historical research for numerous projects at the Presidio of San Francisco. Projects include: Main Parade Ground Greening, Montgomery Street Barracks Landscaping, Presidio Main Post Archival Research, Taylor Road Reconstruction, the Archaeology Education Center. John Holson, Principal Investigator.</p> <p>2011-2015 Senior Archaeologist. <i>Laguna Creek Trail North and South Camden Spur Projects, City of Elk Grove and Caltrans</i>. Several iterations of the Caltrans local assistance project for the construction of segments of the Laguna Creek Trail in the City of Elk Grove, Sacramento County. Managed cultural resources inventory survey of Laguna Creek Trail, Laguna Creek Trail North and South Camden Spur Projects, work included record search, Native American Consultation, pedestrian survey and</p>

Hannah S. Ballard

Project Manager/Senior Supervisor (History/Historical Archaeology)

	<p>Archaeological Survey Report and Historic Property Survey Report for CEQA and Section 106 of the NHPA compliance.</p> <p>2010-2014 Senior Historical Archaeologist and Project Supervisor. <i>North Area Sites Evaluation Project, Western Area Power Authority</i>. Contributed to the Historic Context and Research Design for cultural resources located within over 700 miles of transmissions lines in northern California. Managed and conducted archival research and NRHP evaluation of approximately 110 historic period archaeological sites located along Western Area Power facilities throughout northern California. Rob Jackson, Principal Investigator.</p> <p>2011-2012 Project Supervisor and Senior Historical Archaeologist. Santa Cruz Mountains CAPP, Jodie McGraw Consultants. Managed cultural resources component of a Conservation Area Protection Plan for 224,000 acre region in the Santa Cruz Mountains. Tasked by Sempervirens Fund to conducting research on existing prehistoric and historic period cultural resources, predicted locations of unidentified cultural resources and complete a conservation valuation analysis of resources in the plan area. Tom Jackson, Principal Investigator</p> <p>2008 Senior Archaeologist and Director. Phase II investigations of historic period components of hard rock and placer gold mining and Prison labor camp sites (CA-SHA-4169/H, CA-SHA-171H, and CA-SHA-4172/H) including mining and residential features for the Buckhorn Grade Improvement Project, California Department of Transportation. Pacific Legacy, Inc. Robert Jackson, Principal Investigator.</p> <p>2004 Field Director. Archaeological Test Excavations Boronda Adobe, Monterey. Trish Fernandez, Principal Investigator.</p> <p>2004 Field Director. Phase II Investigations at CA-MEN-2645/H, CA-MEN -3037H, And CA-MEN-3190H On State Route 101, Mendocino County. Department of Transportation, District 3, Marysville, California. Pacific Legacy, Inc., Robert Jackson, Principal Investigator</p>
Professional Experience	<p>1995-Present Senior Archaeologist. Pacific Legacy Inc. Promoted from Technician, Crew Chief, and Supervisor to current position. Direct small and medium size crews in survey and excavation. Author and contribute to excavation and survey reports. Supervise staff in report preparation. Coordinate with clients, subcontractors, and specialists. Member of the Pacific Legacy Board of Directors (2002-2005)</p>
Selected Publications & Accomplishments	<p>Ballard, Hannah</p> <p>1997 Ethnicity and Chronology at Metini, Fort Ross State Historic Park, California . In <i>The Archaeology of Russian Colonialism in the North and Tropical Pacific</i>, edited by Peter Mills and Antoinette Martinez. <i>Kroeber Anthropological Society Journal</i>, 81:116-140, Berkeley, California.</p> <p>Bartoy, Kevin, John Holson and Hannah Ballard</p> <p>2006 "Ponying Up to Billy Hurst's Saloon": Testing and Evaluation of Nineteenth and Twentieth Century Archaeological Deposits Through Less Invasive Techniques, Yosemite National Park, California. In <i>Between Dirt and Discussion: Methods, Methodology and Interpretation in Historical Archaeology</i>. Steven N. Archer and Kevin M. Bartoy eds. Pp. 201-224. Springer Science and Business Media, New York.</p>
Additional Publications	<p>Authored, co-authored, and contributed to professional presentations and over 50 small and large reports including historical documentation, evaluations for eligibility for the National Register of Historic Places and the California Register of Historic Resources, survey, testing, data recovery.</p>
Professional Affiliations & Memberships	<p>Society for Historical Archaeology, Society for California Archaeology, Society for American Archaeology</p>

Enclosure 5.

***Cultural Resources Survey for the Proposed Pure Water Monterey
Groundwater Replenishment Project, Northern Monterey County
(Archaeological Consulting, April 10, 2015)***

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This report is not included in the EA because the report contains confidential information. Specifically, information regarding the location, character, or ownership of a historic resource is exempt from the Freedom of Information Act. Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites, which should not be disclosed to unauthorized persons. Information regarding the location, character or ownership of a historic resource is exempt from the Freedom of Information Act pursuant to 16 U.S.C. 470w-3 (National Historic Preservation Act) and 16 U.S.C. § 470hh (Archaeological Resources Protection Act). In addition, access to such information is restricted by law, pursuant to Section 6254.10 of the California State Government Code.

Enclosure 6.

***Letter Report, Subject: Monterey Peninsula Groundwater
Replenishment Project Minor APE Change, Reclamation Ditch
Diversion in Salinas and Blanco Drain Diversion in Marina
(Archaeological Consulting, March 3, 2015)***

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ARCHAEOLOGICAL CONSULTING

P.O. BOX 3377
SALINAS, CA 93912
(831) 422-4912
Fax (831) 422-4913
March 3, 2015
AC project 4642B

Alison Imamura
Denise Duffy & Associates
947 Cass St., Suite 5
Monterey, CA 93940

Re: Monterey Peninsula Groundwater Replenishment Project minor APE change,
Reclamation Ditch Diversion in Salinas and Blanco Drain Diversion in Marina

Dear Mrs. Imamura:

At your request we have reviewed our records to determine whether our findings and recommendations would require any change based on the minor changes in location for the Reclamation Ditch Diversion in Salinas and the Blanco Drain Diversion Alternatives in Marina, Monterey County, California (see Maps 1-3). The UTMG coordinates for the approximate centers of each of these areas are as follows: Reclamation Ditch Diversion 6.1851/40.6070 on the USGS 7.5 Minute Salinas Quadrangle (1947, photo-revised 1984) and Blanco Drain Diversion on the USGS 7.5 Minute Marina Quadrangle (1947, photo-revised 1983).

We found that the new Reclamation Ditch Diversion area west of Davis Road in Salinas was included in a previous reconnaissance (Bourdeau 1985), which found nothing in that specific portion of the study area. The new APE lies within or immediately adjacent to areas surveyed in three other projects completed by Archaeological Consulting (Breschini and Haversat 1979; Doane 2000; Doane and Breschini 2012).

The Blanco Drain Diversion Alternatives alignments were included in our original research radius for the current project. Because of the extensive previous earthwork in the area of the proposed Blanco Drain Diversion Alternatives alignments, the lack of recorded resources in that area, and the location of pipelines in parallel alignments throughout the area, we have concluded that there is no necessity for additional field study of the area. Several previous archaeological studies have been completed in the near vicinity of the alternative alignments with negative results (Peak and Associates 1978; Doane and Haversat 2006; Jones and Holson 2009; Doane and Breschini 2013).

Based on our previous research and field findings, the project in these areas is expected to have no effect on significant historic resources.

Nevertheless, because the possibility exists that unidentified (buried) cultural resources may be discovered during any underground construction, we recommend that the following standard language, or the equivalent, be included in any permits issued for the project area:

- If archaeological resources are unexpectedly discovered during construction, work shall be halted within 50 meters (± 160 feet) of the find until it is evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated, with the concurrence of the lead agency, and implemented.

If you should have any further questions or concerns in this matter, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, reading "Gary S. Breschini" followed by a horizontal line.

Gary S. Breschini, Ph.D., RPA
GSB/mkd

REFERENCES

Bourdeau, L.

- 1974 *Preliminary Report on Archaeological Reconnaissance and Evaluation with Recommendations for Cultural Resource Management, South Boronda Reorganization Area, Northwest of Salinas, Monterey County California.* Report on file at the Northwest Information Center, Sonoma State University.

Breschini, G. S. and T. Haversat

- 1979 *Preliminary Archaeological Surface Reconnaissance of the Davis Road Grade Separation Project, West of Salinas, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.

Doane, M.

- 2000 *Negative Archaeological Survey Report for the Encroachment Permit Application for the Proposed Sanitary Sewer Trunkline Crossing of State Highway 183 at Davis Road in Salinas, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.

Doane, M. and G. S. Breschini

- 2005 *Phase 1 Archaeological Survey Report for the Davis Road Class II Bicycle Lane Project, in Salinas, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.
- 2013 *Preliminary Archaeological Reconnaissance for the MRWPCA Salinas Pump Station Capacity Enhancement Project between Salinas and Marina, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.

Doane, M. and T. Haversat

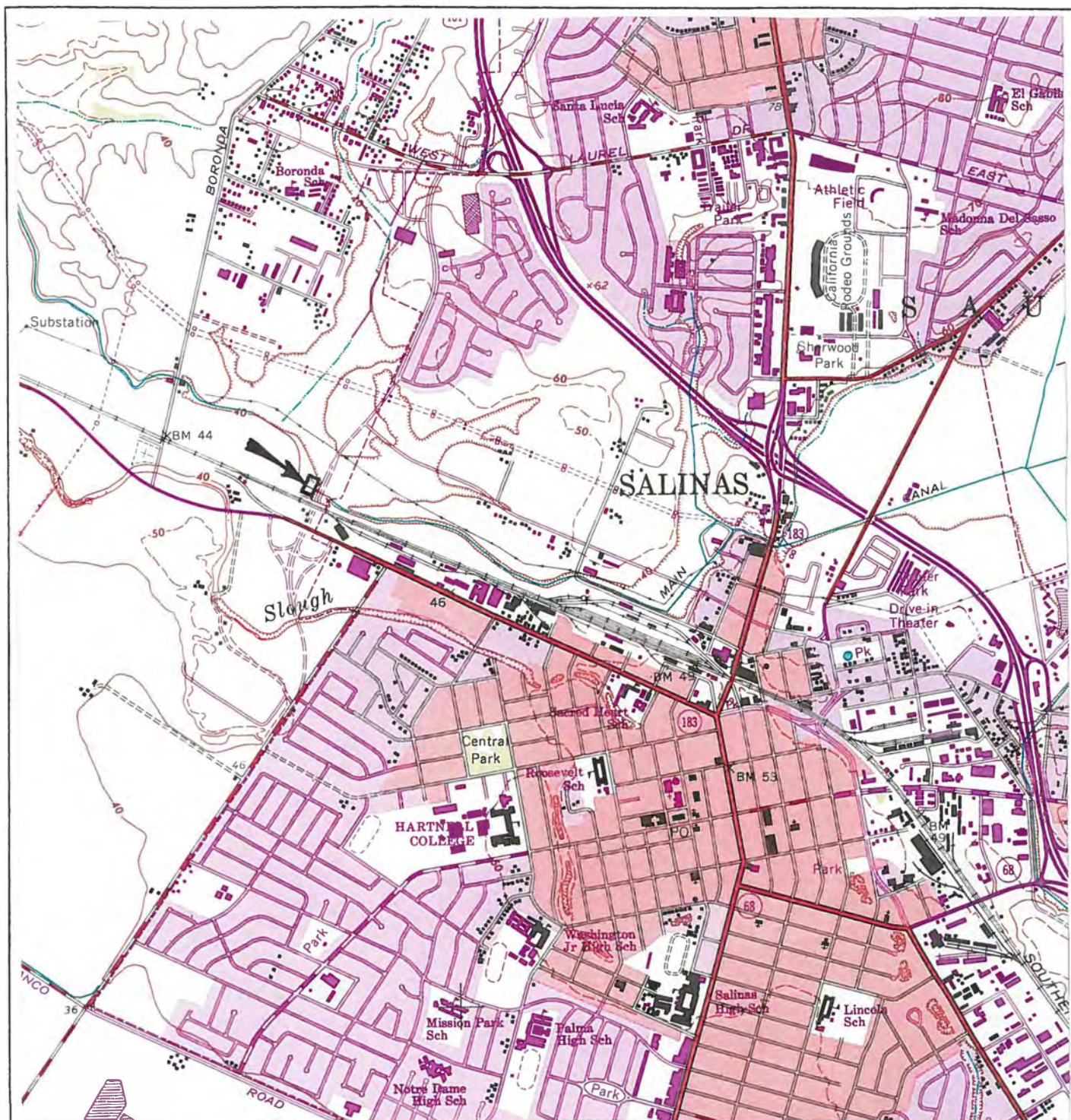
- 2006 *Phase 1 Archaeological Reconnaissance for the Marina Coast Water District Regional Urban Water Augmentation Project, Recycled Water Component, Northern Segment, in Marina and Seaside, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.

Jones, K. and J. Holson

- 2009 *Archaeological Survey for the Cal-Am Coastal Water Project, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.

Peak, A. and Associates

- 1978 *Cultural Resource Assessment of the Proposed Effluent Disposal System, Fort Ord, Monterey County, California.* Report on file at the Northwest Information Center, Sonoma State University.



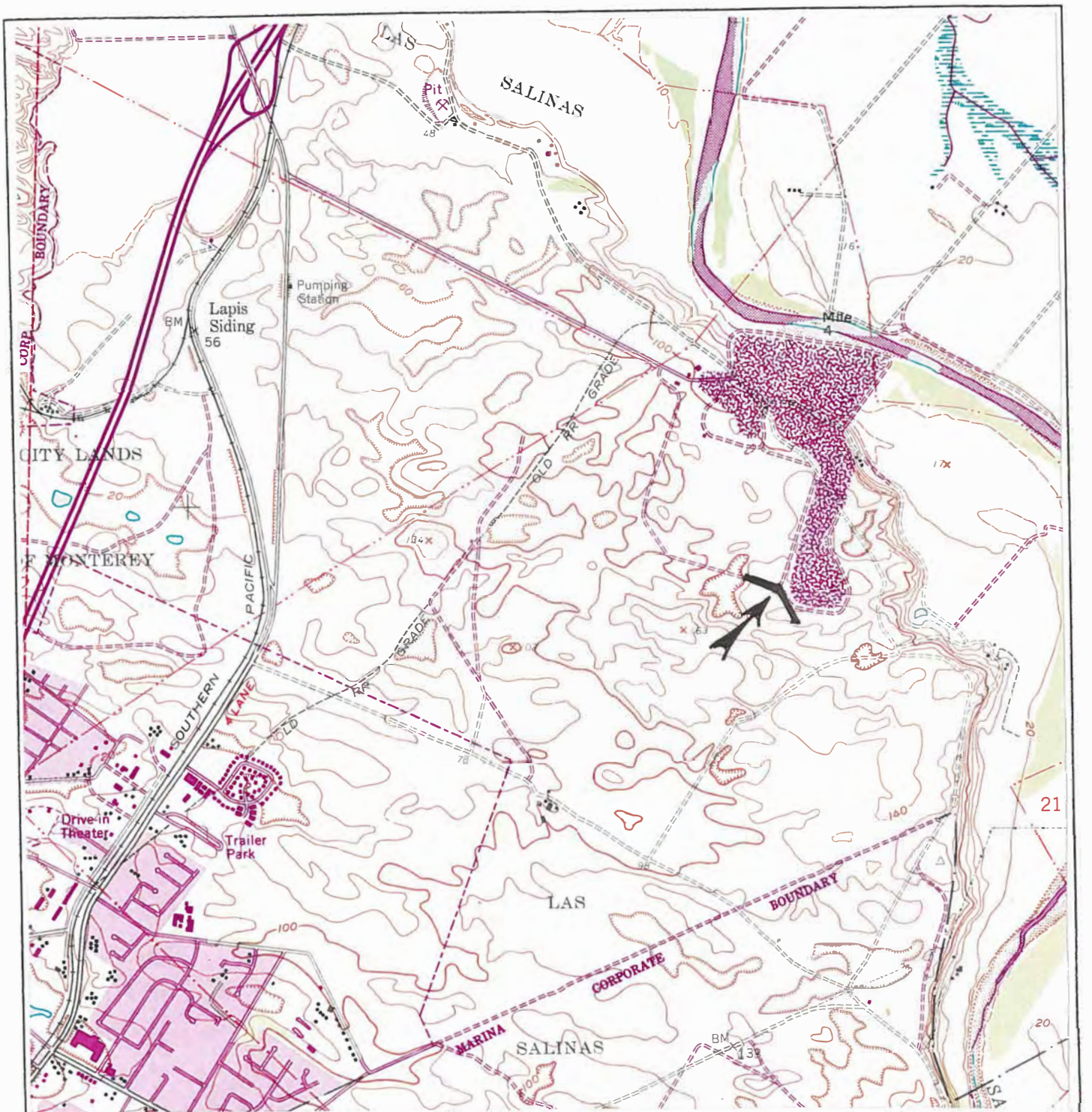
from USGS 7.5 Minute Salinas Quadrangle



Miles



Map 1. Project Location.



from USGS 7.5 Minute Marina Quadrangle



Miles



Map 2. Project Location



Map 3. Project APE Reclamation Ditch Diversion



Blanco Drain Diversion Conceptual Site Plan - Western Portion

October 2014

Pure Water Monterey GWR Project
Administrative Draft EIR

Figure
2-25b

Map 4. Project APE Blanco Drain Diversion Alternatives

Enclosure 7.

***Addendum Cultural Resources Inventory for the Pure Water Monterey
Groundwater Replenishment Project, Monterey County (Pacific
Legacy, November 2015)***

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This report is not included in the EA for the USBR because the report contains confidential information. Specifically, information regarding the location, character, or ownership of a historic resource is exempt from the Freedom of Information Act.

Archaeological and other heritage resources can be damaged or destroyed through uncontrolled public disclosure of information regarding their location. This document contains sensitive information regarding the nature and location of archaeological sites, which should not be disclosed to unauthorized persons. Information regarding the location, character or ownership of a historic resource is exempt from the Freedom of Information Act pursuant to 16 U.S.C. 470w-3 (National Historic Preservation Act) and 16 U.S.C. § 470hh (Archaeological Resources Protection Act). In addition, access to such information is restricted by law, pursuant to Section 6254.10 of the California State Government Code.

Enclosure 8.

***Project Cultural Resources Mitigation Measures applicable to
Proposed Action from the Approved Mitigation Monitoring and
Reporting Program (October 2015)***

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Enclosure 8: Mitigation Measures for Cultural Resources – Proposed Action for the SWRCB Clean Water State Revolving Fund Application

Impact	Mitigation	Applicable Components	Timing of Implementation	Implementation Responsibility	Timing of Monitoring	Responsibility for Compliance Monitoring ¹
Impact CR-2: Construction Impacts on Unknown Archaeological Resources or Human Remains	Mitigation Measure CR-2b: Discovery of Archaeological Resources or Human Remains. If archaeological resources or human remains are unexpectedly discovered during any construction, work shall be halted within 50 meters (±160 feet) of the find until it can be evaluated by a qualified professional archaeologist. If the find is determined to be significant, appropriate mitigation measures shall be formulated and implemented. The County Coroner shall be notified in accordance with provisions of Public Resources Code 5097.98-99 in the event human remains are found and the Native American Heritage Commission shall be notified in accordance with the provisions of Public Resources Code section 5097 if the remains are determined to be of Native American origin.	All components	During project construction	MRWPCA, m, and qualified archaeologists	During project construction	MRWPCA, and qualified archaeologist
	Mitigation Measure CR-2c: Native American Notification. Because of their continuing interest in potential discoveries during construction, all listed Native American Contacts shall be notified of any and all discoveries of archaeological resources in the project area.	All components	During project construction	MRWCPA, and qualified archaeologist	During project construction	MRWCPA and qualified archaeologist

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EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

CERTIFIED MAIL NO.: 7015-3010-0002-3570-8046
RETURN RECEIPT REQUESTED

MAR 21 2016

Mr. Josh Amaris
U.S. EPA, Region 9, WTR-3
75 Hawthorne Street
San Francisco, CA 94105

REQUEST FOR FORMAL SECTION 7 FEDERAL ENDANGERED SPECIES ACT (ESA) FOR THE MONTEREY REGIONAL WATER POLLUTION CONTROL AGENCY (AGENCY); GROUNDWATER REPLENISHMENT PROJECT (PROJECT); MONTEREY COUNTY; CLEAN WATER STATE REVOLVING FUND (CWSRF) NO. C-06-8028-110

Dear Mr. Amaris:

The Division of Financial Assistance of the State Water Resources Control Board (State Water Board) administers the California CWSRF Program pursuant to 40 CFR Part 35. The Agency applied for funds from this program to assist in financing the Project. The CWSRF Program is partially funded by a capitalization grant from the United States Environmental Protection Agency (USEPA), and issuance of funds from this program is considered equivalent to a **FEDERAL ACTION**. Therefore, the Project must undergo federal consultation with agencies responsible for implementation of federal environmental statutes and authorities.

On January 20, 2016, the United States Army Corps of Engineers (USACE) provided formal notification as an email, of their concurrence for the State Water Board (under agreement with the USEPA) and the USEPA to assume the role of lead federal agency for the Project. On February 1, 2016, this notification was accepted by USEPA for the delegation of USEPA as lead federal agency (Enclosure 4.).

State Water Board staff have reviewed and considered the environmental documentation provided by the Agency for the Project and determined the Project **may affect and is likely to adversely affect** the federally threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and California red legged frog (*Rana draytonii*) (CRLF). Additionally, there is potential to adversely affect the federally endangered Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*) if it is documented during protocol-level plant surveys conducted at the Injection Well Facilities site. In addition, the Project **may affect, but is not likely to adversely affect** tricolored blackbird (*Agelaius tricolor*) and other migratory birds.

Although the Official Species List indicates that the Project is adjacent to Critical Habitat for Monterey spineflower (*Chorizanthe pungens* var. *pungens*), there is no critical habitat designated within the Action Area (Enclosure 1 Figure 4-2 and Appendix B of Enclosure 2).

FELICIA MARCUS, CHAIR | THOMAS HOWARD, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

Please note that in addition to this consultation the State Water Board staff are compiling required documentation to send to the USEPA to initiate informal consultation with the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) under Section 7 of the ESA, for the Project's effects to federally listed marine/anadromous fish species and critical habitat, including Essential Fish Habitat for South-Central California Coast (S-CCC) Steelhead Distinct Population Segment.

State Water Board staff are requesting assistance from the USEPA to initiate formal consultation under Section 7 of the ESA with the USFWS for the above determinations. The enclosed CD contains the following: a Biological Assessment for USFWS consultation (Enclosure 1), Biological Assessment Appendices for USFWS consultation (Enclosure 2), USACE Application for Dept. of Army Permit: Clean Water Act Section 404 Permit (Enclosure 3), Email message confirming USACE Lead Federal Agency Delegation to USEPA Monterey GWR (Enclosure 4), Draft EIR for the Pure Water Monterey GWR Project April 2015 (Enclosure 5), Certified EIR for the Pure Water Monterey GWR Project September 2015 (Enclosure 6), USACOE_1997_Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord (Enclosure 7), and a Draft USFWS initiation letter Monterey GWR 17Mar2016 (Enclosure 8).

Thank you for your assistance on this Project. Please feel free to contact me if you have any questions or need additional information, at (916) 341-5879, or by email at Susan.Stewart@waterboards.ca.gov.

Sincerely,



Susan L. Stewart
Environmental Scientist
Division of Financial Assistance

Enclosures on CD (8):

- Enclosure 1. *Biological Assessment for the U. S. Fish and Wildlife Service, Pure Water Monterey Groundwater Replenishment Project* (v4 rev 2Mar2016 - Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 2. *Biological Assessment Appendices for USFWS - Pure Water Monterey Groundwater Replenishment Project* (v4 rev 2Mar2016 - Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 3. *U.S. Army Corps of Engineers Application for Dept. of Army Permit: Clean Water Act Section 404 Permit for the Pure Water Monterey Groundwater Replenishment Project – Reclamation Ditch and Blanco Drain Diversions, submitted November 3, 2015* (Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 4. Email message (1-20-16) USACE Lead Federal Agency Delegation to USEPA Monterey GWR
- Enclosure 5. Draft EIR for the Pure Water Monterey GWR Project April 2015 (Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 6. Certified EIR for the Pure Water Monterey GWR Project September 2015 (Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 7. USACOE_1997_Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord.pdf

Enclosure 8. Draft USFWS initiation letter Monterey GWR 17Mar2016

cc:

Ms. Janelle Leeson (w/o enclosures)
Regulatory Division
U.S. Army Corps of Engineers
1455 Market Street, 16th Floor
San Francisco, California 94103-1398

Ms. Susan Stewart (w/o enclosures)
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Mr. Ahmad Kashkoli (w/o enclosures)
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cc (sent by email only):

Bob Holden, MRWPCA
Mike McCullough, MRWPCA
Justine Herrig, SWRCB – Division of Water Rights
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April 19, 2016

Reply to: EPA_2016_0304_001

Gary Scholze, Archaeologist
Division of Financial Assistance
State Water Resources Control Board
P. O. Box 100
Sacramento, California 95812-0100

RE: Request for Concurrence on Section 106 Compliance and a Finding of No Historic Properties Affected for the Pure Water Monterey Groundwater Replenishment Project; Monterey County, California; Clean Water State Revolving Fund (CWSRF) Project No. C-06-8028-110 (your letter of January 28, 2016)

Dear Mr. Scholze:

Thank you for requesting my comments on the above cited undertaking, in accordance with Section 106 of the *National Historic Preservation Act*, as amended. The Environmental Protection Agency (EPA) has delegated lead agency responsibility to the State Water Resources Control Board (Board) for carrying out the requirements of Section 106.

The Monterey Regional Water Pollution Control Agency (Agency) proposes to implement and construct the Pure Water Monterey Groundwater Replenishment Project (Project). Specifically, the proposed undertaking consists of the elements and actions that you have described in detail in Table 1 (Construction Area of Disturbance and Permanent Footprint) which is included in your letter. The area of potential effect (APE) encompasses the elements and actions described in Table 1, which are located in seven separate areas. Access to the APE will be via paved roads.

As documentation for your finding of effect, you provided a cultural resources survey report, which was prepared by Mary Doane and Dr. Gary S. Breschini (Archaeological Consulting, Salinas, CA), dated December 22, 2014 and revised April 10, 2015. On March 19, 2014, a records review was conducted at the Northwest Information Center at Sonoma State University, which identified: (1) two cultural resources (CA-MNT-494 and CA-MNT-2079H) as being located with the APE, and (2) that 95 previous cultural resource surveys had been conducted on portions of the APE or within a half-mile of the APE between 1974 and 2013. Consequently, those portions of the APE that had been surveyed previously were not resurveyed by Archaeological Consulting. However, they did conducted pedestrian surveys of the unsurvey portions of the APE on April 3 and 21, 2014 and in March 2015 with negative results.

CA-MNT-494 was recorded as a midden containing several burials (i.e., probably four burials) in 1973. Unfortunately, the site was discovered during the construction of an aeration lagoon that was constructed in 1972 as part of the Salinas Industrial Wastewater Treatment Facility. The site form described the condition of the site as "completely excavated by tractors and destroyed". CA-MNT-2079H was recorded in 1998 as a portion of a wooden fence that was described as "being in a state of disrepair". Both sites were resurveyed during the pedestrian survey, which was unable to relocate CA-MNT-494 and found that CA-MNT-2079H was rapidly deteriorating and several sections of the fence had fallen down.

Native American consultation included contacting the American Heritage Commission (NAHC) twice (on March 6, 2014 and December 24, 2014) and requested a record search of their sacred land file. The NAHC responded that their search did not indicate the presence of Native American cultural resources in the APE. On March 6, 2014, request for comment letters were sent to the 12 Native American contacts provided by NAHC, with subsequent telephone calls made to them in May of 2015. Two of the representatives suggested cultural resource sensitivity training for the construction crew members and two other representatives recommended that monitoring be conducted in proximity to cultural resources and/or sensitive areas. In the Agency's Final Environmental Impact Report for the project are the following two mitigation measures:

Mitigation Measure CR-2b – Discovery of Archaeological Resources or Human Remains

If archaeological resources or human remains are discovered, all work will cease within 160 feet of the find until it can be evaluated by a qualified archaeologist. The Agency and a qualified archaeologist are responsible for the compliance monitoring

Mitigation Measure CR-2c – Native American Notification

Because of their continuing interest in potential discoveries during construction, all listed Native American contacts shall be notified of any and all discoveries of archaeological resources in the project area.

Based on the records review, the cultural resource surveys, and the tribal consultation, the Board has concluded a Finding of No Historic Properties Affected is appropriate for this proposed undertaking and has requested my concurrence with that finding. The Agency will conduct the project in accordance with the mitigation measures described above. The Board has requested me to review and comment on their identification of the APE and their determination of No Historic Properties Affected for the project.

After reviewing the information submitted with your letter, I offer the following comments:

- I have no objections to your identification and delineation of the APE, pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d);
- I agree with the Agency's decision to conduct the proposed undertaking in accordance with the mitigation measures described above; and
- I do not object to your determination of No Historic Properties Affected for the proposed undertaking, as described above.

Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800. Should you encounter cultural artifacts during ground disturbing activities, please halt all work until a qualified archaeologist can be consulted on the nature and significance of such artifacts.

Thank you for seeking my comments and considering historic properties as part of your project planning. If you have any questions or concerns, please contact the following member of my staff: Tristan Tozer at (916) 445-7027 or via e-mail at Tristan.Tozer@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

May 13, 2016

Mr. Douglas Cooper
United States Fish and Wildlife Service
Ventura Field Office
2493 Portola Road, Suite B
Ventura, California 93003

REQUEST: ENDANGERED SPECIES ACT (ESA) SECTION 7 FORMAL
CONSULTATION FOR CLEAN WATER STATE REVOLVING FUND
(CWSRF) FINANCING APPLICATION

APPLICANT: MONTEREY COUNTY REGIONAL WATER POLLUTION CONTROL
AGENCY (MCRWPCA)

PROJECT: PURE WATER MONTEREY GROUNDWATER REPLENISHMENT
PROJECT (PROJECT); MONTEREY COUNTY; CWSRF NO. C-06-8028-110

Dear Mr. Cooper:

Monterey County Regional Water Pollution Control Agency (MCRWPCA) is in line to receive Clean Water State Revolving Fund (CWSRF) financing for the Pure Water Monterey Groundwater Replenishment project, CWSRF No. C-06-8028-110 (the project). This letter serves to initiate formal consultation under Section 7 of the ESA for the project.

The United States Environmental Protection Agency (USEPA) has delegated the administration of the CWSRF program to states, including California, under the federal Clean Water Act (CWA), to assist in funding projects intended to improve water quality. The Division of Financial Assistance of the State Water Resources Control Board (State Water Board) administers the CWSRF program pursuant to 40 CFR Part 35. Issuance of CWSRF financing for a project by the State Water Board is considered equivalent to a FEDERAL ACTION. Therefore, projects must undergo federal consultation with agencies responsible for the implementation of federal environmental statutes and authorities. The State Water Board requires, through financing agreement provisions, that applicants implement mitigation measures or other steps determined necessary or appropriate during the consultation process. Failure to implement such measures may result in the State Water Board curtailing financing, imposing interest penalties, or taking other enforcement action as deemed necessary. Should the State Water Board fail to properly enforce the implementation of mitigation measures required by the financing agreement, the USEPA may take corrective

action against the State Water Board pursuant to 40 CFR 35.3170, including the withholding of CWSRF payments.

The State Water Board held a meeting with the USEPA Region 9 and the United States Army Corps of Engineers (USACE), Northern Branch of the Sacramento District, on January 8, 2016, regarding the project. As a result of that meeting, the USEPA assumed the role of lead federal agency for consultation under Section 7 of the ESA for the USACE authorization that is required for the proposed action (Enclosure 4).

USEPA has determined the project **may affect and is likely to adversely affect** the federally threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*), federally and state threatened California red legged frog (CRLF; *Rana draytonii*) and the federally endangered Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*). Monterey gilia has potential to be adversely effected only if it is documented during protocol-level plant surveys conducted at the Injection Well Facilities site.

Although the USEPA is not required to consult on candidate species under the federal ESA, the USEPA has determined that the project **may affect, but is not likely to adversely affect** tricolored blackbirds (*Agelaius tricolor*) and other migratory birds.

Additionally, USEPA has determined the project will not affect the endangered tidewater goby (*Eucyclogobius newberryi*) or its critical habitat. Prior to 2013, this species was presumed lost from this area due to levee construction and channelization. However, two gobies were observed during the fall of 2013. It is likely that the gobies had dispersed from nearby waterbodies. Additionally, construction and operational impacts are not expected within the Salinas Lagoon.

Formal consultation as defined by 50 C.F.R. 402.14 and 50 C.F.R. 600.905 commences with your receipt of this letter. The following information, summarized below, is included to initiate consultation:

- **Enclosure 1.** *Biological Assessment for the U. S. Fish and Wildlife Service, Pure Water Monterey Groundwater Replenishment Project* (v4 rev 2Mar2016 - Prepared by Denise Duffy & Associates, Inc.)
- **Enclosure 2.** *Biological Assessment Appendices for USFWS - Pure Water Monterey Groundwater Replenishment Project* (v4 rev 2Mar2016 - Prepared by Denise Duffy & Associates, Inc.)
- **Enclosure 3.** *U.S. Army Corps of Engineers Application for Dept. of Army Permit: Clean Water Act Section 404 Permit for the Pure Water Monterey Groundwater Replenishment Project – Reclamation Ditch and Blanco Drain Diversions, submitted November 3, 2015* (Prepared by Denise Duffy & Associates, Inc.)
- **Enclosure 4.** Email message (1-20-16) USACE Lead Federal Agency Delegation to USEPA Monterey GWR
- **Enclosure 5.** Draft EIR for the Pure Water Monterey GWR Project April 2015 (Prepared by Denise Duffy & Associates, Inc.)

- **Enclosure 6.** Final EIR for the Pure Water Monterey GWR Project, as certified October 2015 (Prepared by MCRWPCA and Denise Duffy & Associates, Inc.)
- **Enclosure 7.** USACOE 1997 Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord.pdf

Current Conditions

The existing regional wastewater treatment plant (RTP) system includes water recycling facilities, a non-potable crop irrigation water distribution system, sewage collection pipelines, and 25 wastewater pump stations. The RTP was created in 1972 and currently treats approximately 16 to 17 million gallons per day (mgd) of wastewater from residential, commercial, and industrial sources to serve a population of approximately 250,000. The RTP has an average dry weather design capacity of 29.6 mgd and a peak wet weather design capacity of 75.6 mgd. The municipal wastewater collection and conveyance system includes a 36-inch diameter force main that conveys wastewater approximately 7.5 miles from the Salinas Pump Station to the RTP. The agricultural wash water collection, conveyance and treatment system is used to divert the Reclamation Ditch waters to the Salinas Pump Station. Additional existing conveyance pipelines would deliver the water for storage and treatment at the Salinas Treatment Facility. The treated wastewater from the Salinas Treatment Facility is aerated and then it flows by gravity to three percolation ponds. (See Draft EIR Figure 1-2.)

The MCRWPCA provides services to the cities of Monterey, Pacific Grove, Del Rey Oaks, Sand City, Marina, and Salinas, the Seaside Sanitation District, the Castroville, Moss Landing and Boronda Community Service Districts, and former Fort Ord lands. The current service area is shown in dark blue in Enclosure 5. (Draft EIR Figure 2-2, Service Area Map).

The RTP treats wastewater to two different standards:

- 1) Primary and secondary treatment for discharge through the MCRWPCA ocean outfall or for use as influent for the tertiary treatment system, and
- 2) Title 22 California Code of Regulations standards (tertiary filtration and disinfection) for unrestricted crop irrigation use.

In most winter months, secondary treated wastewater from the RTP is discharged to Monterey Bay through the ocean outfall, which includes a diffuser that extends 11,260 feet offshore at a depth of approximately 100 feet. In recent years there have been reduced influent flows of wastewater to the RTP, and reduced discharges from the ocean outfall, while the amount of tertiary treated water that has been delivered for crop irrigation is trending upward. Further influent reductions to the RTP and increased demand for recycled water are projected if additional source waters are not made available for treatment. The use of recycled wastewater for irrigation reduces regional dependence on local groundwater sources and the Salinas Valley aquifers, which in turn reduces seawater intrusion related to groundwater pumping.

Project Description

The purpose of the project is to create purified recycled water for recharge of the Seaside Groundwater Basin to replace 3,500 acre-feet per year of California American (CalAm) Water's

current water supplies, enabling CalAm to reduce its diversions from the Carmel River by the same amount, and to provide additional recycled water to growers within the existing Castroville Seawater Intrusion Project service area for crop irrigation.

Municipal wastewater, industrial wastewater, urban stormwater runoff, and surface water diversions are proposed to be recycled and reused by the project. After secondary treatment, the wastewater would receive an additional four-step Advanced Water Treatment (AWT) purification process of Ozone (O₃) Pre-Treatment, Membrane Filtration (MF), Reverse Osmosis (RO), and Oxidation with Ultra Violet Light (UV) and Hydrogen Peroxide (H₂O₂). The result would be purified water at near distilled quality and exceeding all drinking water standards. The resulting purified water would then be pH-adjusted and piped to the aquifer recharge area at the Injection Well Facilities site in the City of Seaside. There, the highly purified water would mix with established groundwater, improving its quality and reducing the drinking water supply demand on the Carmel River.

Table 1-1 of Enclosure 1 summarizes the physical dimensions of the temporary and permanent construction disturbance for each component of the project. In addition, the following section provides a brief overview of the operations and maintenance activities that would result in changes to the physical environment that might directly or indirectly affect federally-listed plant or animal species. Key project components are illustrated in Figure 1-2 of Enclosure 1, which provides a project facilities overview showing the locations of all proposed action components in relation to each other. Additional information regarding construction, operations and maintenance activities is included in pages 6 – 20 of Enclosure 1, and Appendix D of Enclosure 2 includes photos of the project sites. The project components are divided into the following categories:

Source water diversion and storage facilities enable diversion of new source waters to the existing municipal wastewater collection system and conveyance of those waters as municipal wastewater to the Regional Treatment Plant (RTP) to increase availability of wastewater for recycling. Modifications would be made to the existing Salinas Wastewater Treatment Facility located along the Salinas River to allow the use of the existing treatment ponds for storage of excess winter source water flows, and later delivery to the RTP for recycling. The source water diversion sites include the Blanco Drain Diversion and the Reclamation Ditch Diversion. The Salinas Treatment Facility will be further developed for water storage and recovery. New source water conveyance pipelines will be constructed for the Blanco Drain Diversion and the Salinas Treatment Facility.

Treatment Facilities at the Regional Treatment Plant will continue to be used for primary and secondary treatment. A new Advanced Water Treatment (AWT) Facility will be constructed (including pre-treatment, ozonation, membrane filtration, reverse osmosis, advanced oxidation with ultraviolet light and hydrogen peroxide, and product water stabilization), as well as a product water pump station, concentrate disposal facilities, and modifications to the Salinas Valley Reclamation tertiary treatment plant and storage basin.

Product water conveyance will include new pipelines, a booster pump station, and appurtenant facilities to be constructed along the pipeline alignments to move the product water from the RTP to the Seaside Groundwater Basin Injection Well Facilities.

Injection well facilities with new deep well and vadose zone wells will be constructed to inject product water into the Seaside Groundwater Basin, along with associated back-flush facilities, pipelines, electricity/power distribution facilities, and electrical/motor control buildings.

CWSRF financing, and thus USEPA's Action Area, includes the whole of the project site as labeled in Figure 3-1 of Enclosure 1. Appendix G, Enclosure 2 contains an Area Map Booklet including Permanent Facilities.

Project Location

The Action Area for the project spans approximately 25 miles within Monterey County from the City of Salinas to the City of Seaside, and is located from approximately 1.3 miles east of the Pacific Ocean to eight miles inland. The Reclamation Ditch Diversion site is at the northeast extent of the project, located at the northwest boundary of the City of Salinas. The northern reach of the project is the Blanco Drain Diversion site at the Salinas River located north of the City of Marina and west of the City of Salinas. The project extends southward to the injection well facilities in the City of Seaside. The Action Area evaluated for this biological assessment (BA) includes all construction and staging areas within the four (4) major components of the project listed above that will be disturbed during the construction phase of the project. Several maps within Enclosure 1 provide a visual reference for the project location, including the Regional Location Map (Draft EIR Figure 1-1), Key Project Components (Draft EIR Figure 1-2), and Action Area Maps (Draft EIR Figures 3-1 through 3-14). Enclosure 2, Appendix C includes photographs of several facility construction sites.

Construction Schedule

The project construction is anticipated to require approximately 18 months and is proposed to begin in July 2016 with a completion date in March 2018. Please see the Project Construction Schedule in Table 1-2 of Enclosure 1 for a detailed construction schedule of the project components. The red boxes indicated within the construction schedule table describe when dewatering activities in the Reclamation Ditch and Blanco Drain are proposed to occur. This is the same construction schedule as reflected in the certified Final EIR (Enclosure 6). Major construction of new facilities would be limited to daytime hours. However, at the Salinas Pump Station Diversion site construction may occur up to 24 hours per day, 7 days per week due to the necessity of managing wastewater flows. Construction of the project is anticipated to require approximately 18 months, plus three months of testing and start-up, and the project is currently planned for initial operation by late 2017.

Consultation Summary

On September 2, 2015, Denise Duffy & Associates, Inc. (Consultant) generated the IPaC Trust Resource Report for federally-listed species in the project area¹ (Appendix A, Enclosure 2). On

¹ Although Tembladero Slough and Lake El Estero source water diversions were included as a component of the GWR Project in the EIR and in the MRWPCA's October 8, 2015 project approval action (MRWPCA Resolution 2015-24), the resolution acknowledged that MRWPCA and their partner agency may not include these facilities in the initial phase of the Project, in particular they may not be included in permit applications, loan applications,

Oct. 8, 2015, the MCRWPCA selected the Regional Urban Water Augmentation Project (RUWAP) alignment alternative in their project approval decision. An official species list for the revised project area was later requested and provided by USFWS on November 11, 2015 (Appendix B, Enclosure 2). On January 14, 2016, the MCRWPCA conducted with the Monterey Peninsula Water Management District (MPWMD) and the Monterey County Water Resources Agency (MCWRA) a project information meeting. Representatives from the USFWS, California Department of Fish and Wildlife (CDFW), USACE, and the Divisions of Water Rights and Financial Assistance of the State Water Board attended the meeting. The presentation and summary of the January 14, 2016, meeting are contained within Appendix F of Enclosure 1. A site visit attended by Susan Stewart of the State Water Board Environmental Review Unit was held on February 16, 2016, and the itinerary and map book for that site visit are also contained in Appendix F of Enclosure 1. Another site visit was conducted on February 26, 2016, for Jacob Martin of the USFWS office in Ventura and the itinerary and map book for that site visit are also included in Appendix F of Enclosure 1.

Biological Setting

The project is located within Monterey County with the project components located primarily within urbanized, developed areas and existing agricultural lands. However, some project components would occur within undeveloped habitats. The Monterey Bay region represents the population range limits of many rare plant species endemic to northern and southern portions of the state. The project region is located near the confluence of the San Francisco Bay, Central Coast, and South Coast Range floristic provinces and is among the most diverse in California. In general, the project would be situated in level to gently sloped topography within eight miles of the ocean, with elevations ranging from sea level to approximately 425 feet above sea level at the proposed Injection Well Facility Site. The average annual precipitation in this portion of Monterey County ranges from 12 to 20 inches; annual temperatures average 59 degrees Fahrenheit. The project region includes the following surface water bodies: Reclamation Ditch, Blanco Drain, and Salinas River. This analysis further defines "Affected Reaches" as portions of the Reclamation Ditch, Tembladero Slough, Salinas River, and the Old Salinas River Channel, which have the potential to be affected by the operation of the project as a result of changes in hydrology, due to the proposed diversions.

Project Effects

Please see Enclosure 1 which includes a description of the federally-listed species that may be affected and are likely to adversely affected by the project, including Monterey spineflower, California red legged frog, and Monterey gilia. The rationale for determination of presence or absence of federally-listed plant and animal species within the Action Area is based on protocol-level survey results, local occurrence data, and/or the habitat features documented to occur within the Action Area. Table 1-1 of Enclosure 1 presents the applicant-proposed mitigation

and/or grant applications. These facilities provide only a small benefit to project yields (i.e., 500 to 750 acre feet during some drought years for CSIP irrigation); therefore, are not proposed to be built or operated within the timeframe of the remainder of the components and permits for those facilities are not being pursued.

measures that will be implemented by the GCRWPCA during construction and operation of the project.

Within the boundaries of the Action Area is the former Fort Ord, which is subject to a Habitat Management Plan (HMP) that includes provisions pertaining to federally-listed plant and animal species that may be affected by the proposed project. The proposed project facilities are located on parcels designated by the HMP as "development." Through implementation of the HMP, impacts to HMP species and habitats occurring within the designated development parcels were anticipated and mitigated through the establishment of habitat reserves and corridors, and the implementation of habitat management requirements within habitat reserve parcels on former Fort Ord. Parcels designated as "development" have no management restrictions. However, the Biological Opinion (BO) and HMP require the identification of sensitive biological resources within these parcels that may be salvaged for use in restoration activities in reserve areas. With the designated habitat reserves and corridors and habitat management requirements of the HMP in place, the loss of one or more individuals of these species is not expected to jeopardize the long-term viability of these species and their populations on the former Fort Ord. Because the project is: 1) only proposing development activities within designated development parcels; 2) required to comply with the habitat management restrictions identified in the HMP; and 3) would not result in any additional impacts to HMP species and habitats beyond those anticipated in the HMP, no additional avoidance and minimization measures for these HMP species are required. The HMP is provided in Enclosure 7.

The following is a description of federally-listed species that will be impacted by the project and a list of avoidance and minimization measures that will be implemented to reduce potential project impacts.

Monterey Spineflower: Project construction activities **may affect and are likely to adversely affect** Monterey spineflower. The California Natural Diversity Database (CNDDB) reports 27 occurrences of this species in the 16 quadrangles reviewed, four of which include portions of the Action Area (Enclosure 1, Figure 4-1). This species was identified during the 2014 botanical surveys in the Product Water Conveyance RUWAP alignment option (0.1 acre) and the Injection Well Facilities site (0.1 acre). Monterey spineflower also have a high likelihood of occurrence at portions of the Injection Well Facilities site that have not yet been surveyed. Above-ground construction activities located at the source water diversion sites, treatment facilities at the RTP, booster pump station, and Injection Well Facilities have the potential to permanently affect Monterey spineflower. Underground construction activities including pipelines, pump stations, a water treatment facility, and Injection Well Facilities may affect Monterey spineflower through temporary, short-term disturbance of populations but would not result in long-term permanent impacts. Following construction, daily operation of the pipelines and other underground project components would not affect Monterey spineflower; however, periodic maintenance activities associated with project operations of above-ground facilities could potentially affect this species. Figures 4-1 and 4-2 of Enclosure 1 illustrate known areas of occurrence and critical habitat for this species. Designated critical habitat for Monterey spineflower is not within the Action Area for the project.

Monterey spineflower occurs on approximately 0.1 acre of land within the Action Area outside of the Fort Ord property and would be subject to the mitigation measures identified in the adopted Mitigation Monitoring and Reporting Plan (MMRP) (Table 1-2 Enclosure 1, and Appendix E, Enclosure 2). The following applicable measures are summarized.

Mitigation Measure BT-1a: Implement Construction Best Management Practices including but not limited to an Employee Education Program; BT-1a (1.) A qualified biologist must conduct an Employee Education Program for the construction crew prior to any construction activities. A qualified biologist must meet with the construction crew at the onset of construction at the site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which would ensure the safety of the monitor during such activities, 3) the special-status species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the USFWS and CDFW; and 6) the proper procedures if a special-status species is encountered within the site.

Additional protective measures and revegetation procedures identified in Mitigation Measure BT-1a may apply if a special-status species is encountered.

Mitigation Measure BT-1c: Implement Non-Native, Invasive Species Controls.

The following measures shall be implemented to reduce the introduction and spread of non-native, invasive species:

1. Any landscaping or replanting required for the project shall not use species listed as noxious by the California Department of Food and Agriculture (CDFA).
2. Bare and disturbed soil shall be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion of noxious weeds in the Project Study Area.
3. Construction equipment shall be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds, before mobilizing to arrive at the construction site and before leaving the construction site.
4. All non-native, invasive plant species shall be removed from disturbed areas prior to replanting.

Mitigation Measure BT-1e: Prepare and Implement Rare Plant Restoration Plan

Impacts to rare plant species individuals shall be avoided through project design and modification, to the extent feasible while taking into consideration other site and engineering constraints. If avoidance is not possible, the species shall be replaced at a 1:1 ratio for area of impact through preservation, restoration, or combination of both. A Rare Plant Restoration Plan, approved by the lead agency prior to commencing construction on the component site upon which the rare plant species would be impacted, shall be prepared and implemented by a qualified biologist. The plan shall include, but is not limited to, the following: a) a detailed description of on-site and/or off-site mitigation areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications; b) a 3-year monitoring program; and c) a mitigation area preserved in perpetuity through a conservation easement.

Mitigation Measure BT-1f: Conduct Pre-Construction Protocol-Level Botanical Surveys within the remaining portion of the Project Study Area within the Injection Well Facilities site. The GCRWPCA shall retain a qualified biologist to conduct protocol-level surveys for special-status plant species within the Injection Well Facilities site not yet surveyed. Protocol-level surveys shall be conducted by a qualified biologist at the appropriate time of year for species with the potential to occur within the site. A report describing the results of the surveys shall be provided to the project proponents prior to any ground disturbing activities. The report shall include, but is not limited to: 1) a description of the species observed, if any; 2) map of the location, if observed; and 3) recommended avoidance and minimization measures, if applicable.

As the Injection Well Facilities site is located on the former Fort Ord, any Monterey spineflower (or Monterey gilia) occurrences documented during the protocol-level surveys in this location are subject to the avoidance and minimizations measures identified in the HMP and associated BO. Mitigation Measure BT-4 for HMP Plant Species Salvage is designed to address any construction conflicts that may occur with the HMP and BO.

Monterey Gilia: Project construction activities **may affect and are likely to adversely affect** Monterey gilia, if it is documented during protocol-level plant surveys conducted at the Injection Well Facilities site. The CNDDDB reports 29 occurrences of this species in the 16 quadrangles reviewed. This species was not identified during the 2014 botanical surveys that were conducted for all areas outside of former Fort Ord. However, a portion of the Injection Well Facilities site was added to the action area after the appropriate identification period and, therefore, was not able to be surveyed for special-status plants. Monterey gilia has a high potential to occur in this area. The un-surveyed area at the Injection Well Facilities site consists of central maritime chaparral and ruderal habitat and will be surveyed during the appropriate bloom time. If Monterey gilia is found to be present at the Injection Well Facilities site, above-ground construction activities would have the potential to permanently affect Monterey gilia. Underground construction activities including pipelines, pump stations, a water treatment facility, and Injection Well Facilities may affect Monterey gilia through temporary, short-term disturbance of populations but would not result in long-term permanent impacts. Critical habitat has not been proposed for this species.

The GCRWPCA proposes to identify Monterey gilia within the project survey area of the Injection Well Facilities site not yet surveyed by use of Mitigation Measure BT-1f as listed above.

Monterey gilia occurrences that may be documented at the Injection Well Facilities site located on the former Fort Ord during the protocol-level surveys are subject to the avoidance and minimizations measures identified in the HMP and associated BO, therefore no additional avoidance and minimization measures have been proposed.

The construction and operational impacts for the project would not be cumulatively considerable to Monterey gilia, with implementation of the avoidance and minimization measures previously identified. A cumulative analysis table for the project is provided in Appendix D, Enclosure 2.

California Red-legged Frog (CRLF): The project construction activities **may affect and are likely to adversely affect** CRLF. Direct mortality of individuals may occur associated with construction activities, such as vegetation removal or site grading. Indirect impacts to CRLF may include mortality of individuals due to sedimentation and contamination of aquatic habitat as a result of erosion from disturbed portions or accidental spills associated with directional drilling during pipeline installation under the Salinas River. The impact area for construction activities related to horizontal directional drilling (sending and receiving pits) at the Blanco Drain Diversion site will avoid any adverse effects to riparian habitat associated with the Salinas River including avoidance of tree removal and limbing of existing trees.

The CNDDDB reports 106 occurrences of CRLF within the 16 quadrangles reviewed. The CNDDDB does not present specific location data for some of these occurrences. However, the nearest specific occurrence is a breeding location directly adjacent to the Blanco Drain Diversion site along the Salinas River (Figure 4-3 of Enclosure 1). This occurrence is the only specific CNDDDB CRLF occurrence within 1.6 kilometers (~1-mile) of the action area. Due to the salinity and lack of suitable breeding habitat, CRLF is not expected to occur, however, this species is assumed present within the riparian habitat at the Salinas Treatment Facility and Blanco Drain Diversion sites. Figure 4-3 of Enclosure 1, illustrates known areas of occurrence for this species in relation to the action area.

Table 3-1 of Enclosure 1 indicates the approximate acreage of vegetation and habitat types for the following component action areas where CRLF presence is assumed:

- Salinas Treatment Facility Storage – Ruderal/Developed/Active Agriculture 7.4 ac
- Blanco Drain – Aquatic and 0.3 ac, Riparian 0.7 ac, Non-Native Grassland 0.8 ac, Ruderal/Developed/Active Agriculture 6.5 ac

Table 1-2 of Enclosure 1 presents the applicant-proposed mitigation measures that will be implemented by the GCRWPCA during construction and operation of the project. The following summary includes a brief discussion of the proposed mitigation measures to minimize impacts to CRLF. (Please see Enclosure 1, Chapter 4 and Table 1-2 for additional information). Mitigation measures relevant to the federally-listed CRLF include but are not limited to:

BT-1q: Avoid and Minimize Impacts to California Red-Legged Frog. The following measures for avoidance and minimization of adverse impacts to CRLF during construction of the project components are those typically employed for construction activities that may result in short-term impacts to individuals and their habitat. The focus of these measures is on scheduling activities at certain times of year, keeping the disturbance footprint to a minimum, and monitoring. The mitigation measures include but are not limited to:

1. Submittal of the name(s) and credentials of qualified biologists who would conduct activities,
2. Survey of the work site 48 hours prior to construction, and allowance of sufficient time to move the CRLF, tadpoles or eggs from the work site before work activities begin.

3. A training session for all construction personnel by a USFWS-approved biologist of the work site 48 hours prior to the onset of construction activities; relocation of tadpoles or eggs from the work site by a USFWS-approved biologist before work activities begin;
4. A USFWS-approved biologist shall be present at the work site until such time as all removal of CRLF, instruction of workers, and disturbance of habitat have been completed.
5. A limited number of access routes, staging areas and area activity;
6. Restricted work activities to the time between April 1 and November 1;
7. Specifications for dewatering activities, and
8. Practices to minimize the possible spread of chytrid fungus or other amphibian pathogens and parasites.

BT-2a: Avoidance and Minimization of Impacts to Riparian Habitat and Wetland Habitats. Implement Mitigation Measure BT-1a (to include but not limited to an Employee Education Program; protective fencing and exclusionary barriers of trees and vegetation not planned for removal or trimming; revegetation of disturbed areas using locally-occurring native species; and spill containment measures).

When designing the facilities at these component sites, the MRWPCA shall site and design project features to avoid impacts to the riparian and wetland habitats, including direct habitat removal and indirect hydrology and water quality impacts, to the greatest extent feasible while taking into account site and engineering constraints. To protect this sensitive habitat during construction, the following measures shall be implemented:

1. Place construction fencing around riparian and wetland habitat; and
2. All proposed lighting shall be designed to avoid light and glare into the riparian and wetland habitat.

In the event that full avoidance is not possible and a portion or the entire riparian and wetland habitat would be impacted, additional minimization measures shall be implemented as identified in the Mitigation Monitoring and Reporting Plan (MMRP).

BT-2c Prepare and Implement a Frac-Out Plan to avoid or reduce accidental loss of drilling fluid from the horizontal directional drilling (HDD) beneath the Salinas River and the Blanco Drain Diversion construction site due to excess downhole fluid pressure. The Frac-Out Plan shall address spill prevention, containment, and clean-up methodology. The proposed HDD component of the Blanco Drain diversion shall be designed and conducted to minimize the risk of spill events. The Frac-Out Plan shall be prepared and submitted to United States Fish and Wildlife Services, California Department of Fish and Wildlife, National Marine Fisheries Services, and the Regional Water Quality Control Board prior to commencement of HDD activities for the Blanco Drain Diversion construction. A typical Frac-Out Plan includes:

1. Project description, including details of the HDD design and operations;
2. Site description and existing conditions;
3. Potential modes of HDD failure and HDD failure prevention and mitigation;

4. Prevention measures (including for example, geotechnical investigations, planning for appropriate depths based on those investigations, presence of a qualified engineer during drilling to monitor the drilling process, live adjustments to the pace of drill advancement to ensure sufficient time for cutting and fluid circulation and to prevent or minimize plugging, maintaining the minimum drilling pressure necessary to maintain fluid circulation, etc.);
5. Monitoring requirements (for example, monitoring pump pressure circulation rate, ground surface and surface water inspection, advancing the drill only during daytime hours, on-site biological resource monitoring by a qualified biologist);
6. Response to accidental spills (including stopping drilling, permitting agency notification, surveying the area, containing the spill material, contacting the project biological monitor to identify and relocate species potentially in the area, turbidity monitoring, procedures for clean-up and mitigation of hazardous waste spill materials, preparation of documentation of the event, etc.); and
7. Coordination plan and contact list of key project proponents, biological monitor, and agency staff in the event of an accidental spill event.

As the project will avoid and minimize impacts to individuals, no cumulative impacts to CRLF are anticipated.

Tidewater Goby: Project construction and implementation will not affect the endangered tidewater goby and its critical habitat. However avoidance and minimization measures in place to protect the South-Central California Coast Steelhead and summarized below (Table 1-2 of Enclosure 1) will avoid any adverse effects to the tidewater goby.

Mitigation Measure BF-1b: Relocation of Aquatic Species during Construction.

(Applies to Reclamation Ditch Diversion) Conduct pre-construction surveys to determine whether tidewater gobies or other fish species are present, and if so, implement appropriate measures in consultation with applicable regulatory agencies, which may include a program for capture and relocation of tidewater gobies to suitable habitat outside of work area during construction.

Mitigation Measure BF-1c: Tidewater Goby and Steelhead Impact Avoidance and Minimization. To ensure compliance with the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), consultation with National Marine Fisheries Service (NMFS)/National Oceanic and Atmospheric Agency (NOAA), USFWS, and California Department of Fish and Wildlife (CDFW) shall be conducted as required, and any necessary take permits or authorizations would be obtained. If suitable habitat for tidewater goby (Tembladero Slough) and steelhead cannot be avoided, any in-stream portions of each project component (where the Project improvements require in-stream work) shall be dewatered/diverted. A dewatering/diversion plan shall be prepared and submitted to NMFS, USFWS, and CDFW for review and approval. Specific plan elements are noted in the MMRP and will be refined through consultation with USFWS, NMFS and CDFW.

Tricolored Blackbird: The project construction activities **may affect, but are not likely to adversely affect** tricolored blackbird (candidate species) and several migratory bird species protected by the Migratory Bird Treaty Act (MBTA) that have the potential to nest and forage within the action area. The CNDDDB reports 10 occurrences of tricolored blackbird within the 16 quadrangles reviewed. The nearest specific occurrence is approximately 0.5 mile west of the Action Area (Figure 4-4 Enclosure 1). Suitable nesting habitat for tricolored blackbird occurs within the riparian habitat associated with the Salinas River at the Blanco Drain Diversion site. Additionally suitable nesting and foraging habitat occurs adjacent to the Salinas Treatment Facility wastewater ponds.

Temporary disturbance may occur to foraging tricolored blackbirds or migratory birds during construction activities. Additionally, if construction occurs during the nesting season, activities such as vegetation removal or site grading could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment within the Action Area and areas immediately adjacent to the Action Area. However, avoidance and minimization measures included in Table 1-2 of Enclosure 1 will avoid adverse effects to tricolored blackbirds and other migratory birds.

BT-1k: Conduct Pre-Construction Surveys for Protected Avian Species, including, but not limited to, white-tailed kite and California horned lark to include but not limited to:

1. Pre-construction surveys for suitable nesting habitat within the component project study area and suitable buffer area as determined by a qualified biologist
2. Timing of construction activities that may directly or indirectly affect protected nesting avian species shall be timed to avoid the breeding and nesting season (after September 16 and before January 3).
3. Pre-construction surveys for nesting raptors and other protected avian species where nesting habitat was identified and within the suitable buffer area if construction commences between February 1 and September 15.
4. A time frame for vegetation and/or tree removal limited to after September 16 and before January 3 as needed.
5. Pre-construction surveys shall be conducted no more than 14 days prior to the start of construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).
6. Surveys for nesting birds may be required to continue during construction to address new arrivals, and because some species breed multiple times in a season. The necessity and timing of these continued surveys shall be determined by the qualified biologist based on review of the final construction plans.
7. If active raptor or other protected avian species nests are identified during the preconstruction surveys, the qualified biologist shall notify the project proponents and an appropriate no-disturbance buffer shall be imposed within which no construction activities or disturbance shall take place until the young have fledged and are no longer reliant upon the nest or parental care for survival, as determined by a qualified biologist.

No cumulative impacts to tricolored blackbird or migratory bird species are anticipated.

Conclusion

Based on the above information, the USEPA has determined the project **may affect and is likely to adversely affect** Monterey spineflower and California red legged frog. Additionally, there is potential to adversely affect Monterey gilia, if it is documented during protocol-level plant surveys conducted at the Injection Well Facilities site. In addition, the USEPA has determined the project **may affect, but is not likely to adversely affect** the tricolored blackbird, a candidate species, and other migratory birds. Finally, the USEPA has determined the project will not affect the Tidewater goby.

The efforts to identify the locations of the Monterey spineflower and Monterey gilia indicate that occurrence of these species are well documented, and will continue to be investigated through protocol surveys in the un-surveyed project areas. The HMP and BO in place for these species within the Fort Ord property will ensure a stable population in this area and the provisions included within may contribute to salvage and relocation efforts. The mitigation measures for the Monterey spineflower located outside of the HMP area of Fort Ord propose to educate the construction crew, and prevent the establishment of non-native invasive species. Implementation of a Rare Plant Restoration Plan and avoidance measures in project design and construction contribute to assurance that the project will result in minimal impacts to these special status, federally listed plant species.

The mitigation measures to avoid and minimize impacts to CRLF include pre-construction surveys and monitoring, scheduling activities at certain times of year, and keeping the construction footprint to a minimum. Additionally, use of horizontal directional drilling to minimize soil and vegetation disturbance, and the preparation of a Frac-Out Plan will minimize impacts to CRLF.

Standard mitigation measures for the tidewater goby and its critical habitat will be put in place to avoid any adverse effects to the species.

Mitigation measures including a) pre-construction surveys and continued survey periods to identify nests and b) buffer zones to minimize disturbance in construction areas will be implemented to avoid adverse effects to tricolored blackbirds and other migratory birds.

We are requesting the initiation of formal consultation under Section 7 of ESA as required by the USACE for a Section 404 permit under the Clean Water Act (Enclosure 3) and to support CWSRF financing approval by the State Water Board for the project. If you have questions or need additional information, please contact me or Elizabeth Borowiec of my staff at 415-972-3419, or by email at borowiec.elizabeth@epa.gov.

Sincerely,



Douglas E. Eberhardt
Manager, Infrastructure Section

Enclosures on CD (7):

- Enclosure 1. *Biological Assessment for the U. S. Fish and Wildlife Service, Pure Water Monterey Groundwater Replenishment Project* (v4 rev 2Mar2016 - Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 2. *Biological Assessment Appendices for USFWS - Pure Water Monterey Groundwater Replenishment Project* (v4 rev 2Mar2016 - Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 3. *U.S. Army Corps of Engineers Application for Dept. of Army Permit: Clean Water Act Section 404 Permit for the Pure Water Monterey Groundwater Replenishment Project – Reclamation Ditch and Blanco Drain Diversions, submitted November 3, 2015* (Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 4. Email message (1-20-16) USACE Lead Federal Agency Delegation to USEPA Monterey GWR
- Enclosure 5. Draft EIR for the Pure Water Monterey GWR Project April 2015 (*Prepared by Denise Duffy & Associates, Inc.*)
- Enclosure 6. Certified EIR for the Pure Water Monterey GWR Project September 2015 (Prepared by Denise Duffy & Associates, Inc.)
- Enclosure 7. USACOE_1997_Installation-Wide Multispecies Habitat Management Plan for Former Fort Ord.pdf

cc:

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cc (sent by email, only):

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
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IN REPLY REFER TO:
08EVEN00-2016-F-0523

December 20, 2016

Douglas E. Eberhardt, Manager
Infrastructure Section, Region IX
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105-3901

Subject: Biological Opinion for Pure Water Monterey Groundwater Replenishment Project,
Monterey County, California

Dear Mr. Eberhardt:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion based on our review of the U.S. Environmental Protection Agency's (EPA) proposed funding of the Monterey Regional Water Pollution Control Agency (MRWPCA) to construct the Pure Water Monterey Groundwater Replenishment Project (Project) and its effects on the federally threatened California red-legged frog (*Rana draytonii*) and Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and the federally endangered Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*), in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Per agreements between EPA, the State Water Resources Control Board, and the U.S. Army Corps of Engineers (Corps), EPA is acting as the Federal lead action agency for the section 7 consultation process for the Project; however, the Corps will also be considering an authorization under Nationwide Permit 12 (and potentially Nationwide Permit 13) for compliance with the Clean Water Act Section 404 and, potentially, an authorization under Section 10 of the Rivers and Harbors Act. This Biological Opinion addresses the proposed Federal actions of both the EPA and the Corps. We received your May 13, 2016, request for formal consultation on May 18, 2016. No critical habitat for the California red-legged frog or Monterey spineflower occurs within the Project area and therefore none would be affected. No critical habitat has been designated for the Monterey gilia and therefore none would be affected.

You determined that the Project is likely to adversely affect the California red-legged frog and Monterey spineflower and requested formal consultation on those species. You also determined that the Project has potential to adversely affect the Monterey gilia, pending botanical surveys of a portion of the project area that had not yet been surveyed at the time of your request. We received results of the relevant botanical surveys on June 23, 2016, and a minor revision of those results on August 16, 2016 (Johnson in litt. 2016), from Matthew Johnson of Denise Duffy and Associates (consultant to MRWPCA). Those results indicate that adverse effects to the Monterey gilia are likely and we have therefore addressed that species in this biological opinion.

You determined that the Project is not likely to adversely affect the tricolored blackbird (*Agelaius tricolor*). We have received a petition to list this species, but it currently has no status under the Act and therefore no consultation under the Act is required. We appreciate the measures that you and MRWPCA have proposed to protect this species and other migratory birds.

We have based this biological opinion on information that accompanied your May 13, 2016, request for consultation, including a biological assessment (Denise Duffy and Associates 2016), and other information from our files. We can make available a complete record of this consultation at the Ventura Fish and Wildlife Office.

Consultation History

We received your request for consultation on May 18, 2016. We received the aforementioned botanical survey results on June 23, 2016, and August 16, 2016, which completed the information needed to initiate consultation.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Salinas Pump Station Diversion

Construction

Construction activities at this site would include demolition, excavation, site grading and installation of new junction structures, new meter vault or flow measurement structures and short pipeline segments. Existing pump stations operations would be ongoing during construction due to the uninterrupted nature of conveyance of wastewater (and in some cases, stormwater flows). For this reason, temporary shunts of various waters may be necessary to maintain the collection and conveyance of waters to treatment facilities. Construction may occur up to 24 hours per day, 7 days per week due to the necessity of managing wastewater flows; however, major construction of new facilities would be limited to daytime hours. Approximately 0.75 acre would be temporarily disturbed (several discrete trenches and pits) and up to 0.25 acre of new impervious surfaces would be added to the site. The majority of permanent facilities would be subsurface. The site would be under construction for up to five months. Key construction components are:

- Open excavation within the existing facility for new cast-in-place vaults around existing pipelines.
- New pipelines installed by open excavation connecting the new vaults.

Operations and Maintenance

The Salinas Pump Station Diversion site is adjacent to and north of the existing Salinas Pump Station within the City's Treatment Plant 1 site (also called, TP1), and would be maintained by the same MRWPCA operations staff as currently operate the pump station. No additional employee site visits would be required at the Salinas Pump Station site. The facility would operate continually using automated flow metering, gates and valves. Operations would consist of seasonally adjusting the diversion settings to direct flows to the Pump Station or to the Salinas Treatment Facility. Gates and valves would be exercised annually if not operated more frequently. Installed flow meters would require periodic inspection and calibration on a less-than-annual frequency. Power usage at the site would be incidental to the existing pump station and would only be needed for supervisory control and data acquisition (SCADA) and metering and controls for the gates and valves. No ongoing materials delivery or solid waste generation would occur.

Salinas Treatment Facility Storage and Recovery

Construction

The majority of the construction activity for the Salinas Treatment Facility Storage and Recovery Facilities would occur within the existing 281-acre Salinas Treatment Facility site. New pipelines from Pond 3 (the western-most pond at the Salinas Treatment Facility) and the aeration basin to the return pump station, including pre-cast concrete manholes, would be constructed within the existing unpaved access road and parallel to the existing pipelines. A new lift station would be constructed at Pond 3 to return water to the return pump station. This new lift station would be constructed adjacent to the existing City of Salinas irrigation transfer station in Pond 3. If the work for the new lift station in Pond 3 must be performed while it is full, sheet piling and dewatering equipment would be required. The return pump station would be located near the existing influent pump station at the east end of the site. Return pump station and pipelines construction would include trenching and installation of new pipelines, new pump and lift station, new pumps/pump motors, electrical facilities, valve vaults and flow meter, requiring equipment delivery trucks, loaders, compactors, and backhoes.

The recovery or return pipeline from the Salinas Treatment Facility to the Salinas Pump Station Diversion site would be constructed inside the existing 33-inch influent pipeline, which has been abandoned in place. Installing a new pipeline inside the existing pipeline would require excavating access pits every 600-ft to 800-ft along the existing alignment, cutting into the existing pipe, pulling the new assembled pipe into the existing pipe and connecting the new pipe segments before closing the pit. The work area at each pit would be up to 20-ft wide, approximately 60-ft long and up to 10-feet deep. The width of construction disturbance at each pit could be up to 50 feet, but typically only 30 to 40 feet. Equipment would include equipment delivery trucks, loaders, backhoes, pipe cutting and welding equipment, pipeline fusing equipment (if fusible pipe is used), and pipeline pulling equipment. If work must occur in an existing street, jack-hammering and paving equipment would be required for demolition and repairing the site. The following are key aspects of construction of these facilities:

- *Recovery Pump Station:* Open excavation within the existing facility, new pump station wet well adjacent to the existing pump station at the east end of the site.
- *Recovery Pipeline:* Existing 33-inch pipeline would be slip-lined with a new 18-inch pipe and open excavation for sending/receiving pits at each end and every 600-800 feet along the pipeline. Pits would be located in either the existing pump station sites, within existing road rights-of-way or under agricultural land, depending on the stationing. Pipeline starts at the existing Salinas Industrial Wastewater Treatment Facility pump station, located on South Davis Road and follows a straight line to the Salinas Treatment Plant 1 (TP1) site, located on Hitchcock Road.
- *Pond 3 pump station and inlet structure:* Open excavation within the existing facility, adding a new wet well and inlet structure at the west end of treatment pond #3.
- *Pipeline from Pond 3:* Open excavation within the access road along the north side of treatment ponds 1, 2 and 3 at the existing Salinas Treatment Facility for installation of a new pipeline that would connect the Pond 3 pump station and the recovery pump station.

Operations and Maintenance

The new storage and recovery facilities at the Salinas Treatment Facility would be managed by the same number of staff that currently operates the Salinas Treatment Facility. During the storage season (November to April), the return pumps would not be operated. The Salinas Treatment Facility aeration pond would continue to operate as it currently does. Volumes in Ponds 1, 2, and 3 would be monitored. If inflows exceed the storage capacity, some flows would be diverted to the existing drying beds, or adjustments may be made at the Salinas Pump Station Diversion to send some agricultural wash water to the Regional Treatment Plant. The return pumps at the Salinas Treatment Facility and the Pond 3 lift station would be inspected during the storage season, and routine mechanical services would be scheduled during this season. Trucks with lifting equipment would be required to pull the pumps out of the wet wells for maintenance.

During the return pumping season (June to October), the return pump station would operate during the period of off-peak electrical rates, at flow rates up to 5 million gallons per day (mgd), depending upon the daily volume of new agricultural wash water diverted directly to the Salinas Pump Station. The pumping rate may be reduced during the peak hours of agricultural wash water flows. Stored water in Pond 3 would be conveyed to the return pump station. At the end of this season, the Salinas Treatment Facility ponds would be empty or nearly empty, allowing maintenance to be performed, if needed, on the gates, valves, overflow structures, pump stations and levee banks.

Reclamation Ditch Diversion

Construction

Construction of the Reclamation Ditch diversion would include minor grading, installation of a wet well/diversion structure, modification of an existing sanitary sewer manhole and a short

pipeline from the existing manhole to the new pump station. The work would disturb approximately 0.15 acre of land, including up to 0.02 acre of waters of the U.S. within Reclamation Ditch banks and channel bottom (no potentially jurisdictional wetlands were delineated at the site). The channel carries flow year-round, so a temporary coffer dam would be required above and below the site, with a small diversion pump to convey existing channel flows past the project construction area. The temporary coffer dams would consist of waterproof tarps or membranes wrapped around gravel fill material, which would be removed when the work is completed.

The new pump station wet well, intake structure and pipelines would be constructed using open-trench excavation. The construction excavation may be as large as 40-feet long by 10-feet wide. Due to the steepness of the banks and depth of the excavation, a tracked, long-arm excavator would be required. The below-grade components may use pre-cast concrete structures, so that the underground work would take less than a week to complete. Once the excavations are closed, the channel protection (concrete or riprap) may be installed and the temporary cofferdams and by-pass pumping system removed. The pumps and controls would be installed in the wet well and valve vault using a large excavator or crane.

During the period the channel is blocked with temporary cofferdams, the work may proceed 7 days a week to minimize the impact and duration. Electrical power used during construction may come from a temporary electrical service by Pacific Gas and Electric (PG&E), from permanent electrical service by PG&E if installed in advance of the site work, or from portable generators. The by-pass pumps would need to operate until the in-channel work is complete, so power would be required 24-hours a day. The site is in an industrial area, so there are no nearby residents to be disturbed by the noise at night. Key aspects of the construction of this facility include the following:

- Open excavation to install new intake structure, new wet well and new pipeline to connect to existing sanitary sewer main.
- New pump station would be constructed approximately 60 feet from the receiving sanitary sewer manhole.
- Site is highly disturbed by the adjacent railroad, construction of the Davis Road overpass, construction of the Salinas sanitary sewer siphon and realignment of the Reclamation Ditch. The Reclamation Ditch is maintained as a trapezoidal channel.

Operations and Maintenance

The Reclamation Ditch Pump Station would be configured to operate autonomously, based upon diversion and by-pass flow settings. A system operator would visit the site at most once per day to check for alarms and vandalism, and to visually inspect the intake screen for clogging. The Reclamation Ditch is assumed to require one employee visit per day at most (two one-way trips). Approximately once per month an operator would need to access the channel bottom to physically clear vegetation or debris from the intake screen. The pumps would require annual

inspection and servicing, using a lift truck to remove the pumps from the wet well. The flow meters would require inspection and calibration less than once per year.

Blanco Drain Diversion

Construction

Construction of the Blanco Drain Diversion would include minor grading, installation of a new wet well/diversion structure, installation of a new force main by open trench and by trenchless methods. The work would temporarily disturb approximately 0.15 acre of land at the pump station, including up to 0.02 acre of waters of the U.S. within Blanco Drain banks and channel bottom, and approximately 5 acres along the pipeline alignment including the excavation pits for constructing the pipeline under the Salinas River. The channel carries flow year-round, so a temporary coffer dam would be required above the construction site, with a small diversion pump to convey existing channel flows past the project site and the existing slide gate downstream of the adjacent Monterey County Water Resources Agency pump station. The temporary coffer dam would consist of waterproof tarps or membrane wrapped around gravel fill material, which would be removed when the work is completed. West of the river crossing and south of the existing Monterey Regional Waste Management District landfill site, the new force main would intersect the existing MRWPCA Salinas Interceptor. The new Blanco Drain source water force main would connect to the existing Salinas Interceptor to carry the water to the Regional Treatment Plant headworks. A hydraulic analysis of the Salinas Interceptor will be conducted during final design to determine the feasibility of the upstream connection from the Blanco Drain source water force main.

The new pump station wet well, intake structure, and on-site pipelines would be constructed using open-trench excavation. The construction excavation may be as large as 40-feet long by 10-feet wide. Due to the steepness of the banks and depth of the excavation, a tracked, long-arm excavator would be required. The below-grade components may use pre-cast concrete structures, so that the underground work would take less than a week to complete. Once the excavations are closed, channel protection (concrete or riprap) may be installed and the temporary cofferdam and by-pass pumping system removed. The concrete deck, pumps and controls would be installed in the wet well and valve vault and hydropneumatic tank installed using a tracked excavator or crane. Some cast-in-place concrete work is expected, requiring concrete trucks accessing the site.

During the period the channel is blocked with temporary cofferdams, the work may proceed 7 days a week to minimize the impact and duration. A portion of the new pipeline must be installed using trenchless methods. That work may require 24-hour operations during the drilling phase. A portion of the pipeline would be installed within the existing Regional Treatment Plant site. That work may be performed at night to minimize impacts to plant operations.

The force main pipeline must cross under the Salinas River¹. This work would be performed using a trenchless method, referred to as “horizontal directional drilling”. Trenchless construction would require work areas approximately 40-ft by 60-ft on each side of the river. Horizontal directional drilling is a trenchless technology where a drill bit fitted with a transmitter is guided from the drilling machine. The drill bit uses a fluid “mud” to lubricate, loosen and carry the drilled soil from the hole. The intent of this pipeline construction method is to stay far enough below the river bottom to avoid having the “mud” find a fissure in the soil, which would create a connection to the river above (called a “frac-out”). If a frac-out occurs, the mud, which is a highly caustic material, could spill into the aquatic resource and indirectly impact species dependent upon the resource.

The rest of the pipeline may be installed using open-trench methods. The final portion of the pipeline would cross the existing Regional Treatment Plant site and may require limited bore and jack construction to cross existing utilities which must remain in-service.

Surface water by-pass pumps at the Blanco Drain site would need to operate until the in-channel work is complete, so power would be required 24-hours a day.

Key construction aspects of the Diversion Pump Station component include the following:

- Open excavation to install new intake structure, new wet well, and new pipeline.
- New pump station would be constructed adjacent to the existing Monterey County Water Resources Agency pump station.
- The Blanco Drain is maintained as a trapezoidal channel.

Key construction aspects of the Blanco Drain Force Main and Gravity Pipeline include the following:

- Open excavation to install the majority of the new pipeline. The segment crossing the Salinas River would be installed using trenchless methods (directional drilling), with sending/receiving pits on either side.
- The pipeline would start at the new pump station and follow the farm road on the west bank of the Blanco Drain to the point the pipeline crosses the Salinas River. On the south side of the river, the pipeline would run north-west and then south-west under existing farm roads, then cross a portion of Monterey Regional Waste Management District landfill, and finally a portion of the MRWPCA Regional Treatment Plant to the point it joins the existing Salinas Interceptor pipeline.

¹ The HDD operation will require both a sending and receiving pit to complete the connection under the Salinas River. The project proponents and engineers have designed the location of these pits (and all other HDD construction staging and activities that might result in physical impacts) to avoid riparian habitat associated with the Salinas River.

Operations and Maintenance

The Blanco Drain Pump Station, like the Reclamation Ditch Pump Stations, would be configured to operate autonomously based upon diversion settings. A system operator would visit the site once a day to check for alarms and vandalism and to visually inspect the intake screen for clogging. The site is adjacent to the Monterey County Water Resources Agency's Blanco Drain Pump Station, and may require separate visits by operators from the two agencies or the two agencies can enter into an agreement for shared maintenance responsibilities. Approximately once per month an operator would need to access the channel bottom to physically clear vegetation or debris from the intake screen. The pumps would require annual inspection and servicing, using a lift truck to remove the pumps from the wet well. The new station flow meter would require inspection and calibration at a less-than-annual frequency. The pipeline valves would be inspected and exercised once per year. Any above-grade air-release valves would be inspected quarterly, requiring a system operator to drive the pipeline alignment.

Treatment Facilities at the Regional Treatment Plant

Advanced Water Treatment Facility

Construction

Construction workers would access the proposed Advanced Water Treatment (AWT) Facility site via Charles Benson Road and existing access roads serving the Regional Treatment Plant. Construction activities would include grading, cutting, laying, and welding pipelines and pipe connections; pouring concrete footings for foundations, tanks, and other support equipment; constructing walls and roofs; assembling and installing major advanced treatment process components; installing piping, pumps, storage tanks, and electrical equipment; testing and commissioning facilities; and finish work such as paving, landscaping, and fencing the perimeter of the site. Construction equipment would include excavators, backhoes, graders, pavers, rollers, bulldozers, concrete trucks, flatbed trucks, boom trucks and/or cranes, forklifts, welding equipment, dump trucks, air compressors, and generators. Mechanical components of the pretreatment, membrane filtration systems, reverse osmosis, advanced oxidation, and post-treatment facilities would be prefabricated and delivered to the site for installation.

Approximately 3.5 acres would be disturbed during construction. Construction activities related to the AWT Facility are expected to occur over 18 months, plus three months for testing and start-up. Key aspects of AWT Facility construction include:

- The new AWT Facility would be installed using open excavation within the existing MRWPCA Regional Treatment Plant. The 3.5-acre site is currently a mix of paved and unpaved areas.
- Portions of the work would include cast-in-place concrete structures around existing pipelines.

Operations and Maintenance

Regional Treatment Plant secondary effluent would include a treated mixture of the source waters and would be drawn from a new diversion structure on an existing main pipeline. Pumping facilities would be controlled remotely through the AWT SCADA system. The AWT Facility would operate at an overall water recovery rate of 81 percent.² Waste residuals would include backwash from the biological filtration system (if included), backwash and cleaning wastes from the membrane filtration treatment system and concentrate and cleaning wastes from the reverse osmosis system. Cleaning wastes from each system would be neutralized and returned to the head of the Regional Treatment Plant, along with backwash waste residuals from the membrane treatment system. Reverse osmosis concentrate would be discharged through a new brine mixing structure to the existing Regional Treatment Plant ocean outfall. The AWT Facility would target an annual production rate of up to 3,700 acre-feet per year (AFY), requiring an average annual reverse osmosis feed supply of 4,568 AFY and producing waste residuals (reverse osmosis concentrate) of 868 AFY, which would be discharged to the ocean through the existing MRWPCA ocean outfall along with other wastewater that is not recycled.

Salinas Valley Reclamation Plant Modifications

Construction

Modification of the existing Salinas Valley Reclamation Plant would primarily occur within the existing 16-acre plant site. Internal modifications would be made to the existing reclamation plant, which includes a mix of concrete structures, paved, and unpaved areas. A new pipeline would be installed under the existing recycled water storage pond using open excavation, and the existing inlet and outlet structures would be modified, to allow seasonal delivery of recycled water without using the storage pond. Installation of motorized sluice gates in the chlorine contact basins, installation of a motorized sluice gate and platform at the entrance of the storage pond, installation of a pipeline between the entrance and exit structures within the storage pond, and motorizing the existing sluice gate at the exit of the storage pond would all be implemented within the existing Salinas Valley Reclamation Plant. Construction activities would include cutting, laying, and welding pipelines and pipe connections; pouring concrete footings for foundations, and other support equipment; installing piping, sluice gates and electrical equipment; testing and commissioning facilities; and finish work such as repairing the existing storage pond lining. Construction equipment would include excavators, backhoes, concrete trucks, flatbed trucks, boom trucks and/or cranes, forklifts, welding equipment, dump trucks, air compressors, temporary tanks and generators. Construction activities related to the Salinas Valley Reclamation Plant Modifications are expected to occur over 12 months. Any work requiring a full system shut-down would occur during the winter months when irrigation demands for recycled water are lowest.

² This recovery rate does not include the filter backwash flows routed through the Regional Treatment Plant, as these flows would be recycled through the plant and return as source water, thus not decreasing the system recovery.

Operations and Maintenance

Operation of the modified facility would be similar to the current operational method. During the peak irrigation season, the plant would operate at full capacity with both chlorine contact basins used for disinfection and the 80 acre-foot pond used for tertiary-treated product water storage. During the off-peak, low demand months, normal low flow (5 to 8 mgd) volumes would be sent to the plant, one or two coagulation/flocculation tanks would be used, between one and three filters would be active, and only one chlorine contact tank would be used for disinfection, while the other tank would provide product water storage. When the tertiary-treated product water fills the storage basin, the flow to the Salinas Valley Reclamation Plant could be reduced or stopped until additional water is needed.

Operation of the system year-round would increase the time required for system maintenance, because portions of the treatment train would remain in operation as compared to the current winter shut-down. These operations occur year-round within the overall MRWPCA facility, so this increased maintenance window should not affect the overall daily level of maintenance effort.

Product Water Pipeline

Construction

Workers would install approximately 10 miles of Product Water pipelines primarily within existing roads and infrastructure easements. Pipeline installation would generally progress by 250 feet per day within or along roadways. For some pipelines in open (undeveloped) areas, work could progress at up to 400 feet per day. Progress at intersections or major utility crossings may be slower. Most pipeline segments would be installed using conventional open-trench technology; however, where it is not feasible or desirable to perform open-cut trenching, trenchless methods would be used.

Typical construction equipment for pipeline installation would include flatbed trucks, backhoes, excavators, pipe cutting and welding equipment, haul trucks for spoils transport, trucks for materials delivery, compaction equipment, Baker tanks, pickup trucks, arc welding machines, generators, air compressors, cranes, drill rigs, and skip loaders. Pipeline segments would typically be delivered and installed in 6- to 40-foot-long sections. Soil removed from trenches and pits would be stockpiled and reused, to the extent feasible, or hauled away for offsite disposal.

Under typical circumstances, the width of the disturbance corridor for pipeline construction would vary from 50 to 100 feet, depending on the size of the pipe being installed. Trenchless technologies could require wider corridors at entry and exit pits. Pipeline installation would be ongoing throughout the entire 18-month construction period for the Proposed Action, with multiple pipe segments being installed simultaneously. Pipeline installation would be sequenced to minimize land use disturbance and disruption to the extent possible. The following describes key components of construction of the pipeline:

- The pipeline would start at the AWT Facility and proceed to the southern boundary of the MRWPCA Regional Treatment Plant under existing roads and pavements.
- The pipeline would proceed south across undeveloped lands owned by Marina Coast Water District and the Armstrong Ranch to the City of Marina. The alignment follows existing farm roads.
- The pipeline follows street rights of way through Marina: Crescent Avenue, Carmel Avenue, Vaughn Avenue, Reindollar Avenue, California Avenue/5th Avenue, and connects to an existing pipeline segment, previously installed in Inter-Garrison Road (3rd Street) and 5th Avenue on the CSUMB Campus
- The pipeline construction resumes at 5th Avenue at A Street, and proceeds southwest under unpaved roads within CSUMB to General Jim Moore Boulevard (GJM Blvd). It would then proceed south in GJM Blvd to Normandy Road, where it connects to an existing recycled water pipeline.
- The final pipeline segment would connect the recycled water main in GJM Blvd to the injection well field.

Open-Trench Construction

For pipeline segments to be installed using open-trench methods, the construction sequence would typically include clearing and grading the ground surface along the pipeline alignments; excavating the trench; preparing and installing pipeline sections; installing vaults, manhole risers, manifolds, and other pipeline components; backfilling the trench with non-expansive fills; restoring preconstruction contours; and revegetating or paving the pipeline alignments, as appropriate. A conventional backhoe, excavator, or other mechanized equipment would be used to excavate trenches. The typical trench width would be 6 feet; however, vaults, manhole risers, and other pipeline components could require wider excavations. In addition, much of the project construction area is underlain by sandy soils that may require a laid-back trench cross-section due to considerations such as duration of construction, efficiency, and safety. In these cases, trench widths may be up to 12 feet. Work crews would install trench boxes or shoring or would lay back and bench the slopes to stabilize the pipeline trenches and prevent the walls from collapsing during construction. After excavating the trenches, the contractor would line the trench with pipe bedding (sand or other appropriate material shaped to support the pipeline). Construction workers would then place pipe sections (and pipeline components, where applicable) into the trench, connect the sections together by welding or other applicable joining methods as trenching proceeds, and then backfill the trench. Most pipeline segments would have 4 to 5 feet of cover. Open-trench construction would generally proceed at a rate of about 150 to 250 feet per day. Steel plates would be placed over trenches to maintain access to private driveways or public recreation areas. Some pipeline installation would require construction in existing roadways and could result in temporary lane closures or detours.

Trenchless Technologies

Where it is not feasible or desirable to perform open-cut trenching, trenchless methods such as jack-and-bore, drill-and-burst, horizontal directional drilling, and/or micro-tunneling would be employed. Pipeline segments located within heavily congested underground utility areas would likely be installed using horizontal directional drilling or micro-tunneling. Jack-and-bore methods would also be used for pipeline segments that cross beneath highways, major roadways, or drainages.

Jack-and-Bore and Micro-tunneling Methods The jack-and-bore and micro-tunneling methods entail excavating an entry pit and receiving pit at either end of the pipe segment. A horizontal boring machine or auger is used to drill a hole, and a hydraulic jack is used to push a casing through the hole to the opposite pit. As the boring proceeds, a steel casing is jacked into the hole and pipe is installed in the casing.

Drill-and-Burst Method The drill-and-burst method involves drilling a small pilot hole at the desired depth through a substrate, and then pulling increasingly larger reamers multiple times through the pilot hole until the hole reaches the desired diameter. The pipe is then installed through the drilled hole.

Horizontal Directional Drilling Horizontal directional drilling requires the excavation of a pit on either end of the pipe alignment. A surface-launched drilling rig is used to drill a small horizontal boring at the desired depth between the two pits. The boring is filled with drilling fluids and enlarged by a back reamer or hole opener to the required diameter. The pipeline is then pulled into position through the boring. Entry and receiving pits would range in size depending on the length of the crossing, but typically would have dimensions of approximately 50 by 50 feet.

Operations and Maintenance

The pipelines could operate continuously for up to 24 hours a day. General operations and maintenance activities associated with pipelines would include annual inspections of the cathodic protection system and replacement of sacrificial anodes when necessary; inspection of valve vaults for leakage; testing, exercising and servicing of valves; vegetation maintenance along rights-of-way; and repairs of minor leaks in buried pipeline joints or segments. Above-grade surge tanks would require periodic inspection (once every five years) and recoating (once every twenty years).

*Product Water Booster Pump Station*Construction

Two pump stations would be constructed: the AWT Product Water Pump Station (at the site of the AWT Facility described above) and the Booster Pump Station. Construction crews would prepare the pump station sites by removing vegetation and grading the sites to create a level work area. Construction activities would include excavations for wet wells, installing shoring

and forms, pouring concrete footing for foundations; assembling and installing piping, pumps, and electrical equipment; constructing concrete enclosures and roofs; and finish work such as paving, landscaping, and fencing the perimeter of the pump station sites. Construction access would be provided via existing access roads and roadways.

The AWT Product Water Pump Station would be constructed on a new concrete pad adjacent to the new product water stabilization facilities at the Regional Treatment Plant. It is assumed that the entire 3.5-acre AWT Facility site could be disturbed during project construction activities. Construction of either Booster Pump Station would result in approximately 2,400 square feet of temporary disturbance and permanent facility (including driveways and fenced areas). The new booster pump station and associated pipelines would be installed using open excavation methods. The building foundation and pump wells would be cast in place. The booster pump station is located at the existing City of Marina Corporation Yard in a paved area.

Operations and Maintenance

The proposed booster pump station could operate continuously for up to 24 hours a day. Although pump stations would typically be operated remotely via SCADA, facility operators would conduct routine visits to the pump station sites approximately once daily to monitor operations, conduct general maintenance activities, and service the pumps. Above-grade surge tanks would require periodic inspection (once every five years) and recoating (once every twenty years).

Injection Well Facilities

Construction

The following are key aspects of the Injection Well Facilities construction activity. More details follow this summary:

- All of the injection well facilities would be installed by open excavation, except the wells themselves which would be by conventional rotary drilling. Above-grade facilities would have cast-in-place concrete floors or pads.
- The Injection Well Facilities site is located in an area previously used as small arms ranges when Fort Ord was as active base. The well clusters would be located along the southeast boundary of the parcel, which borders with the Bureau of Land Management's Fort Ord National Monument.
- The pipelines and conduits would be installed under existing unpaved roads or would follow another alignment within the Injection Well Facilities site generally following the same alignment, but modified as needed to follow the topography as requested by the City of Seaside. Conduits would also be installed along General Jim Moore Blvd and/or Eucalyptus Road to reach the existing PG&E service.

- A single percolation pond for well backwash water is proposed, to be located between the second and third well cluster, adjacent to the access road and pipeline corridor.
- Groundwater monitoring wells would be installed along existing unpaved roads.

Well Construction

Installation of any of the wells (deep injection, vadose zone and monitoring wells) typically follows a three-step process: drilling and logging, installation, and testing and equipping. The deep injection well would be drilled with rotary drilling methods. The method would be customized to minimize borehole impacts from drilling fluids and may incorporate air rotary methods or specialized drilling fluids (such as polymers). Cuttings from the borehole would be laid on the ground and logged by a California Certified Hydrogeologist. The direct rotary drilling method would likely be used for the monitoring wells. The deep injection well design would incorporate 18-inch to 20-inch diameter production casing and a wire-wrap stainless steel screen. Mechanical and pumping techniques would be used to develop the well after installation. Both constant discharge and constant injection testing for approximately eight hours would be completed in the injection well following well drilling. A 400-horsepower, variable speed pump would be installed at proposed deep injection well for back-flushing.

Back-flush Pipeline Facilities Construction

The back-flush facilities at the Injection Well Facilities site would include a flow meter, a back-flush pump and 400-horsepower motor, and an electrical cabinet, monitoring and SCADA. A main electrical power supply/transformer and motor control building would be built for PG&E power supply. In addition to incidental power requirements (instrumentation and monitoring equipment, site lighting, etc.), major power supply would be required to drive only one injection pump motor at a time. To construct the back-flush pipeline and basin, the contractor would excavate pipe trenches, retain the spoilage on site, import and install bedding material, and lay pipe, backfill & compact trench.

Estimated construction time for this component is approximately 4 months. The temporary construction area along the alignment of the 14-inch diameter back-flush water pipeline would be approximately 25 to 50 feet wide, for its approximate 3,000-foot length. Hence, the ground surface disturbance area would be between 1.75 and 3.5 acres. The construction area width is to provide space for a backhoe, trucks for hauling excess soil material, and imported bedding material. The depth of the pipeline trench would be approximately five feet to allow for bedding of the pipe and about three to four feet of cover material.

Pump Motor Control/Electrical Conveyance Construction

The following activities would be required to construct the pump motor control and electrical conveyance facilities:

- Excavation, spoils handling, import and install bedding material, building foundation, trench, place concrete, backfill & compact trench, finish concrete floor of electrical building.
- Install exterior electrical control cabinets on the paved area at the four clusters of vadose and deep injection wells.
- For electrical buildings, construct block walls, doors, louvers, roof and appurtenances, then interior finishes, lighting and HVAC; and electrical equipment and wiring.

The estimated construction period for these facilities is approximately 6 months. The temporary construction area would be approximately 25 to 50 feet wide within the alignment of the 14-inch diameter back-flush water pipeline, which is approximately 3,000 feet long. There would be no additional surface disturbance for construction of electrical conduits beyond that for the 14-inch back-flush water pipeline, described in the previous section. Construction activities would include a buried electrical power conduit and instrumentation conduits, all of which would be underground and encased in a concrete duct-bank, which would run in parallel and near the 14-inch back-flush pipeline. The depth of the duct-bank trench would be approximately 4.5 to 5 feet to allow for about 3 feet of cover material. The electrical control building that would house the SCADA transmission equipment would be approximately 16 feet by 24 feet. Its foundation construction would be slab-on-grade; hence, excavation would be only about 3 feet deep. The construction surface area would be about 600 square feet.

Operations and Maintenance

Injection wells and associated electrical and mechanical systems would operate 24 hour per day, 7 days per week throughout the year, although it is unlikely that all eight wells would be actively injecting at the same time for any length of time. Operations and maintenance staff would visit the Injection Well Facilities site most likely once daily Monday through Friday nearly every week. In addition to operation and maintenance of the wells, the workers would inspect above ground valves and appurtenances to assure they are properly functioning and to conduct and monitor the back-flush operations.

Based on the experience of the Water Management District in the operation of its nearby Aquifer Storage and Recovery (ASR) wells, back-flushing of each injection well would occur for about four hours weekly and would require discharge of the back-flush water to the percolation basin. The Water Management District conducts manual back-flushing and visual checks and field-tests the back-flush water discharge to confirm adequate flushing time has been provided. At nearby ASR wells, backflush basins percolate water from the back-flushing operations of a single well very quickly (on the order of approximately one day). Approximately once per year, a disking machine would be used to scarify the bottom of the backflush basin to increase/restore the percolation rate.

Avoidance and Minimization Measures

MRWPCA has proposed an extensive series of avoidance and minimization measures to limit the proposed action's adverse effects on natural resources, which are detailed in the biological assessment. Those measures relevant to federally listed species addressed in this biological opinion are presented here. It should be noted that measures for the federally endangered tidewater goby (*Eucyclogobius newberryi*), including surveys and relocation, are described in the biological assessment. However, the project has been modified since those measures were proposed such that the project will have no effect to this species and no relocations are now proposed.

Implement Construction Best Management Practices The following best management practices shall be implemented during all identified phases of construction (i.e., pre-, during, and post-) to reduce impacts to special-status plant and wildlife species:

1. A qualified biologist must conduct an Employee Education Program for the construction crew prior to any construction activities. A qualified biologist must meet with the construction crew at the onset of construction at the site to educate the construction crew on the following: a) the appropriate access route(s) in and out of the construction area and project boundaries; b) the special-status species that may be present; c) the specific mitigation measures that will be incorporated into the construction effort; d) the general provisions and protections afforded by the Service and CDFW; and e) the proper procedures if a special-status species is encountered within the site.
2. Trees and vegetation not planned for removal or trimming shall be protected prior to and during construction to the maximum extent possible through the use of exclusionary fencing, such as hay bales for herbaceous and shrubby vegetation, and protective wood barriers for trees. Only certified weed-free straw shall be used, to avoid the introduction of non-native, invasive species. A biological monitor shall supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.
3. Protective fencing shall be placed prior to and during construction to keep construction equipment and personnel from impacting vegetation outside of work limits. A biological monitor shall supervise the installation of protective fencing and monitor at least once per week until construction is complete to ensure that the protective fencing remains intact.
4. Following construction, disturbed areas shall be restored to pre-construction contours to the maximum extent possible and revegetated using locally-occurring native species and native erosion control seed mix, per the recommendations of a qualified biologist.

5. Grading, excavating, and other activities that involve substantial soil disturbance shall be planned and carried out in consultation with a qualified hydrologist, engineer, or erosion control specialist, and shall utilize standard erosion control techniques to minimize erosion and sedimentation to native vegetation (pre-, during, and post-construction).
6. No firearms shall be allowed on the construction sites at any time.
7. All food-related and other trash shall be disposed of in closed containers and removed from the project area at least once a week during the construction period, or more often if trash is attracting avian or mammalian predators. Construction personnel shall not feed or otherwise attract wildlife to the area.
8. To protect against spills and fluids leaking from equipment, the project proponent shall require that the construction contractor maintains an on-site spill plan and on-site spill containment measures that can be easily accessed.
9. Refueling or maintaining vehicles and equipment should only occur within a specified staging area that is at least 100 feet from a waterbody (including riparian and wetland habitat) and that has sufficient management measures that will prevent fluids or other construction materials including water from being transported into waters of the state. Measures shall include confined concrete washout areas, straw wattles placed around stockpiled materials, and plastic sheets to cover materials to prevent their transport by wind or rain into surface waters.

Implement Construction-Phase Monitoring The project proponents shall retain a qualified biologist to monitor all ground disturbing construction activities (i.e., vegetation removal, grading, excavation, or similar activities) to protect any special-status species encountered. Any handling and relocation protocols of special-status wildlife species shall be determined in coordination with the Service and CDFW prior to any ground disturbing activities, and conducted by a qualified biologist, approved under this biological opinion and holding an appropriate scientific collection permit. After ground disturbing project activities are complete, the qualified biologist shall train an individual from the construction crew to act as the on-site construction biological monitor. The construction biological monitor shall be the contact for any special-status wildlife species encounters, shall conduct daily inspections of equipment and materials stored on site and any holes or trenches prior to the commencement of work, and shall ensure that all installed fencing stays in place throughout the construction period. The qualified biologist shall then conduct regular scheduled and unscheduled visits to ensure the construction biological monitor is satisfactorily implementing all appropriate mitigation protocols. Both the qualified biologist and the construction biological monitor shall have the authority to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. The qualified biologist and the construction monitor shall complete a daily log summarizing activities and environmental compliance throughout the duration of the project. The log shall also include any special-status wildlife species observed and relocated.

Prepare and Implement Rare Plant Restoration Plan to Mitigate Impacts to Monterey Spineflowers (and Other Sensitive Plant Species) Where They Occur Outside the Former Fort Ord) Consultation between the Service and the U.S. Army on disposal of lands of the former Fort Ord included development of a habitat management plan (Corps 1997), which addresses conservation of relevant listed plant species. The proposed action will comply with the habitat management plan to address adverse effects to the Monterey spineflower and Monterey gilia where they occur on former Fort Ord lands. The proposed action would also have adverse effects to Monterey spineflower outside of the former Fort Ord. The following minimization measures will address those impacts:

Impacts to rare plant species individuals shall be avoided through project design and modification, to the extent feasible while taking into consideration other site and engineering constraints. If avoidance is not possible, the species shall be replaced at a 1:1 ratio for area of impact through preservation, restoration, or combination of both. A Rare Plant Restoration Plan shall be prepared and implemented by a qualified biologist. The plan shall include, but is not limited to, the following:

1. A detailed description of on-site and/or off-site mitigation areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, including, if appropriate, increased planting ratio to ensure the applicable success ratio. Specifically, seed shall be collected from the on-site individuals that would be impacted and grown in a local greenhouse, and then transplanted within the mitigation area. Plants shall be transplanted while they are young seedlings in order to develop a good root system. Alternatively, the mitigation area may be broadcast seeded in fall; however, if this method is used, some seed shall be retained in the event that the seeding fails to produce viable plants and contingency measures need to be employed.
2. A description of a 3-year monitoring program, including specific methods of vegetation monitoring, data collection and analysis, restoration goals and objectives, success criteria, adaptive management if the criteria are not met, reporting protocols, and a funding mechanism.

The mitigation area shall be preserved in perpetuity through a conservation easement or other legally enforceable land preservation agreement. Exclusionary fencing shall be installed around the mitigation area to prevent disturbance until success criteria have been met.

Avoid or Minimize Impacts to California Red-Legged Frog³

1. The MRWPCA shall annually submit the name(s) and credentials of biologists who would conduct activities specified in the following measures. No project construction activities at the component site would begin until the MRWPCA receives confirmation from the Service that the biologist(s) is qualified to conduct the work.
2. A Service-approved biologist shall survey work sites 48 hours prior to the onset of construction activities. If California red-legged frog, tadpoles, or eggs are found, the approved biologist shall determine the closest appropriate relocation site. The approved biologist shall be allowed sufficient time to move the California red-legged frog, tadpoles or eggs from the work site before work activities begin. Only Service-approved biologists shall participate in activities associated with the capture, handling, and moving of California red-legged frogs.
3. Before any construction activities begin on the project component site, a Service-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, general measures that are being implemented to conserve the California red-legged frog as they relate to the project, and the boundaries within which the project construction activities may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.
4. A Service-approved biologist shall be present at the work site until such time as all removal of California red-legged frogs, instruction of workers, and disturbance of habitat have been completed. After this time, the biologist shall designate a person to monitor onsite compliance with all minimization measures and any future staff training. The Service-approved biologist shall ensure that this individual receives training in the identification of California red-legged frogs. The monitor and the Service-approved biologist shall have the authority to stop work if California red-legged frogs are in harm's way.
5. The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas to the extent practicable.
6. Work activities shall be completed between April 1 and November 1, to the extent practicable. Should the project proponent demonstrate a need to conduct activities

³ Minimization measures for California red-legged frog would be implemented at the Blanco Drain diversion site and its associated source water pipeline, where the species is most likely to be encountered, as described in the Condition (Status) of the Species in the Action Area section, below.

outside this period, the project proponent may conduct such activities after obtaining Service approval (applies to Blanco Drain site only).

7. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than five millimeters (mm) to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.
8. The Declining Amphibian Populations Task Force's Fieldwork Code of Practice shall be followed to minimize the possible spread of chytrid fungus or other amphibian pathogens and parasites (Appendix A).

Frac-Out Plan: The project proponents in coordination with the contractor shall prepare and implement a Frac-Out Plan to avoid or reduce accidental impacts resulting from horizontal directional drilling (HDD) beneath the Salinas River. The Frac-Out Plan shall address spill prevention, containment, and clean-up methodology in the event of a frac-out. The proposed HDD component of the Blanco Drain diversion shall be designed and conducted to minimize the risk of spills and frac-out events. The Frac-Out Plan shall be prepared and submitted to the Service, California Department of Fish and Wildlife, National Marine Fisheries Service, and the Regional Water Quality Control Board prior to commencement of HDD activities for the Blanco Drain Diversion construction. The following are contents of a Frac-Out Plan:

- Project description, including details of the HDD design and operations
- Site description and existing conditions
- Potential modes of HDD failure and HDD failure prevention and mitigation
- Frac-out prevention measures (including for example, geotechnical investigations, planning for appropriate depths based on those investigations, presence of a qualified engineer during drilling to monitor the drilling process, live adjustments to the pace of drill advancement to ensure sufficient time for cutting and fluid circulation and to prevent or minimize plugging, maintaining the minimum drilling pressure necessary to maintain fluid circulation, etc.)
- Monitoring requirements (for example, monitoring pump pressure circulation rate, ground surface and surface water inspection, advancing the drill only during daytime hours, on-site biological resource monitoring by a qualified biologist)
- Response to accidental frac-out (including stopping drilling, permitting agency notification, surveying the area, containing the frac-out material, contacting the project biological monitor to identify and relocate species potentially in the area, turbidity

monitoring, procedures for clean-up and mitigation of hazardous waste spill materials, preparation of documentation of the event, etc.)

ANALYTICAL FRAMEWORK FOR THE JEOPARDY DETERMINATIONS

Section 7(a)(2) of the Endangered Species 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 relies on four components: (1) the Status of the Species, which describes the range-wide conditions of the California red-legged frog, Monterey spineflower, and Monterey gilia, the factors responsible for those conditions, and their survival and recovery needs; (2) the Environmental Baseline, which analyzes the conditions of the California red-legged frog, Monterey spineflower, and Monterey gilia in the action area, the factors responsible for those conditions, and the relationship of the action area to the survival and recovery of California red-legged frog, Monterey spineflower, and Monterey gilia; (3) the Effects of the Action, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the California red-legged frog, Monterey spineflower, and Monterey gilia; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities, that are reasonably certain to occur in the action area, on the California red-legged frog, Monterey spineflower, and Monterey gilia.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of the California red-legged frog, Monterey spineflower, and Monterey gilia, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the California red-legged frog, Monterey spineflower, and Monterey gilia in the wild by reducing the reproduction, numbers, and distribution of these species.

STATUS OF THE SPECIES

California red-legged frog

The California red-legged frog was federally listed as threatened on May 23, 1996 (61 FR 25813). The Service has published a recovery plan (Service 2002).

The historical range of the California red-legged frog extended coastally from southern Mendocino County and inland from the vicinity of Redding, California, southward to northwestern Baja California, Mexico (Jennings and Hayes 1985; Storer 1925). The California

red-legged frog has been extirpated or nearly extirpated from 70 percent of its former range. Historically, this species was found throughout the Central Valley and Sierra Nevada foothills. Four additional occurrences have been recorded in the Sierra Nevada foothills since listing, bringing the total to five extant populations, compared to approximately 26 historical records (71 FR 19244). Currently, California red-legged frogs are only known from 3 disjunct regions in 26 California counties and 1 disjunct region in Baja California, Mexico (Fidenci 2004; R. Smith and D. Krofta, in litt. 2005 as cited in Service 2011).

California red-legged frogs have been found at elevations that range from sea level to about 5,000 feet. In the Sierra Nevada Mountains, California red-legged frogs typically occur below 4,000 feet and occurrences above this elevation are atypical for the subspecies (71 FR 19244).

The California red-legged frog uses a variety of habitat types, including various aquatic systems, riparian, and upland habitats. The diet of California red-legged frogs is highly variable. Hayes and Tennant (1985) found invertebrates to be the most common food item of adults. Vertebrates, such as Pacific chorus frogs (*Pseudacris regilla*) and California mice (*Peromyscus californicus*), represented over half of the prey mass eaten by larger frogs (Hayes and Tennant 1985). Feeding activity occurs along the shoreline and on the surface of the water. Hayes and Tennant (1985) found juveniles to be active diurnally and nocturnally, whereas adults were largely nocturnal.

California red-legged frogs breed from November through March; earlier breeding has been recorded in southern localities (Storer 1925). Males appear at breeding sites from 2 to 4 weeks before females (Storer 1925). Female California red-legged frogs deposit egg masses on emergent vegetation so that the masses float on the surface of the water (Hayes and Miyamoto 1984). Egg masses contain about 2,000 to 5,000 moderate-sized, dark reddish brown eggs (Storer 1925; Jennings and Hayes 1985). Eggs hatch in 6 to 14 days (Storer 1925). Larvae undergo metamorphosis 3.5 to 7 months after hatching (Storer 1925; Wright and Wright 1949). Sexual maturity can be attained at 2 years of age by males and 3 years of age by females (Jennings and Hayes 1985); adults may live 8 to 10 years (Jennings et al. 1992) although the average life span is considered to be much lower. The California red-legged frog is a relatively large aquatic frog ranging from 1.5 to 5 inches from the tip of the snout to the vent (Stebbins 1985).

California red-legged frogs breed in aquatic habitats. Larvae, juveniles and adults have been collected from streams, creeks, ponds, marshes, plunge pools and backwaters within streams, dune ponds, lagoons, and estuaries. California red-legged frogs frequently breed in artificial impoundments, such as stock ponds, if conditions are appropriate. Although California red-legged frogs successfully breed in streams and riparian systems, high spring flows and cold temperatures in streams often make these sites risky environments for eggs and tadpoles. The importance of riparian vegetation for this species is not well understood. When riparian vegetation is present, California red-legged frogs spend considerable time resting and feeding in it; the moisture and cover provided by the riparian plant community likely provide good foraging

habitat and may facilitate dispersal in addition to providing pools and backwater aquatic areas for breeding.

Juvenile and adult California red-legged frogs may disperse long distances from breeding sites throughout the year. They can be encountered living within streams at distances exceeding 1.8 miles from the nearest breeding site, and have been found up to 400 feet from water in adjacent dense riparian vegetation (Bulger et. al 2003). During periods of wet weather, starting with the first rains of fall, some individuals may make overland excursions through upland habitats. Most of these overland movements occur at night. Bulger et al. (2003) found marked California red-legged frogs in Santa Cruz County making overland movements of up to 2 miles over the course of a wet season. These individual frogs were observed to make long-distance movements that are straight-line, point to point migrations over variable upland terrain rather than using riparian corridors for movement between habitats. For the California red-legged frog, suitable habitat is potentially all aquatic and riparian areas within the range of the species and includes any landscape features that provide cover and moisture (61 FR 25813).

Habitat loss and alteration, combined with over-exploitation and introduction of exotic predators, were important factors in the decline of the California red-legged frog in the early to mid-1900s. Continuing threats to the California red-legged frog include direct habitat loss due to stream alteration and loss of aquatic habitat, indirect effects of expanding urbanization, competition or predation from non-native species including the bullfrogs (*Rana catesbeiana*), catfish (*Ictalurus* spp.), bass (*Micropterus* spp.), mosquito fish (*Gambusia affinis*), red swamp crayfish (*Procambarus clarkii*), and signal crayfish (*Pacifastacus leniusculus*). Chytrid fungus (*Batrachochytrium dendrobatidis*) is a waterborne fungus that can decimate amphibian populations, and is considered a threat to California red-legged frog populations.

Recovery of the California Red-legged Frog

The recovery plan for the California red-legged frog identifies eight recovery units (Service 2002), which are based on the assumption that various regional areas of the species' range are essential to its survival and recovery. The status of this species is considered within the smaller scale of recovery units as opposed to the overall range. These recovery units are delineated by major watershed boundaries as defined by U.S. Geological Survey hydrologic units and the limits of the range of the California red-legged frog. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit.

Within each recovery unit, core areas have been delineated and represent contiguous areas of moderate to high California red-legged frog densities that are relatively free of exotic species such as bullfrogs. The goal of designating core areas is to protect metapopulations that, combined with suitable dispersal habitat, will allow for the long-term viability within existing populations. This management strategy will allow for the recolonization of habitat within and

adjacent to core areas that are naturally subjected to periodic localized extinctions, thus assuring the long-term survival and recovery of California red-legged frogs.

Monterey Spineflower

The Monterey spineflower was listed as a federally threatened subspecies on February 4, 1994 (59 FR 5499), and 11,055 acres of critical habitat were designated on January 9, 2008 (73 FR 1525). Information contained in this account was obtained primarily from the Monterey Spineflower (*Chorizanthe pungens* var. *pungens*) 5-Year Review (Service 2009).

Monterey spineflower is a prostrate annual species in the buckwheat family (Polygonaceae). It has long, somewhat wiry branching stems supporting aggregates of small white to pinkish flowers. Seeds typically germinate after the onset of winter rains and plants can be found above ground as early as December (Fox et al. 2006). Flowering occurs from late March to June, depending on weather patterns, and seed is dispersed in mid-summer.

At the time of listing, Monterey spineflower in the Monterey Bay area was known from scattered populations along the immediate coast, in the Prunedale Hills at Manzanita Park, in the coastal and inland areas of former Fort Ord, and from historical collections described as east of Watsonville and near Mission Soledad in the Salinas Valley. Since its listing, additional populations of Monterey spineflower have been discovered in the Prunedale Hills of Monterey County and interior areas of Santa Cruz County.

Monterey spineflower is currently known to be extant in southern Santa Cruz and northern Monterey Counties. The distribution of Monterey spineflower extends from Santa Cruz County south along the Monterey Bay to the Monterey Peninsula. Two historical collections were made farther south, in southern Monterey County in 1935 and in northern San Luis Obispo County in 1842. The CNDDDB lists 29 extant occurrences of Monterey spineflower in this range (CNDDDB 2013). Populations also occur inland in Monterey County in the Prunedale Hills and at former Fort Ord. One population has also been located in the Soledad area of the Salinas Valley (Reveal and Hardham 1989, CNDDDB 2013).

As an annual species, Monterey spineflower responds strongly to annual precipitation patterns and amounts, resulting in large fluctuations in the population of plants visible above-ground from year to year. Many populations support large numbers of individuals (thousands or tens of thousands of plants) scattered in openings among the dominant perennial vegetation (CNDDDB 2013).

Researchers recently investigated the phylogenetic relationships of various members of the genus *Chorizanthe*, subsection *Pungentes*, including Monterey spineflower (Brinegar 2006, Baron and Brinegar 2007, Brinegar and Baron 2008). Results from the first phase of the molecular study, using ribosomal DNA internal transcribed spacer (ITS) sequencing, indicate that Monterey spineflower and robust spineflower appear to be more closely related to one another than to the

other subspecific taxa in the *C. pungens* and *C. robusta* complex. In a second phase of analysis, researchers sequenced chloroplast DNA to determine if it was possible to further differentiate Monterey spineflower from robust spineflower based on these genetic techniques. Results indicated that: (1) there is a general agreement between the results of the ITS sequencing and the DNA phylogenies for the *C. pungens*/*C. robusta* complex, while results for the other *Pungentes* taxa are often inconsistent with their position in the ITS-based phylogeny; (2) there is a general biogeographical pattern to this phylogeny with regard to the *C. pungens*/*C. robusta* complex; and (3) there is genetic diversity between populations of Monterey spineflower. While the researchers suggest that a taxonomic revision of the *Pungentes* complex may be in order, no changes are being proposed at this time (S. Baron, botanic consultant, in litt. 2008).

Monterey spineflower readily grows where suitable sandy substrates occur and, like other *Chorizanthe* species, where competition with other plant species is minimal (Harding Lawson Associates 2000; Reveal 2001). Studies of the soil requirements and shade tolerances of a related taxon, Scotts Valley spineflower (*Chorizanthe pungens* var. *hartwegiana*), concluded that this taxon is restricted to openings in sandy soils primarily due to its intolerance of shade produced by competing vegetation, rather than its restriction to the specific soil type (McGraw and Levin 1998).

Where Monterey spineflower occurs within native plant communities, along the coast as well as at more interior sites, it occupies microhabitats found between shrubs where there is little cover from other herbaceous species. In coastal dune scrub, shifts in habitat composition caused by patterns of dune mobilization that create openings suitable for Monterey spineflower are followed by stabilization and successional trends that result in increased vegetation cover over time (Barbour and Johnson 1988). Accordingly, over time there are shifts in the distribution and size of individual colonies of Monterey spineflower found in the gaps between shrub vegetation.

Human-caused disturbances, such as scraping of roads and firebreaks, can reduce the competition from other herbaceous species and consequently provide favorable conditions for Monterey spineflower, as long as competition from other plant species remains minimal. This has been observed at former Fort Ord, where Monterey spineflower occurs along the margins of dirt roads and trails and where it has colonized disturbances created by military training (Corps 1992, BLM 2003). However, such activities also promote the spread and establishment of nonnative species, can bury the seedbank of Monterey spineflower, and do not result in the cycling of nutrients and soil microbial changes that are associated with some large-scale natural disturbances, such as fires (Stylinski and Allen 1999, Keeley and Keeley 1989).

The primary threats to the Monterey spineflower identified at the time of listing were development for human uses, recreation, and encroachment of invasive nonnative species into its habitat. While these are still occurring and diminishing occurrences of Monterey spineflower, other lands that support this taxon have been purchased by conservation-oriented organizations and are preserved (e.g., Long Valley in the Prunedale Hills) or have the potential for long-term preservation (e.g., Caltrans lands). Within its range, numerous occurrences are on lands being

restored or enhanced (e.g., State Beaches, Naval Post-Graduate School) or are planned for restoration and enhancement (e.g., former Fort Ord). A primary component of these programs is the removal of nonnative invasive species that compete with Monterey spineflower. Monterey spineflower appears able to recolonize sites where nonnative species have been removed (Service 2009).

Recovery of Monterey Spineflower

The Seven Coastal Plants and the Myrtle's Silverspot Butterfly Recovery Plan (Service 1998a) outlines recovery criteria for Monterey spineflower. Monterey spineflower can be considered for delisting when the following criteria have been met:

1. The Fort Ord disposal and reuse process has led the management agencies to develop, fund, and implement permanent protection plans for the species' habitat including permanent iceplant suppression programs; and
2. Beach-dune occurrences on State Park and private lands throughout its current range from Santa Cruz to the Monterey Peninsula are covered under a permanent protection plan. Plans to conserve roughly 60 percent of Fort Ord appear sufficient for recovery of the interior occurrence. A reassessment would be made should plans call for conservation of less habitat. Existing management along the coast at the State Parks units needs to be supplemented with protection and management on private lands (management to be determined after a thorough analysis of the beach populations).

Monterey Gilia

Monterey gilia was listed as a federally endangered subspecies on June 22, 1992 (57 FR 27848). Critical habitat has not been designated for this subspecies. Information contained in this account was obtained primarily from the Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*) 5-Year Review: Summary and Evaluation (Service 2008).

Monterey gilia is an annual herbaceous plant in the phlox family (Polemoniaceae), endemic to the Monterey Bay and Peninsula dune complexes. Individual plants are less than 7 inches tall, with a basal rosette of leaves and white and purple funnel-shaped flowers. Fifteen known natural occurrences are distributed in discontinuous populations from Spanish Bay on the Monterey Peninsula north to Moss Landing. Monterey gilia is typically associated with sandy soils of dune scrub, coastal sage scrub, and maritime chaparral vegetation types in the coastal dunes of Monterey County, California. The species is thought to be primarily self-pollinating based on its stamens not protruding from the flower, no observations of pollinators, and very viable seed (Service 1998).

There are likely 24 currently extant occurrences of Monterey gilia; 7 occurrences were known at the time the subspecies was listed. Since listing, 11 additional inland occurrences of Monterey gilia have been located, 12 coastal occurrences have been located, and 5 occurrences have likely been extirpated. One occurrence was extirpated prior to listing. Although these inland occurrences may constitute a range extension from what was known at the time of listing, the overall range of the taxon is still limited. It is unclear as to where the range of the subspecies *Gilia tenuiflora* ssp. *arenaria* ends and the range of *Gilia tenuiflora* ssp. *tenuiflora* begins. There is an additional possibility that some cross-breeding is occurring on the boundary between these subspecies. Genetic analyses should be undertaken to confirm the range extents within this species.

The primary threats to Monterey gilia are habitat destruction due to development and an increase in cover by invasive, nonnative plant species (which inhibits its ability to germinate and colonize). The interior sites are generally more at risk than coastal populations. The coastal populations of Monterey gilia on State Park lands are relatively more protected than interior sites at this time, although nonnative plant control is required at virtually all sites and repeated out-plantings have been necessary to maintain numbers and expand population areas. Because invasive species are a concern throughout the Monterey Bay region, it is likely that they pose a threat to Monterey gilia on private parcels in this area as well; however, little information is available regarding the status of occurrences on private lands along the coast.

The status of Monterey gilia since the time of listing has likely improved at some sites by virtue of current or planned management for conservation. Along the coast, acquisition of one private parcel by Big Sur Land Trust and management activities within the State Park units have been a benefit to the long-term conservation of the taxon. At inland sites, the current and future transfer of lands from former Fort Ord to the University of California and Bureau of Land Management will also potentially benefit the long-term conservation of the taxon; however, planned losses of habitat along the western edge of former Fort Ord via land transfers to local agencies for development, and likely future development of other private lands along the coast, will likely result in direct losses of populations, secondary impacts to a portion of the remaining populations, and increased fragmentation of remaining habitat (particularly between the coastal and inland populations). For all remaining populations, both coastal and inland, threats due to invasive species will persist and will likely require management in perpetuity (Bossard et al. 2000).

Recovery of Monterey Gilia

The immediate objective of the Seven Coastal Plants and the Myrtle's Silverspot Butterfly Recovery Plan (Service 1998) is to minimize the threats to the species and the habitats upon which they depend. The plan's primary objective is to delist taxa covered by the plan in a minimum of 20 years. This recovery plan includes recovery criteria for Monterey gilia.

Monterey gilia can be considered for delisting when habitat throughout its range in the Monterey Bay Dunes from Moss Landing to about Sand City, and from dunes in and near Asilomar State Park on the Monterey Peninsula, is protected from encroachment of non-native species, recreational activity (including off-road vehicles and horses), and development; restored to native vegetation at proper densities to allow natural colonization; monitored sufficiently to assure that local threats are spotted promptly; and has enough plants at enough locations within the protected vegetation to reasonably assure the viability of the species. Specific numbers at each location can be found in the recovery plan for the species.

ENVIRONMENTAL BASELINE

Action Area

The implementing regulations for section 7(a)(2) of the Act define the “action area” as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 Code of Federal Regulations 402.02). The action area for this biological opinion is dispersed through northwestern Monterey County, from just north of the Salinas River, south through the cities of Marina and Seaside to the former Fort Ord, and east to the city of Salinas. The Project consists of diversion sites, pump stations, treatment facilities, and injection wells, which are connected by a series of new or existing pipelines (see biological assessment, Figure 3, map series, for details). Much of the action area is in existing developed or highly disturbed (e.g., row crop agriculture) areas. Individual project components are discussed in greater detail in the next subsection.

Habitat Characteristics of the Action Area

The Blanco Drain diversion would be constructed just north of the Salinas River and its associated source water pipeline would be directionally drilled under the Salinas River and the adjacent riparian corridor. Existing aquatic, ruderal, agricultural, and developed areas would be affected during construction of the diversion pump station; effects to aquatic habitat would be limited to Blanco Drain (an open ditch carrying agricultural runoff to the Salinas River) itself. Ruderal, agricultural, and developed areas and non-native grassland habitats would be affected during construction of the associated source water pipeline. California red-legged frogs have been observed at the Salinas River near the proposed Blanco Drain diversion and could occur within the portion of the Action Area where the diversion and its associated pipeline would be constructed (Denise Duffy and Associates 2016).

New treatment facilities would be constructed at the existing Regional Treatment Plant. Habitat at this location includes existing developed and ruderal areas and non-native grassland. The Salinas River is to the north and east of the Regional Treatment Plant and the proposed Blanco Drain diversion would be across the River to the east. California red-legged frogs have been observed in the Salinas River near the Regional Treatment Plant and could occur within the treatment facilities portion of the Action Area (Denise Duffy and Associates 2016).

The proposed project water line would run south, through the eastern sides of the cities of Marina and Seaside, from the Regional Treatment Plant to the proposed injection well facilities. The product line runs primarily through existing developed, agricultural, and ruderal areas plus sections of non-native grassland and maritime chaparral habitats. Portions of the product line route totaling 0.1 acre are occupied by the Monterey spineflower (Denise Duffy and Associates 2016). There is a small potential for the California red-legged frog to move through the product water line route, especially in the northern portion of the line where it would exit the Regional Treatment Plant.

The injection well facilities site is on designated development parcels within the former Fort Ord and is composed primarily of Maritime chaparral plus ruderal and developed areas (mostly existing roads) and a small area of oak woodland. Approximately 0.2 acre of this portion of the Action Area is occupied by the Monterey spineflower; 0.09 occupied acre plus additional scattered individuals were found in 2016 surveys (Johnson, in litt. 2016) and an additional 0.1 acre was found occupied in earlier surveys (Denise Duffy and Associates 2016). Approximately 0.003 acre of this portion of the Action Area is occupied by the Monterey gilia; 2016 surveys revealed a total of 87 individuals (Johnson, in litt. 2016).

Other proposed facilities (including the Reclamation Ditch Diversion, the source water pipeline from and modifications to the existing Salinas Treatment Facility Storage and Recovery Ponds, and the Salinas Pump Station Diversion) would be constructed in existing developed or intensive agricultural areas near the city of Salinas. There is a small potential for California red-legged frogs to move through these areas from the Salinas River, but there are no known localities of the species within 2 miles of these portions of the Action Area (CNDDB 2016).

Previous Consultations in the Action Area

We have consulted several times with the U.S. Army on cleanup and re-use of the former Fort Ord and its effects on listed species (Service 2015 and references therein). The planning process for re-use of the former Fort Ord included designating some parcels for development and others as habitat reserves and corridors that would contribute to conservation of listed and sensitive species, including the Monterey spineflower and Monterey gilia (Corps 1997). The injection well site is on parcels within the former Fort Ord that have been designated for development. Our analyses of base re-use assumed that Monterey spineflower and Monterey gilia occurrences within designated development parcels would be lost and we determined that such loss would not jeopardize either species.

A search of our files did not reveal any consultations addressing portions of the Action Area outside the former Fort Ord.

Condition (Status) of the Species in the Action Area

California Red-legged Frog

California red-legged frogs have not been observed immediately within the Action Area. However, the species has been observed along the Salinas River near the proposed Blanco Drain diversion site and the existing Regional Treatment Plant and may move through the Action Area from the Salinas River.

Monterey Spineflower

Monterey spineflower was documented during botanical surveys of the Action Area (Denise Duffy and Associates 2016, Johnson in litt. 2016). Approximately 0.1 acre of occupied habitat occurs within the product water pipeline route (outside the former Fort Ord) and approximately 0.2 acre occurs within the injection well site (within the former Fort Ord). Surveys only reveal adult plants and there is potential that additional habitat within the Action Area is occupied by seed of the Monterey spineflower. It is not possible to quantify areas where seed may be present, but adult plants have not been observed. However, if such areas exist, we presume them to be small because the Action Area is primarily in developed and intensive agricultural uses.

Monterey Gilia

Monterey gilia was documented during botanical surveys of the Action Area (Johnson in litt. 2016). Approximately 0.003 acre of the injection well site is occupied by the Monterey gilia and 2016 surveys revealed a total of 87 individuals. Surveys only reveal adult plants and there is potential that additional habitat within the Action Area is occupied by seed of the Monterey gilia. It is not possible to quantify areas where seed may be present, but adult plants have not been observed. However, if such areas exist, we presume them to be small because the Action Area is primarily in developed and intensive agricultural uses.

Recovery

California Red-legged Frog

The Action Area is within Recovery Unit 5 (Central Coast) and overlaps the southern end of Recovery Core Area 19 (Watsonville Slough-Elkhorn Slough; Salinas River-Pajaro River)⁴ for

⁴ Recovery core area 19 is named inconsistently in the California red-legged frog recovery plan (Service 2002). The map on page 51 names it as “Watsonville Slough-Elkhorn Slough” while the text on page 55 names it as “Salinas River-Pajaro River”. The mapping on page 51 and the text on page 55 are both correct and some or all of all four drainages are encompassed within the core area; only the names are inconsistent.

the California red-legged frog (Service 2002). Core area 19 was designated because it is currently occupied by the species, provides connectivity between occupied areas, and is inhabited by a stable population that may provide dispersing individuals that colonize other areas.

Monterey Spineflower

The former Fort Ord is discussed for Monterey spineflower recovery in the Seven Coastal Plants and the Myrtle's Silverspot Butterfly Recovery Plan (Service 1998). Service (1998) indicates that the proposed conservation strategy (Corps 1997) for base re-use appears adequate to conserve the interior occurrences of the Monterey spineflower. Service (1998) also indicates that coverage of beach and dune populations of the Monterey spineflower, on California State Parks and private land, under a permanent management plan is necessary for recovery of the species (i.e., implementation of conservation actions on the former Fort Ord is necessary, but not sufficient, to achieve recovery of the species as a whole). All occurrences of Monterey spineflower within the Action Area are at interior locations.

Monterey Gilia

The former Fort Ord is discussed for Monterey gilia recovery in the Seven Coastal Plants and the Myrtle's Silverspot Butterfly Recovery Plan (Service 1998). Specifically, management of Fort Ord (CNDDDB occurrence number 20 as mentioned on page 92) to support 10,000 to 40,000 individual plants is identified as a recovery criterion. All occurrences of Monterey gilia within the Action Area are at the former Fort Ord.

EFFECTS OF THE ACTION

Effects of the Proposed Action on the California Red-legged Frog

Direct impacts to adults and sub-adults of the California red-legged may include injury or mortality from being crushed by earth moving equipment, construction debris, and worker foot traffic. These impacts will be reduced by minimizing and clearly demarcating the boundaries of the project areas and equipment access routes. Scheduling work outside of the rainy season in the Blanco Drain area (the portion of the Action Area where the species is most likely to be found) to avoid times when California red-legged frogs are most likely to move overland would further reduce these effects. Although some aquatic habitat would be affected at the diversion sites, we do not expect this habitat to be occupied by eggs or larvae and therefore do not expect these life stages to be affected.

The capture and handling of California red-legged frogs to move them from a work area may result in injury or mortality. Mortality may occur as a result of improper handling, containment, or transport of individuals or from releasing them into unsuitable habitat. Improper handling, containment, or transport of individuals would be reduced or prevented by use of a Service-

approved biologist. California red-legged frogs may attempt to return to the capture site. California red-legged frogs attempting to return to capture sites are likely to be more susceptible to predation, exposure to the elements, and vehicle strikes if they attempt to return to the original capture site. Overall, relocation is intended to reduce the risk of injury or mortality from the direct effects described above.

Construction activities, including noise and vibration, may cause California red-legged frogs to temporarily abandon habitat adjacent to work areas. This disturbance may increase the potential for predation and desiccation when California red-legged frogs leave shelter sites.

Trash left during or after project activities could attract predators to work sites, which could, in turn, prey on California red-legged frogs. For example, raccoons are attracted to trash and also prey opportunistically on California red-legged frogs. This potential impact will be reduced or avoided by careful control of waste products at all work sites.

Chytridiomycosis is an infectious disease that affects amphibians worldwide, and is caused by the chytrid fungus. Chytrid fungus is a water-borne fungus that can be spread through direct contact between aquatic animals and by a spore that can move short distances through the water. The fungus only attacks the parts of a frog's skin that have keratin (thickened skin), such as the mouthparts of tadpoles and the tougher parts of adults' skin, such as the toes. The fungus can decimate amphibian populations, causing fungal dermatitis which usually results in death in 1 to 2 weeks, but not before infected animals may have spread the fungal spores to other ponds and streams. Once a pond or waterway has become infected with chytrid fungus, the fungus stays in the water for an undetermined amount of time. Chytrid fungus could be spread if infected California red-legged frogs are relocated and introduced into areas with healthy California red-legged frogs. It is also possible during the relocation of California red-legged frogs that infected equipment or clothing could introduce chytrid fungus into areas where it did not previously occur. The proposal to implement the fieldwork code of practice developed by the Declining Amphibian Populations Task Force should reduce the potential for movement of chytrid fungus.

Accidental spills of hazardous materials or careless fueling or oiling of vehicles or equipment could degrade aquatic or upland habitat to a degree where California red-legged frogs are adversely affected or killed. The potential for this impact to occur will be reduced by the proposal to require all refueling, maintenance, and staging of equipment and vehicles to occur at least 100 feet from riparian habitat or water bodies and not in a location from where a spill would drain directly toward aquatic habitat.

Workers may intentionally or unintentionally disturb, injure, or kill California red-legged frogs. The potential for this impact to occur will be reduced by the proposal to conduct pre-construction training informing workers of the presence and protected status of this species and the measures that are being implemented to protect it during project activities.

Work in streams or in floodplains could cause unusually high levels of siltation downstream. This siltation could alter the quality of habitat to the extent that use by individuals of the species is precluded. Implementing best management practices and reducing the area to be disturbed to the minimum necessary, as proposed by MRWPCA, will likely assist in reducing the amount of sediment that is washed downstream, as a result of project activities.

Directional drilling could introduce caustic mud into the Salinas River if a frac-out occurs. Such mud could kill California red-legged frogs or degrade their habitat. Proposed measures to reduce the likelihood of a frac-out and to respond to one if it occurs, should reduce the likelihood or severity of these effects.

Effects of the Proposed Action on the Monterey Spineflower

All of the habitat occupied by Monterey spineflower within the Action Area (approximately 0.3 acre and possibly additional undetected acreage occupied by seed) could be disturbed or destroyed by trenching and construction activities. MRWPCA will avoid these effects, if they determine that avoidance is feasible when considering other constraints. If avoidance is not considered feasible, then the known occupied habitat outside the former Fort Ord (0.1 acre) will be replaced at a minimum 1:1 ratio through implementation of a rare plant restoration plan. We consider adverse effects to Monterey spineflower within designated development parcels on the former Fort Ord adequately minimized through the planning process for base re-use (Corps 1997) and replacement of occupied habitat there is not proposed.

Effects of the Proposed Action on the Monterey Gilia

All of the habitat occupied by Monterey Gilia within the Action Area (approximately 0.003 acre and possibly additional undetected acreage occupied by seed) could be disturbed or destroyed by trenching and construction activities. All of the known occupied habitat for Monterey Gilia within the Action Area is within designated development parcels on the former Fort Ord. We consider adverse effects to Monterey gilia within designated development parcels on the former Fort Ord adequately minimized through the planning process for base re-use (Corps 1997) and replacement of occupied habitat there is not proposed.

Effects on Recovery of the California Red-legged Frog

We do not expect that the proposed action would substantially affect recovery of the California red-legged frog. At worst, the project may result in mortality of a few individuals, which we do not expect would have long-term effects to recovery. We do not expect that the population stability of the species within or the habitat connectivity across recovery core area 19 would be affected.

Effects on Recovery of the Monterey Spineflower

We do not expect that the proposed action would substantially affect recovery of the Monterey Spineflower. At worst, the proposed action could result in loss of approximately 0.3 acre of known occupied habitat plus unquantified but presumably small additional acreage occupied by seed. These small effects would be further reduced by proposed measures to avoid destruction of occupied habitat, if determined feasible, and to replace the up to 0.1 acre of occupied habitat that could be destroyed outside the former Fort Ord. Furthermore, the occupied habitat that may be destroyed within the former Fort Ord occurs on designated development parcels and is not considered essential to recovery of the species (Corps 1997, Service 1998).

Effects on Recovery of the Monterey Gilia

We do not expect that the proposed action would substantially affect recovery of the Monterey Gilia. At worst, the proposed action could result in loss of approximately 0.003 acre of known occupied habitat plus unquantified but presumably small additional acreage occupied by seed. All of the known occupied habitat that may be destroyed is within the former Fort Ord and occurs on designated development parcels not considered essential to recovery of the species (Corps 1997). The Seven Coastal Plants and the Myrtle's Silverspot Butterfly Recovery Plan (Service 1998) indicates that management of the former Fort Ord to support 10,000 to 40,000 individual plants is necessary for recovery of the species. Because Monterey gilia is an annual plant that persists as seed and the number of individual adult plants varies from year to year, we do not know the exact number of individuals that could be destroyed due to the proposed action. However, the best available information is from 2016 surveys, which located only 87 individuals. We do not expect the loss of such a small area of habitat and number of individuals to affect the potential for the former Fort Ord to support the 10,000 to 40,000 individual plants considered necessary for recovery of the species.

Summary of Effects

California Red-legged Frog

The proposed action may result in mortality of a few adult or juvenile California red-legged frogs. We expect minimal effects to the quality of California red-legged frog habitat because most of the proposed action would be implemented in existing developed or highly disturbed areas. We expect little to no long-term effect to the local population of California red-legged frogs. We do not expect that the proposed action would have substantial effects to the population stability of the species within or the habitat connectivity across recovery core area 19.

Monterey Spineflower

We expect that the proposed action would result in destruction of up to 0.3 acre of known occupied Monterey spineflower habitat and possibly additional habitat occupied by seed. At

least 0.1 acre of this habitat would either be avoided or replaced. Habitat that would not necessarily be either avoided or replaced occurs within designated development parcels of the former Fort Ord and is not considered essential to conservation of the species (Corps 1997, Service 1998). We do not expect that the small amount of habitat destruction and mortality likely due to the proposed action would have substantial effects to recovery of the species.

Monterey Gilia

We expect that the proposed action would result in destruction of up to 0.003 acre of known occupied Monterey gilia habitat and possibly additional habitat occupied by seed. Based on 2016 surveys, we estimate that approximately 87 adult plants may be killed, but because Monterey gilia is an annual, the number of adult plants present during project construction may vary from this estimate. All of the known occupied habitat for this species within the Action Area is on designated development parcels of the former Fort Ord and is not considered essential to conservation of the species (Corps 1997). We do not expect that the small amount of habitat destruction and mortality likely due to the proposed action would have substantial effects to recovery of the species.

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. We do not consider future Federal actions that are unrelated to the proposed action in this section because they require separate consultation pursuant to section 7 of the Act. We are not aware of any non-Federal activities that are reasonably certain to occur in the action area.

CONCLUSION

The regulatory definition of “to jeopardize the continued existence of the species” focuses on assessing the effects of the proposed action on the reproduction, numbers, and distribution, and their effect on the survival and recovery of the species being considered in the biological opinion. For that reason, we have used those aspects of the California red-legged frog’s, Monterey spineflower’s, and Monterey gilia’s statuses as the basis to assess the overall effect of the proposed action on the species.

California Red-legged Frog

Reproduction

We expect no effects on reproduction of the California red-legged frog.

Numbers

There is potential for the proposed action to result in mortality of adult or juvenile California red-legged frogs. However, we expect such mortality events to occur very rarely, if at all, during project implementation. We do not expect such a small reduction in numbers to appreciably reduce the likelihood of both the survival and recovery of the California red-legged frog.

Distribution

We do not expect the proposed action to affect the distribution of the California red-legged frog.

Recovery

We do not expect that the proposed action would substantially affect recovery of the California red-legged frog. At worst, the project may result in mortality of a few individuals, which we do not expect would have long-term effects to recovery. We do not expect that the population stability of the species within or the habitat connectivity across recovery core area 19 would be affected.

After reviewing the current status of the California red-legged frog, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog.

Monterey Spineflower

Reproduction

We expect no effects on reproduction of the Monterey spineflower.

Numbers

We expect that the proposed action will result in mortality of an unknown number of Monterey spineflowers due to the destruction of up to 0.3 acre of known occupied habitat and potentially additional habitat occupied by seed. However, because the amount of habitat to be destroyed is small, and at least 0.1 of the 0.3 acre would either be avoided or replaced, we do not expect this loss of individuals to have substantial effects on the species. Therefore, even though the

proposed action is expected to kill Monterey spineflowers, we do not expect this mortality to have long-term population-level effects that would reduce appreciably the likelihood of both the survival and recovery of the Monterey spineflower.

Distribution

The proposed action could cause a small reduction in the distribution of the Monterey spineflower due to the destruction of up to 0.3 acre of known occupied habitat and potentially additional habitat occupied by seed. However, we expect all such effects to be small and localized, such that the likelihood of both the survival and recovery of the Monterey spineflower would not be appreciably reduced.

Recovery

All known Monterey spineflower habitat that would be destroyed by the proposed action would either be replaced (outside the former Fort Ord) or has already been determined non-essential to recovery of the species (inside the former Fort Ord). Therefore, we do not expect the proposed action to appreciably reduce the likelihood of recovery of the Monterey spineflower.

After reviewing the current status of the Monterey spineflower, the environmental baseline for the action area, the effects of the proposed Project, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the Monterey spineflower.

Monterey Gilia

Reproduction

We expect no effects on reproduction of the Monterey gilia.

Numbers

We expect that the proposed action will result in mortality of an unknown number (best estimated at 87) of Monterey gilies due to the destruction of up to 0.003 acre of known occupied habitat and potentially additional habitat occupied by seed. However, because the amount of habitat to be destroyed is small, we do not expect this loss of individuals to have substantial effects on the species. Therefore, even though the proposed action is expected to kill Monterey gilies, we do not expect this mortality to have long-term population-level effects that would reduce appreciably the likelihood of both the survival and recovery of the Monterey gilia.

Distribution

The proposed action could cause a small reduction in the distribution of the Monterey gilia due to the destruction of up to 0.003 acre of known occupied habitat and potentially additional habitat occupied by seed. However, we expect all such effects to be small and localized, such that the likelihood of both the survival and recovery of the Monterey gilia would not be appreciably reduced.

Recovery

All known Monterey gilia habitat that would be destroyed by the proposed action is within designated development parcels at the former Fort Ord, which were determined (Corps 1997) to be non-essential to conservation of the species. We do not expect that the small loss of habitat and individuals that may occur due to the proposed action would preclude the former Fort Ord from being managed to meet recovery criteria. Therefore, we do not expect the proposed action to appreciably reduce the likelihood of recovery of the Monterey gilia.

After reviewing the current status of the Monterey gilia, the environmental baseline for the action area, the effects of the proposed Project, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the Monterey gilia.

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 wildlife 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. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service 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 behavioral patterns which include, but are not limited to, 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 lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not the purpose 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.

In June 2015, the Service finalized new regulations implementing the incidental take provisions of section 7(a)(2) of the Act. The new regulations also clarify the standard regarding when the Service formulates an Incidental Take Statement [50 CFR 402.14(g)(7)], from "...if such take may occur" to "...if such take is reasonably certain to occur." This is not a new standard, but

merely a clarification and codification of the applicable standard that the Service has been using and is consistent with case law. The standard does not require a guarantee that take will result; only that the Service establishes a rational basis for a finding of take. The Service continues to rely on the best available scientific and commercial data, as well as professional judgment, in reaching these determinations and resolving uncertainties or information gaps.

The measures described below are non-discretionary, and must be undertaken by the EPA or made binding conditions of any grant or permit issued to the MRWPCA, as appropriate, for the exemption in section 7(o)(2) to apply. The EPA has a continuing duty to regulate the activity covered by this incidental take statement. If the EPA (1) fails to assume and implement the terms and conditions or (2) fails to require the MRWPCA 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. To monitor the impact of incidental take, the EPA 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)(3)].

We anticipate that some California red-legged frogs could be taken as a result of the proposed action. We expect the incidental take to be in the forms of harassment, capture, injury, or mortality. California red-legged frogs may be injured or killed if they are struck by heavy equipment, construction debris, or worker foot traffic. California red-legged frogs would be captured and moved out of harm's way if they are found within work areas. California red-legged frogs may be harassed if they are disturbed by construction activities or siltation of aquatic habitat to the extent that they abandon their normal sheltering behaviors and become more vulnerable to predation or desiccation as a result.

We cannot quantify the precise number of California red-legged frogs that may be taken as a result of the actions that the EPA has proposed because California red-legged frogs move over time. The number of individuals present, their behaviors, and their location within the action area varies daily and seasonally. The protective measures proposed by the EPA are likely to prevent mortality or injury of most individuals. In addition, finding a dead or injured California red-legged frog may be unlikely, especially in a case where it is predated.

Consequently, we are unable to reasonably anticipate the actual number of California red-legged frogs that would be taken by the proposed project; however, we must provide a level at which formal consultation would have to be reinitiated. The Environmental Baseline and Effects Analysis sections of this biological opinion indicate that adverse effects to California red-legged frogs would likely be low given the nature of the proposed activities, and we, therefore, anticipate that take of California red-legged frogs would also be low. We also recognize that for every California red-legged frog found dead or injured, other individuals may be killed or injured that are not detected, so when we determine an appropriate take level we are anticipating that the actual take would be higher and we set the number below that level.

Similarly, for estimating the number of California red-legged frogs that would be taken by capture, we cannot predict how many may be encountered for reasons stated earlier. While the benefits of relocation (i.e., minimizing mortality) outweigh the risk of capture, we must provide a limit for take by capture at which consultation would be reinitiated because high rates of capture may indicate that some important information about the species in the action area was not apparent (e.g., it is much more abundant than thought). Conversely, because capture and relocation can be highly variable, depending upon the species and the timing of the activity, we do not anticipate a number so low that reinitiation would be triggered before the effects of the activity were greater than what we determined in the Effects Analysis.

Therefore, if 3 California red-legged frogs are found dead or wounded or if 10 are captured and relocated, EPA must contact our office immediately to reinitiate formal consultation. Project activities that are likely to cause additional take should cease during this review period because the exemption provided under section 7(o)(2) would lapse and any additional take would not be exempt from the section 9 prohibitions.

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species; however, limited protection of listed plants is provided at section 9(a)(2) to the extent that the Act prohibits the removal and reduction to possession of federally listed plants from areas under Federal jurisdiction, the malicious damage or destruction of such plants on areas under Federal jurisdiction, and the destruction of listed plants on non-Federal areas in violation of State law or regulation or in the course of a violation of a State criminal trespass law.

REASONABLE AND PRUDENT MEASURE

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize the impacts of the incidental take of the California red-legged frog:

- 1) Take of California red-legged frogs must be minimized by using qualified individuals and procedures to monitor, capture, and relocate California red-legged frogs.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the EPA must comply with the following terms and conditions, which implement the reasonable and prudent measure described above and outline reporting and monitoring requirements. These terms and conditions are non-discretionary.

The following terms and conditions implements reasonable and prudent measure 1:

- a) Only qualified biologists(s), approved by the Service under the auspices of this biological opinion, may conduct the proposed monitoring and minimization measures for the California red-legged frog. The EPA must request our approval of any

biologist they wish to employ for activities with the California red-legged frog. The request must be in writing and received at least 30 days prior to the initiation of activities. Please note that use of qualified biologists was proposed by MRWPCA and this term and condition merely clarifies procedures for their approval by the Service.

- b) A Service-approved biologist must determine an appropriate relocation site(s) for any California red-legged frogs that must be removed from construction areas. The proposed site should include appropriate sheltering habitat and be far enough from construction areas to minimize disturbance due to noise, but close enough to minimize the likelihood of spreading chytrid fungus. The EPA must submit the proposed relocation site(s) to the Service for approval at least 10 days prior to the initiation of activities.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), the EPA must report the progress of the action and its impact on the species to the Service as specified in this incidental take statement. A report must be submitted to the Service's Ventura Fish and Wildlife Office (2493 Portola Road, Suite B; Ventura, California 93003) within 60 days following completion of construction. This report will include: 1) the results of the surveys and monitoring proposed by the EPA; 2) a detailed discussion of any incidental take observed and the circumstances under which it occurred; 3) a summary of how the terms and conditions of this biological opinion and the protective measures proposed by the EPA worked; and, 4) any suggestions of how these measures could be revised to improve conservation of California red-legged frogs while facilitating compliance with the Act.

DISPOSITION OF DEAD OR INJURED SPECIMENS

As part of this incidental take statement and pursuant to 50 CFR 402.14(i)(1)(v), upon locating a dead or injured California red-legged frog initial notification within 3 working days of its finding must be made by telephone and in writing to the Ventura Fish and Wildlife Office (805-644-1766). The report must include the date, time, location of the carcass, a photograph, cause of death or injury, if known, and any other pertinent information.

The EPA must take care in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The EPA must transport injured animals to a qualified veterinarian. Should any treated California red-legged frogs survive, the EPA must contact the Service regarding the final disposition of the animal(s).

The remains of any dead California red-legged frogs must be placed with the California Academy of Sciences Herpetology Department (Contact: Jens Vindum, Senior Collections

Manager, California Academy of Sciences Herpetology Department
(herpetology@calacademy.org), 55 Music Concourse Drive, San Francisco, California 94118).

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use 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.

- 1) EPA and MRWPCA should revegetate appropriate areas of the project site with native vegetation that includes Monterey spineflower and Monterey gilia.
- 2) EPA and MRWPCA should investigate opportunities to construct new or secure management of existing pond(s) to provide California red-legged frog breeding habitat in the vicinity of the Blanco Drain diversion site. The species is known to use the Salinas River riparian corridor in this area, but the River may provide poor breeding habitat.

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) may have lapsed and any further take could be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending reinitiation.

If you have any questions about this biological opinion, please contact Jacob Martin of my staff at (831) 768-6953, or by electronic mail at Jacob_Martin@fws.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Stephen P. Henry", is written above the printed name.

Stephen P. Henry
Field Supervisor

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Appendix A: The Declining Amphibian Populations Task Force Fieldwork Code of Practice

1. Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires, and all other surfaces. Rinse cleaned items with sterilized (e.g., boiled or treated) water before leaving each work site.
2. Boots, nets, traps, and other types of equipment used in the aquatic environment should then be scrubbed with 70 percent ethanol solution and rinsed clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond, wetland, or riparian area.
3. In remote locations, clean all equipment with 70 percent ethanol or a bleach solution, and rinse with sterile water upon return to the lab or "base camp." Elsewhere, when washing-machine facilities are available, remove nets from poles and wash in a protective mesh laundry bag with bleach on the "delicates" cycle.
4. When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable vinyl⁵ gloves and change them between handling each animal. Dedicate sets of nets, boots, traps, and other equipment to each site being visited. Clean them as directed above and store separately at the end of each field day.
5. When amphibians are collected, ensure that animals from different sites are kept separately and take great care to avoid indirect contact (e.g., via handling, reuse of containers) between them or with other captive animals. Isolation from unsterilized plants or soils which have been taken from other sites is also essential. Always use disinfected and disposable husbandry equipment.
6. Examine collected amphibians for the presence of diseases and parasites soon after capture. Prior to their release or the release of any progeny, amphibians should be quarantined for a period and thoroughly screened for the presence of any potential disease agents.
7. Used cleaning materials and fluids should be disposed of safely and, if necessary, taken back to the lab for proper disposal. Used disposable gloves should be retained for safe disposal in sealed bags.

The Fieldwork Code of Practice has been produced by the Declining Amphibian Populations Task Force with valuable assistance from Begona Arano, Andrew Cunningham, Tom Langton, Jamie Reaser, and Stan Sessions. For further information on this Code, or on the Declining Amphibian Populations Task Force, contact John Wilkinson, Biology Department, The Open University, Walton Hall, Milton Keynes, MK7 6AA, UK, e-mail: DAPTF@open.ac.uk.

⁵ Do not use latex gloves as latex is toxic to amphibians.



EDMUND G. BROWN JR.
GOVERNOR



MATTHEW RODRIGUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

CERTIFIED MAIL NO.: 7003 – 0500 – 0003 – 1326 - 9645
RETURN RECEIPT REQUESTED

FEB 12 2018

Ms. Julianne Polanco
California State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

CONTINUING NATIONAL HISTORIC PRESERVATION ACT (NHPA) SECTION 106
CONSULTATION FOR THE PURE WATER MONTEREY (APPLICANT) GROUNDWATER
REPLENISHMENT PROJECT (UNDERTAKING), MONTEREY COUNTY, CALIFORNIA;
CLEAN WATER STATE REVOLVING FUND (CWSRF) NO. C-06-8028-110, SHPO TRACKING
NO. EPA_2016_0304_001

Dear Ms. Polanco:

The State Water Resources Control Board's (State Water Board) Division of Financial Assistance (DFA) is continuing consultation under Title 54 United States Code (USC) § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 Code of Federal Regulations (CFR) Part 800, for the subject Undertaking located just west of the City of Salinas in Monterey County, California.

DFA administers the CWSRF Program pursuant to 40 CFR Part 35. The Applicant is seeking funds from this program to assist in financing the Project. The CWSRF Program is partially funded by a capitalization grant from the United States Environmental Protection Agency (USEPA). Issuance of CWSRF funds by the State Water Board is considered equivalent to a federal undertaking, thereby necessitating compliance with Section 106 under a Nationwide Programmatic Agreement executed for the CWSRF by USEPA, the Advisory Council on Historic Preservation, and the National Council of State Historic Preservation Officers. USEPA has delegated lead agency responsibility to the State Water Board for carrying out the requirements of Section 106.

In a letter dated April 19, 2016, the State Historic Preservation Officer concurred (Enclosure 1) on the Area of Potential Effects (APE) and a finding of no adverse effect for the Undertaking as described (Enclosure 2). The Reclamation Ditch Diversion portion of the APE has changed from what was originally concurred upon in 2016.

FELICIA MARCUS, CHAIR | EILEEN SOBECK, EXECUTIVE DIRECTOR

1001 I Street, Sacramento, CA 95814 | Mailing Address: P.O. Box 100, Sacramento, CA 95812-0100 | www.waterboards.ca.gov

New APE for the Reclamation Ditch Diversion

Enclosure 3 depicts the original Reclamation Ditch Diversion APE and Excavation Site Plan (permanent facility footprint) in relation to the new Reclamation Ditch Diversion APE. The enlargement of the horizontal APE for the permanent facility is due to the addition of matting along the banks of the diversion structure. The vertical APE of the permanent facility is the same. The horizontal APE of the construction footprint was enlarged to allow for a larger staging area and to include the access roads.

Cultural Resources Inventory and New APE

The Applicant contracted with Archaeological Consulting and later Pacific Legacy Inc. to do a historic properties identification report (Doane and Breschini 2015) and an Addendum report (Pacific Legacy 2015). As part of the study, a records search was conducted at the Northwest Information Center (NWIC), with a half mile buffer around the APE. The results of this search indicated that seven previous cultural resource investigations were completed covering almost all portions of the new APE with the exception of the southeast access road (Enclosure 4). No cultural resources are recorded within the new APE and one prehistoric site with burials (CA-MNT-2246) was recorded approximately 800 feet to the south of the new APE on the south side of State Route 183 (Enclosure 4).

Description of Findings

The new Reclamation Ditch Diversion APE has been previously surveyed for cultural resources with the exception of the southeast access road (Enclosure 3). The southeast access road runs along the top of a graveled berm that is most likely composed of spoils from excavation and maintenance of the canal adjacent to it (Enclosure 5). Because the southeast road is on top of a graveled berm, impacts from vehicle traffic should not affect native soil.

State Water Board Finding of Effect

The State Water Board has reached a finding that historic properties will not be affected by the APE change. Therefore, the State Water Board is seeking concurrence that the finding of "no historic properties affected" pursuant to 36 CFR Part 800.4(d)(1) is still applicable.

The State Water Board is respectfully requesting your response within 30 days of receiving this consultation request. Please contact Wendy Pierce at 916-449-5178 or at Wendy.Pierce@waterboards.ca.gov if you have any questions or concerns about the undertaking.

Sincerely,



Wendy Pierce
Senior Environmental Planner
Division of Financial Assistance

Enclosures: See next page

Enclosures (5):

1. Letter from SHPO, dated April 19, 2016
2. Letter to SHPO with APE table, dated March 3, 2016
3. Figure 1 Old and New APEs on Aerial Background
4. Figure 2 Old and New APEs on Record Search Results Map
5. Google Earth Street Views of Southeast Road to west and east

cc: without enclosures:

Elizabeth Borowiec
Water Division, Infrastructure Section (W-3-3)
US EPA Region 9
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**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, Director

Julianne Polanco, State Historic Preservation Officer

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calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

February 28, 2018

Reply to: EPA_2016_0304_001

Wendy Pierce, Senior Environmental Planner
Division of Financial Assistance
State Water Resources Control Board
P. O. Box 100
Sacramento, California 95812-0100

RE: Continuation of Section 106 Compliance for the Pure Water Monterey
Groundwater Replenishment Project, Monterey County, Clean Water State
Revolving Fund Project No. C-06-8028-110 (your letter of February 12, 2018)

Dear Ms. Pierce:

The State Water Resources Control Board (Board) is continuing its consultation with the State Historic Preservation Officer (SHPO) on the above cited undertaking, in accordance with Section 106 of the *National Historic Preservation Act of 1966* (54 U.S.C. §306108) as amended, and its implementing regulations found at 36 CFR Part 800. The Environmental Protection Agency has delegated lead agency responsibility to the Board for carrying out the requirements of Section 106.

In a letter dated January 28, 2016, the Monterey Regional Water Pollution Control Agency (Agency) proposed to implement and construct the Pure Water Monterey Groundwater Replenishment Project (Project). Specifically, the proposed undertaking consisted of the elements and actions that you had described in detail in Table 1 (Construction Area of Disturbance and Permanent Footprint) which was included in your letter. The area of potential effect (APE) encompassed the elements and actions described in Table 1, which are located in seven separate areas. In a letter dated April 19, 2016, the SHPO offered the following comments: (1) did not object to your identification and delineation of the APE; (2) agreed with the Agency's decision to conduct the proposed undertaking in accordance with the mitigation measures described in your letter; and (3) did not object to your determination of No Historic Properties Affected for the proposed undertaking.

In your current letter, the Agency has amended the APE for the Reclamation Ditch Diversion portion of the original APE by enlarging it. The enlargement of the horizontal APE for the permanent facility is due to the addition of matting along the banks of the diversion structure. The vertical APE of the permanent facility will remain the same as before. The horizontal APE of the construction footprint was enlarged to allow for a larger staging area and to include the access roads.

The amended APE was included in the records review and pedestrian survey conducted for the original proposed undertaking. No cultural resources are located within the amended APE, but one prehistoric site with burials (CA-MNT-2246) is located approximately 800 feet to the south of the amended APE on the south side of State Route 183. That site will not be affected by the amended undertaking.

Native American consultation included contacting the Native American Heritage Commission (NAHC) and requesting a record search of their sacred land file, which was negative. On April 19, 2016 and July 14, 2017, request for comment letters were sent to the four Native American contacts provided by NAHC. No responses were received from the Tribes or tribal contacts.

Based on the records review, the pedestrian survey, and the tribal consultation, the Board has determined that a finding of No Historic Properties Affected remains appropriate for the amended project and has requested the SHPO to review and comment it. After reviewing the submitted information, the SHPO offers the following comments:

- The SHPO has no objections to identification and delineation of the amended APE, pursuant to 36 CFR Parts 800.4(a)(1) and 800.16(d); and
- The SHPO does not object to a finding of No Historic Properties Affected for the amended proposed undertaking, as described above.

Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, the Board may have additional future responsibilities for this undertaking under 36 CFR Part 800. Should cultural artifacts be encountered during ground disturbing activities, please halt all work until a qualified archaeologist can be consulted on the nature and significance of such artifacts.

If you have any questions or concerns, please contact the following member of my staff: Tristan Tozer at (916) 445-7027 or via e-mail at Tristan.Tozer@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

January 25, 2022

ELECTRONIC SUBMITTAL

Ms. Julianne Polanco
California State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, California 95816

Re: Request for Concurrence on "Section 106" Compliance
Monterey One Water (M1W) Expanded Pure Water Monterey Project
(Expanded PWM Project), Monterey County, California; Water Infrastructure Finance and
Innovation Act (WIFIA) Program

Dear Ms. Polanco:

Monterey One Water (M1W) proposes to construct facilities needed for an Expanded Pure Water Monterey (PWM) Project (Expanded PWM Project) in Monterey County, California and is seeking funds from the WIFIA Program to assist in financing the Project. The U.S. Environmental Protection Agency (EPA) administers the WIFIA Program and is the federal lead agency for the Expanded PWM Project. EPA is initiating consultation with your agency to begin the federal review process for the proposed project under Section 106 of the National Historic Preservation Act of 1966, and its implementing regulations found at 36 Code of Federal Regulations (CFR) Part 800.

The Water Infrastructure Finance and Innovation Act (WIFIA) was signed into law in 2014 and authorized the WIFIA program to be managed by EPA Headquarters. WIFIA was amended by section 1445 of the Fixing America's Surface Transportation Act of 2015 and section 5008 of the Water Infrastructure Improvements for the Nation Act of 2016. WIFIA is a federal credit program for eligible water and wastewater infrastructure projects. EPA selected M1W to submit an application for credit assistance for the Expanded PWM Project. On December 30, 2021, M1W submitted their application and WIFIA staff is currently reviewing the application. M1W has also applied to the State Water Resources Control Board for a State Revolving Fund loan or an extension of its existing loan for the project, and to the U.S. Bureau of Reclamation for additional grant money through their WaterSmart / Title XVI program.

For the original or "base" PWM Project (also referred to as the PWM/Groundwater Replenishment (GWR) Project), M1W secured a Clean Water State Revolving Funds (CWSRF) from the State Water Resources Control Board (State Board) (Project No. C-06-8028-110). The State Board submitted their request for section of the project for review on March 3, 2016, with a finding of no historic properties affected. On April 19, 2016, SHPO concurred with the finding assigning the reference number EPA_2016_0304_001. On February 12, 2018, the State Board notified SHPO of project changes, stated

that they determined that a finding of No Historic Properties Affected remained appropriate for the amended project, and requested the SHPO review and comment on it. After reviewing the submitted information, the SHPO concurred in a letter dated. The two CWSRF consultation letters and SHPO concurrence letters can be found in Enclosure 1.

Description of Undertaking

The base PWM/GWR Project is included as part of the WIFIA loan but is not discussed in detail further as it is constructed and operational (subject of existing 2016 and 2018 letters of concurrence in Enclosure 1). In addition to the base PWM/GWR Project, the following additional components would be constructed as part of the current Undertaking. The Expanded PWM Project includes two components discussed below.

Advanced Water Purification Facility (AWPF) Expansion Component. The Expanded PWM Project would expand the AWPF peak capacity from 5 million gallons per day (mgd) to 7.6 mgd and increase recharge of the Seaside Groundwater Basin by an additional 2,250 AFY (for a total average yield of 5,750 AFY). Modifications would include installation of additional treatment and pumping equipment, chemical storage, pipelines, and facility appurtenances within the 3.5-acre existing building area. No new ground disturbance nor changes to the AWPF buildings or overhanging canopies are proposed as part of the Expanded PWM Project. All ground disturbance and construction of structures occurred during construction of the base project in 2018 to 2019. Ground disturbance, concrete work, and building/canopy construction, including the depth and heights of construction and permanent facilities, are not being modified for the Expanded PWM Project; therefore, no new APE is defined for this component below. A detailed description is provided in Enclosure 2.

Injection Well Facilities Phase 4 (incl. Conveyance Facilities). The Expanded PWM Project would include construction and operational of additional product water conveyance facilities, specifically, a new product water conveyance pipeline and appurtenances extending from the existing Blackhorse Reservoir to an Expanded Injection Well Area. Water conveyance components would be a new 2.3 mile long, 24-inch diameter pipeline. The northern part of the pipeline would be located within an existing unpaved access road servicing an in-place utility site. The southern portion of the pipeline would be located within the existing paved area of Eucalyptus Road and existing injection well access road.

The Expanded PWM Project includes an expansion of the area of temporary and permanent Injection Well Facilities, in an area referred to as the Expanded Injection Well Area. The Expanded Injection Well area will include construction and operation of additional Injection Well facilities incl. two deep injection wells, electrical and mechanical equipment at Well Sites #6 and #7, additional monitoring well, and an additional backflush pipelines and percolation basin. A detailed description is provided in Enclosure 2.

Undertaking Objective

The Expanded PWM Project purpose is to replace and augment water supplies for the Monterey Peninsula area customers of California American Water Company by expanding the base PWM/GWR Project advanced water purification facility and injection capacities. With the increased capacity, M1W

would also be able to divert additional excess secondary effluent currently being discharged to the ocean; thereby reducing pollutant loads.

Undertaking Location

The Expanded PWM Project is located in northern Monterey County, including within unincorporated parts of the county adjacent to the City of Seaside and within the city itself, as shown in Enclosure 2 (Figures 1 and 2).

Area of Potential Effects

The Area of Potential Effects (APE) for Archaeology includes the area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, should any be present within the APE. The horizontal and vertical APE consists of the proposed construction within the project's development footprint and proposed improvements. As stated above, there is no new APE for the AWPf Expansion.

The APE for the new injection well facilities includes the entire Expanded Injection Well Area, and a pipeline starting at the existing (base) PWM Project's "Blackhorse Reservoir" and continuing to and past the new injection well sites (no new well is currently proposed at Well Site #5) to the existing Well Site #1 constructed as part of the base project. Within this area, the undertaking includes construction of two new injection wells each (with required electrical/control facilities, fencing, and appurtenances) at Well Sites #6 and #7, a backflush basin, and a new monitoring well within the Eucalyptus Road right of way.

The APE for the conveyance pipelines extends from the well sites to the Blackhorse Reservoir. The vertical APE for the proposed conveyance pipeline trenches and other improvements (e.g., basins, enhancements to existing gravel roads over the pipeline and conduits, utilities, etc.) would be at most 50 feet below existing grade due to the use of horizontal directional drilling (HDD) for approximately 2,200 feet of the conveyance pipeline. The APE is described and shown in Enclosure 2 (Section 2-2 and Figure 3-1, respectively). A summary of construction/temporary disturbance and permanent facility dimensions is provided in the following table.

Construction Area of Disturbance and Permanent Footprint

Project Component	Construction Boundary (feet)		Permanent Component Footprint (feet)			
	Length	Width	Length	Width	Maximum Height	Maximum Depth Below Ground Surface
Product Water Conveyance Pipeline						
Blackhorse Reservoir to first Injection Well (Well Site #5)	5,280	10-15	5,280	<6	0	10
Injection Well Facilities (on-site conveyance)						
Well Site #6 Facilities including: one deep injection well, motor control building, and transformer	300	150	130	100	15	1,050
Well Site #7 Facilities including: one deep injection well, motor control building, and transformer	300	150	100	100	15	1,050
Backflush Basin (a light post and the outlet pipe are above-ground facilities)	500	200	500	120	20	10
One monitoring well (no above ground facilities)	100	100	3	3	0	1,000
Access Roads to Injection Wells, including underground pipelines listed separately & electrical	8,400	40	8,400	20	0	10
Purified water, backflush pipeline and electrical conduit from Well Site #5 to Well Site #1	4,600 (incl. up to 2,400 ft installed with HDD*)	10-15	4,600	<6	0	50*
Backflushing Pipelines	2,000	10-15	2,000	<6	0	10
Electrical conduit in General Jim Moore Blvd and, if needed, Eucalyptus Rd.	560	10	560	3	0	6
*A portion of the pipeline will be installed using horizontal directional drilling (HDD). This segment is between Well Site #1 and Well Site #5. The pipe will be installed to a maximum depth of 50 feet below ground. Horizontal directional drilling requires the excavation of a pit on either end of the pipe alignment that measures approximately 15 feet wide and 50 to 80 feet long (sloping from 10 feet deep to the existing grade at the far end).						

Summary of Identification Efforts

M1W contracted Basin Research Associates to complete a cultural resources study (Enclosure 2). The study includes the results of record searches at the California Historical Resources Information System (CHRIS), Northwest Information Center (NWIC), Sonoma State University, a review of archival materials on file with BASIN for the former Fort Ord and Monterey County, a Sacred Lands File (SLF) search completed by the Native American Heritage Commission (NAHC), Native American and historical society outreach, and results of a field survey. In addition, a reasonable and good faith effort has been made to identify historic properties and unique archaeological resources listed, determined, or potentially eligible for inclusion on the National Register of Historic Places (NRHP) within or immediately adjacent to the APE.

- The CHRIS/NWIC records review noted 11 previous cultural resources studies for the APE with negative results. No prehistoric and/or historic era archaeological sites are within in or adjacent to the APE.

One reported prehistoric archaeological site, CA-MNT-280/P-27-00385, without a definite location (emphasis added) was recorded in 1950 for an area including a larger area of the former Fort Ord that includes the APE. The site form notes that the site was destroyed by

bulldozing ca. 1940, likely destroyed during Fort Ord Army base construction. No further information is available.

- No Native American villages, traditional use areas or contemporary use areas or other features of significance have been previously identified in or adjacent to the proposed Expanded PWM Project APE.
- No Hispanic era features have been identified in or adjacent to the project APE.
- No American Period archaeological sites have been recorded, reported, or identified in or adjacent to the project APE.
- The two archaeological field inventories completed by Basin Research Associates (2019 and 2021) noted no prehistoric or historic cultural resources. The location of the eastern injection well field had been subject to UXO remediation resulting in considerable surface and subsurface disturbance.
- Research suggests a low potential for the presence of subsurface prehistoric and/or historic deposits either within or adjacent to the APE.
- No listed or known potential NRHP are located in or adjacent to the APE. No other significant or potentially significant local, state, or federal cultural resources/historic properties, landmarks, points of interest, etc. have been identified in or adjacent to the Expanded PWM Project APE.

Native American and Interested Party Consultation

Native American outreach and consultation occurred in 2019 for the proposed Expanded PWM Project (Busby 2019a). The review of the NAHC SLF was negative and 12 Native Americans were contacted for additional information with two Tribes responding. One tribe (Xolon Salinan People) responded noting the area was not part of their traditional lands while the other tribe (Esselen Tribe of Monterey County) requested that the Tribe be consulted should cultural resources be encountered during construction (Busby 2019n). The NAHC was contacted for a review of the SLF (Busby 2021a) to supplement the previous 2019 outreach. The 2021 NAHC review of the SLF was negative for Native American resources in or adjacent to the Expanded PWM Project (Sanchez 2021). Letters soliciting additional information were sent to the 15 Native American individuals/groups recommended by the NAHC (Busby 2021b-p) (see Attachments).

Responses were limited to communications from Ms. Susan Morley, representing the Esselen Tribe of Monterey County (ETMC), who responded via email on August 2, 2021, regarding the notification of Tom Little Bear Nason, Jana Nason, Susan Morley, and Brenna Wheelis about the project (Morley 2021a-d). A copy of the Technical Memorandum - Cultural Resources Assessment – for Supplemental EIR for Expanded Pure Water Monterey Groundwater Replenishment (PWM/GWR) (Busby 2019n) - was forwarded for her review. No other responses were received. (See Enclosure 2).

Summary of Findings

No historic properties were identified in the APE. A reasonable and good faith effort has been made to identify historic properties listed, determined, or potentially eligible for inclusion on the NRHP (36 CFR Part 800.4) within or immediately adjacent to the APE pursuant to the NHPA of 1966 (as amended) (54 U.S.C. § 306108) and its implementing regulations 36 CFR Part 800. The identification effort included a records search, a literature review, a field inventory, and Native American outreach. The regulations implementing Section 106 define an effect as any action that would alter the characteristics of the property that may qualify the property for inclusion in the NRHP and diminish the integrity of a

property's location, setting, design, materials, workmanship, feeling or association (36 CFR Part 800.5(a)(1-2)). A finding of No Historic Properties Affected (36 CFR Part 800.4(d)(1)) is recommended as the installation of the injection wells and associated pipeline and other project improvements will not have an effect on any historic properties within the APE as defined in 36 CFR Part 800.5(a)(1), 800.5(b), and 800.16(i).

EPA Finding of Effect

Consistent with substantive portions of section 106 of NHPA (36 CFR 800.4[d][1]), EPA has applied the evaluation criteria of adverse effects and found that this proposed undertaking will not affect historic properties ("no historic properties affected").

We look forward to receiving your concurrence on the APE and our finding of "no historic properties affected" on this undertaking. Please provide any comments and concerns you have within 30 days. EPA will consider them and provide formal responses to comments. Correspondence can be submitted electronically to the EPA contact for this project. Please feel free to contact me at (202) 564-6996 or mccurdy.alaina@epa.gov.

Sincerely,



Alaina McCurdy
WIFIA Management Division
Office of Wastewater Management

Enclosures (2)

1. *CWSRF Section 106 Consultation - State Historic Preservation Office Concurrence Letters (applicable to Pure Water Monterey Groundwater Replenishment Project)*
2. *Historic Property Survey Report/Finding of Effect Expanded Pure Water Monterey Groundwater Replenishment Project: Expanded Injection Well Area and Product Water Conveyance Facilities City of Seaside and Unincorporated Monterey County, California (Basin Research Associates, December 2021)*

cc:

Jody Hack, SWRCB – DFA
Ahmad Kashkoli, SWRCB – DFA
Brian Cary, SWRCB – DFA
Lisa Machado, SWRCB – DFA
Elizabeth Borowiec, US EPA Region 9
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Julianne Polanco, SHPO

January 25, 2022

Page 7

Karen Grimmer, Monterey Bay National Marine Sanctuary

Bridget Hoover, Monterey Bay National Marine Sanctuary

Tamsen McNarie, Monterey One Water

Mike McCullough, Monterey One Water

Alison Imamura, Monterey One Water

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February 17, 2022

In reply refer to: EPA_2022_0125_001

VIA ELECTRONIC MAIL

Ms. Alaina McCurdy
WIFIA Management Division
Office of Wastewater Management
U.S. Environmental Protection Agency
Washington, D.C. 20460

RE: Section 106 consultation for the proposed Monterey One Water (M1W) Expanded Pure Water Monterey Project (Expanded PWM Project), Monterey County, California.

Dear Ms. McCurdy:

The United States Environmental Protection Agency (EPA) is consulting with the State Historic Preservation Officer (SHPO) to comply with Section 106 of the National Historic Preservation Act of 1966 (as amended) and its implementing regulation at 36 CFR Part 800. The EPA is requesting SHPO review and comments on their finding of *no historic properties affected*.

The EPA is considering issuing funds through their Water Infrastructure Finance and Innovation Act (WIFIA) program to the Monterey One Water (applicant) for their Expanded Pure Water Monterey (PWM) Project (undertaking) within and adjacent to the City of Seaside, Monterey County, California.

The proposed undertaking will expand the Advanced Water Purification Facility and construct a new Injection Well Facility. The new Injection Well Facility would require a new 2.3-mile water conveyance pipeline from the Blackhorse Reservoir to the Expanded Injection Well Area.

The proposed undertaking also includes what the EPA refers to as the "base PWM/GWR Project." The SHPO consulted on the base PWM/GWR Project in 2016 and 2018 when the Monterey One Water secured funding through the State Water Resources Control Board (OHP file EPA_2016_0304_001). This consultation is for the Expanded Pure Water Monterey Project that the SHPO has not consulted on.

The Area of Potential Effects (APE) for the Expanded PMW Project is roughly 75 acres and includes the Expanded Injection Well Area and water conveyance pipeline to Blackhorse Reservoir. The vertical APE is 50 feet deep to account for the maximum depth of ground disturbing activities.

Along with your letter, you submitted the following document:

- *Historic Property Survey Report/Finding of Effect: Expanded Purewater Monterey Groundwater replenishment Project, Expanded Injection Well Area and Product water*

Conveyance Facilities, City of Seaside and Unincorporated Monterey County, California.
Prepared by Basin Research Associates. December 2021.

Efforts to identify historic properties that might be affected by the undertaking included a record search at the Northwest Information Center, pedestrian archaeological survey, and Native American consultation conducted by the applicant's consultant.

Native American consultation included the applicant's consultant contacting the Native American Heritage Commission (NAHC) and requesting a search of their sacred lands file and list of all tribes that have ancestral ties to the area. The NAHC responded with a negative search of their sacred lands file. The applicant's consultant sent initial consultation letters to all tribes identified by the NAHC as having ancestral ties to the area. None of the tribes expressed concern regarding the undertaking.

The EPA's identification efforts resulted in identifying no historic properties within the APE.

The EPA has made a finding of *no historic properties affected* for this undertaking and has requested SHPO review and comment. Pursuant to 36 CFR § 800.4(d)(1), **I do not object** to a finding of *no historic properties affected* for this undertaking and have no further comments.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the EPA may have additional future responsibilities for this undertaking under 36 CFR Part 800. If you require further information, please contact Jeffrey Delsescaux at (916) 445-7016 or Jeffrey.Delsescaux@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

March 10, 2022

ELECTRONIC SUBMITTAL

Leilani Takano
Assistant Field Supervisor
U.S. Fish and Wildlife Service
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, CA 93003

RE: 2016-F-0523; Request for Re-Initiate Consultation on the Section 7 Endangered Species Act Compliance for Monterey One Water Expanded Pure Water Monterey (PWM) Project (Expanded PWM Project) (the Project)

Dear Ms. Takano:

The U.S. Environmental Protection Agency's (EPA) Water Infrastructure Finance and Innovation Act (WIFIA) program is requesting re-initiation of consultation with the U.S. Fish and Wildlife Service (the Service) on the proposed Monterey One Water (M1W or the Agency) Expanded Pure Water Monterey (PWM) Project (Expanded PWM Project) in Monterey County, California.

The Service issued a Biological Opinion (BO; 2016-F-0523) for the base or original PWM Project on December 20, 2016 (hereafter, referred to as the PWM BioOp). The Expanded PWM Project incorporates new components and areas of disturbance (see below); therefore, M1W prepared a Biological Assessment to document the changes to effects on special status species.

WIFIA was signed into law in 2014 and authorized the WIFIA program to be managed by EPA Headquarters. WIFIA was amended by section 1445 of the Fixing America's Surface Transportation Act of 2015 and section 5008 of the Water Infrastructure Improvements for the Nation Act of 2016. WIFIA is a federal credit program for eligible water and wastewater infrastructure projects. EPA selected Monterey One Water to submit an application for credit assistance for the Expanded PWM Project.

The Agency is also applying for Clean Water State Revolving Funds from the California State Water Resources Control Board, and Title XVI (WaterSMART) Funding from the U.S. Bureau of Reclamation for specified components of the Project: (1) Product Water Conveyance Facilities and Injection Well Facilities, and (2) modifications to the existing Advanced Water Purification Facility (AWPF), see Project Description, below.

Summary of Pure Water Monterey Biological Opinion

The PWM BioOp concluded that the base PWM/GWR Project would not likely jeopardize the continued existence of the California red-legged frog (*Rana draytonii*), the Monterey spineflower (*Chorizanthe pungens* var. *pungens*), or the Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*). The PWM BioOp determined the potential for incidental take of the California red-legged frog and required avoidance and minimization measures. The incidental take statement in the PWM BioOp specifies that if three (3) California red-legged frogs are found dead or injured, or if ten (10) are captured and relocated, USEPA must make immediate contact with the USFWS office to reinitiate formal consultation.

The incidental take statement does not apply to listed plant species; however, protection of listed plants is provided, namely it required substantial series of avoidance and minimization measures to limit the PWM Project's adverse effects on plant species. These include best management practice that shall be implemented during all identified phases of construction including but not limited to an Employee Education Program, construction monitoring, protective fencing of trees and vegetation, restoration of disturbed areas, erosion control techniques, on-site spill plan and containment measures, and refueling or maintenance of vehicles within a specified staging area. These measures are described in more detail below as they are also applicable to the Expanded PWM Project. The avoidance and minimization measures are the same as the mitigation measures that M1W adopted in their Mitigation Monitoring and Reporting Program (approved in November 2021) for the Expanded PWM Project.

The PWM BioOp assumes that Monterey spineflower and Monterey gilia occurrences within designated development parcels at the Fort Ord base would be lost and determined that such loss would not jeopardize either species.

Expanded PWM Project Description and Purpose

The base PWM/GWR Project is constructed and operational. In addition to the base PWM/GWR Project, the following additional components would be constructed and operated if the WIFIA loan or alternative financing is approved.

AWPF Expansion Component. The changes to the PWM/GWR Project to create the Expanded PWM Project would expand the AWPF peak capacity from 5 million gallons per day (mgd) to 7.6 mgd and increase recharge of the Seaside Groundwater Basin by an additional 2,250 AFY (for a total average yield of 5,750 AFY). Modifications would include installation of additional treatment and pumping equipment, chemical storage, pipelines, and facility appurtenances within the 3.5-acre existing building area. No new ground disturbance nor changes to the AWPF buildings or overhanging canopies are proposed as part of the Expanded PWM Project. All ground disturbance and construction of structures occurred during construction of the base project in 2018 to 2019. Ground disturbance, concrete work, and building/canopy construction, including the depth and heights of construction and permanent facilities, are not being modified for the Expanded PWM Project. A detailed description is provided in Enclosure 1.

Injection Well Facilities Phase 4 (incl. Conveyance Facilities). The changes to implement the Expanded PWM Project would include construction and operation of additional product water conveyance facilities, specifically, a new product water conveyance pipeline and appurtenances extending from the existing Blackhorse Reservoir to an Expanded Injection Well Area. The southern portion of the pipeline would be located within the existing paved area of Eucalyptus Road. The Expanded Injection Well area will include

construction and operation of additional Injection Well facilities (incl. two deep injection wells, electrical and mechanical equipment), additional monitoring well, and an additional backflush pipelines and percolation basin. A detailed description is provided in Enclosure 1, Section 1.3.

The Expanded PWM Project purpose is to replace and augment water supplies for the Monterey Peninsula area customers of California American Water Company by expanding the base PWM/GWR Project advanced water purification facility and injection capacities. This project will benefit the Carmel River flows and habitat, including for California red-legged frog and south-central coast California steelhead. With the increased capacity, M1W would also be able to divert additional excess secondary effluent currently being discharged to the ocean; thereby, reducing pollutant loads to the Monterey Bay.

Project Location and Habitat

The changes to the base PWM/GWR Project to create the Expanded PWM Project are located in northern Monterey County, within unincorporated parts of the county adjacent to the City of Seaside and within the city itself, as shown in Enclosure 1 (Figures 1 and 2).

Expanded Advanced Water Purification Facility: The AWPf is located in the northwest corner of the larger Regional Treatment Plant (RTP), shown in the PWM/GWR Final EIR as being within an Urban and Developed landscape unit due to existing structures and development, although the surrounding area is generally located in the Agricultural landscape unit. The site is characterized by large scale public utility/industrial-looking tanks and structures. The 2010 Monterey County General Plan classifies this site as Public/Quasi-Public. The area next to the AWPf contains industrial-type wastewater and solid waste management equipment and facilities similar to the PWM Project facilities, including the Monterey Regional Waste Management District Landfill, leased land on which composting and other industrial-type operations occur, and row crops (strawberries) to the west and south.

Product Water Conveyance Pipeline and Expanded Injection Well Facilities: The product water conveyance pipeline component is primarily within the Urban and Developed landscape unit, except for the northern most part, which would be constructed within an existing dirt road, and a portion of the alignment located near the area of the Expanded Injection Well Facilities. Although the northern part of the alignment is located within an existing disturbed area, the area immediately surrounding the existing dirt road is within the Coastal Scrub landscape unit. Similarly, the southern part of this modification would also be located within the Coastal Scrub landscape unit. The remaining part of the alignment located within the right of way of the existing paved portions of Eucalyptus Road is within the Urban and Developed landscape unit. In the 2010 Monterey County General Plan, specifically the Fort Ord Master Plan, the Product Water Conveyance Pipeline is designated as Low Density Residential and School/University. In the 2003 City of Seaside General Plan, the Product Water Conveyance Pipeline location is designated as Medium Density Residential. The existing visual character of the Injection Well Facilities site is characterized to be in the Coastal Scrub landscape unit. the visual character of the Expanded Injection Well Area is similar. The Expanded Injection Well Area has historically been disturbed by former military training operations and environmental remediation activities. The Expanded Injection Well Facilities Area is designated as Low-Density Single Family Residential in the 2003 Seaside General Plan.

Identified Listed Species and Critical Habitats

Surveys for special-status species and biological resources were conducted for species on the Information for Planning and Conservation (IPaC) species list, and the surveys identified three federally listed flowering plant species which are known or have the potential to occur within the Action Area, the endangered Monterey gilia, endangered Yadon's piperia (*Piperia yadonii*), and threatened Monterey spineflower. No federally listed wildlife species nor critical habitat is known or have the potential to occur within the Action Area and/or be affected by the Project. However, several avian species protected under the Migratory Bird Treaty Act are known or have the potential to occur within the Action Area. The IPaC is included in Appendix A of Enclosure 1.

Monterey gilia is a federally Endangered, state Threatened, and California Native Plant Society (CNPS) California Rare Plant Rank (CRPR) 1B species that blooms from April through June typically found in sandy openings of maritime chaparral, cismontane woodland, coastal dune and central coastal scrub habitats. Botanical surveys conducted for the Expanded PWM/GWR Project Supplemental EIR documented 22 polygons of Monterey gilia, totaling approximately 0.1 acre and 35 points within the Focused Botanical Survey Area (FBSA). The Proposed Action will have **no effect** on Monterey gilia as the project proponent is committed to modifying project design to avoid all impacts to this species.

Yadon's piperia is a federally Endangered perennial herb that blooms from May through August known to occur in sandy soils in coastal bluff scrub, closed-cone coniferous forest, and maritime chaparral at elevations of 10-510 meters. No specimen was identified in the FBSA during surveys conducted in 2019, however, suitable habitat is present in un-surveyed areas. Project design features and avoidance and minimization measures adopted as part of the Project MMRP will reduce the effects of the Project on Yadon's piperia, however, construction activities **are likely to adversely affect** Yadon's piperia **if** they are documented in protocol-level surveys planned in spring and summer of 2022.

Monterey spineflower is a federally threatened, CNPS CRPR 1B, and Fort Ord Habitat Management Plan (HMP) species with designated critical habitat in the vicinity of the FBSA. The Monterey spineflower blooms from April to June, typically occurring on open sandy or gravelly soils on relic dunes in coastal dune, central coastal scrub, and central maritime chaparral habitats, though it can also be associated with cismontane woodlands and valley and foothill grasslands. The Expanded PWM/GWR Project Supplemental EIR identified 156 polygons of Monterey ceanothus, totaling approximately 1.3 acres and 308 points (621 individuals) within the FBSA. Project design features and avoidance and minimization measures adopted as part of the Project MMRP will reduce the effects of the Project on the Monterey spineflower, however, construction activities **are likely to adversely affect** the Monterey spineflower if they are documented in protocol-level surveys planned in spring and summer of 2022.

Various migratory bird species have a potential to nest within any of the large trees within and adjacent to the Biological Survey Area (BSA), which include individual or small clusters of cypress and coast live oak trees. As identified in Enclosure 1, migratory bird species that may be present within the Action Area include but are not limited to: common poorwill (*Phalaenoptilus nuttallii*), western meadowlark (*Sturnella neglecta*), Townsend's warbler (*Setophaga townsendii*), white-crowned sparrow (*Zonotrichia leucophrys*), California thrasher (*Toxostoma redivivum*), ash-throated fly catcher (*Myiarchus cinerascens*), tree swallow (*Tachycineta bicolor*), and California horned lark (*Eremophila alpestris actia*).

Avoidance and Minimization Measures

As concluded in Enclosure 1, the Proposed Action would potentially adversely affect special-status species due to construction of Product Water Conveyance Pipeline and Injection Well Facilities, if the species are found during protocol level surveys of the site in spring and summer of 2022 and avoidance through project design is not feasible. The BSA and Action Area are located within designated “development” parcels on the former Fort Ord, within the jurisdiction of the City of Seaside and County of Monterey. The HMP anticipates losses to these species because of redevelopment; however, with the designated reserves and corridors and habitat management requirements in place, the losses of individuals are not expected to jeopardize the long-term viability of this species or its populations on former Fort Ord.

The City of Seaside and County of Monterey, as well as all other land recipients, are required to implement HMP requirements in accordance with the deed covenants. Starting in 1997, the local jurisdictions coordinated with the Service over a period of over 20 years to prepare the Fort Ord HCP to comply with these requirements. The BA for the Original PWM/GWR Project and the subsequently issued project specific, PWM BioOp were prepared under the assumption that the HCP would be approved. Therefore, the Proposed Action for the Original PWM/GWR was required to identify sensitive biological resources that may be salvaged for use in restoration activities in habitat reserve areas, in compliance with the HMP and 2017 Programmatic BioOp. Mitigation for individual populations of these species was not a required component of the HMP or BioOp.

However, in June 2020, the local jurisdictions decided not to approve the Fort Ord HCP and not collectively pursue base-wide incidental take permits and the Service has requested that the local jurisdictions initiate the steps necessary to comply with the HMP. The County of Monterey is currently preparing their RMP and anticipates approval by the Service at the end of 2022; the status of the required RMP and Borderland Management Plan for the City of Seaside is unknown. Currently, the City of Seaside and the County of Monterey are not yet in compliance with the HMP and 2017 Programmatic BO. As such, the project applicant recognizes that additional mitigation may be required for the proposed action. Implementation of the following measures are recommended to reduce or avoid impacts of project actions to Monterey spineflower and Yadon’s piperia within the Action Area.

As the proposed project will receive Federal funding, the action agency must consult with the Service under Section 7 of the ESA. As these are plant species and any potential effects on these species will occur on non-federal lands, no take authorization is needed for the proposed action. However, the project proponents will reduce effects on these species through the implementation of the following mitigation measures:

1. The project proponents shall retain a qualified biologist to conduct protocol-level botanical surveys for federally listed plant species, including the Monterey spineflower and Yadon’s piperia within the Action Area, where impacts are anticipated. Protocol-level surveys shall be conducted by a qualified biologist at the appropriate time of year for species with the potential to occur within the site. A report describing the results of the surveys shall be

- provided to the project proponents prior to any ground disturbing activities. The report shall include but is not limited to results of the survey, and, if found the number and locations of individuals/populations identified within the Action Area. The report shall be used to influence the design of project components. The project proponents will modify the project design to the extent feasible while taking into consideration other site and engineering constraints to avoid impacts to Monterey spineflower.
2. A qualified biologist must conduct an Employee Education Program for the construction crew prior to any construction activities. A qualified biologist must meet with the construction crew at the onset of construction at the site to educate the construction crew on the following: 1) the appropriate access route(s) in and out of the construction area and review project boundaries; 2) how a biological monitor will examine the area and agree upon a method which would ensure the safety of the monitor during such activities, 3) the federally-listed species that may be present; 4) the specific mitigation measures that will be incorporated into the construction effort; 5) the general provisions and protections afforded by the Service; and 6) the proper procedures if a federally listed species is encountered within the site.
 3. Any landscaping or replanting required for the project shall not use species listed as noxious by the California Department of Food and Agriculture (CDFA).
 4. Bare and disturbed soil shall be landscaped with CDFA recommended seed mix or plantings from locally adopted species to preclude the invasion on noxious weeds in the Action Area.
 5. Construction equipment shall be cleaned of mud or other debris that may contain invasive plants and/or seeds and inspected to reduce the potential of spreading noxious weeds, before mobilizing to arrive at the construction site and before leaving the construction site.
 6. All non-native, invasive plant species shall be removed from disturbed areas prior to replanting.
 7. To mitigate impacts due to permanent above ground structures to Monterey spineflower and Yadon's piperia, the project proponents will consult with the Service and the underlying land use jurisdictions responsible for habitat management in the Monterey County Munitions Response Area (MRA) under the Environmental Services Cooperative Agreement to develop a plan to collect seed or soil containing seedbank (dependent upon the construction schedule) from Monterey spineflower and Yadon's piperia plants that will be impacted during construction for redistribution within the temporary construction easement. The project proponent will finalize the location of this seed collection and redistribution obligation in consultation with the USFWS. The project proponents will create and maintain suitable habitat using a 1:1 ratio and will monitor the area for a three-

year period to ensure success of the restoration effort. A Rare Plant Restoration Plan, approved by M1W prior to commencing construction on the component site upon which the rare plant species would be impacted, shall be prepared and implemented by a qualified biologist. The plan shall include, but is not limited to, the following:

- a. A detailed description of on-site and/or off-site mitigation areas, salvage of seed and/or soil bank, plant salvage, seeding and planting specifications, including, if appropriate, increased planting ratio to ensure the applicable success ratio. Although off-site mitigation areas may be available, the City's ordinance related to military munitions and deed restrictions prohibit exportation of soil from the site; therefore, offsite areas for mitigation may not be feasible.
- b. A description of a 3-year monitoring program, including specific methods of vegetation monitoring, data collection and analysis, restoration goals and objectives, success criteria, adaptive management if the criteria are not met, reporting protocols, and a funding mechanism.

As identified above, the project has been designed to avoid impacts to Monterey gilia where it was observed within the FSA and the project design will be modified to completely avoid impacts to Monterey gilia if found in the Action Area during future surveys. Therefore, no additional measures to mitigate effects to Monterey gilia are necessary as impacts to this species will be avoided.

Endangered or Threatened Species Evaluation

Proposed determinations are supported by the *Biological Assessment for the Re-initiation of Consultation for the Pure Water Monterey Groundwater Replenishment Project* (DD&A, October 25, 2021) in Enclosure 1.

Plant Species

USEPA has determined the Project **will not affect Monterey gilia** and is **likely to adversely affect** Monterey spineflower and Yadon's piperia, if documented in protocol-level plant surveys to be conducted in 2022.

Migratory Birds

Temporary disturbance may occur to foraging migratory birds during construction activities, and if conducted during nesting season, activities such as vegetation removal or site grading could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment. Operation of the Project is not anticipated to result in impacts to bird species protected by the MTBA. Avoidance and minimization measures adopted as part of the Project MMRP will reduce the effects of the Project on migratory birds such that the Project **may affect, but is not likely to adversely affect**, migratory birds.

Critical Habitat

As previously stated, and further detailed in Enclosure 1, there are no areas of designated critical habitat within the Action Area and thus, the Project **will not affect** critical habitat.

Ms. Leilana Takano, USFWS

March 10, 2022

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We look forward to consulting on any change to the determinations made for the Project. Please provide any comments and concerns you may have within 30 days. EPA will consider them and provide formal responses to comments. Correspondence can be submitted to the EPA contact for this Project, Alaina McCurdy at mccurdy.alaina@epa.gov or (202) 564-6996. Thank you for your review and coordination with EPA on this Project.

Sincerely,



Alaina McCurdy
WIFIA Management Division
Office of Wastewater Management

Enclosure

1. *Biological Assessment for Re-initiation of Consultation for the Pure Water Monterey Project*, prepared by Denise Duffy & Associates, March 7, 2022, including IPaC Species List

cc:

Jody Hack, SWRCB – DFA
Ahmad Kashkoli, SWRCB – DFA
Brian Cary, SWRCB – DFA
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United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE

Ecological Services
Ventura Fish and Wildlife Office
2493 Portola Road, Suite B
Ventura, California 93003



IN REPLY REFER TO:
2022-0061436-S7

August 17, 2022

Alaina McCurdy
Office of Wastewater Management
U.S. Environmental Protection Agency
1301 Constitution Avenue, Northwest
Washington, D.C. 20460

Subject: Reinitiation of Formal Consultation on Monterey One Water's Expanded Pure Water Monterey Project, Monterey County, California

Dear Alaina McCurdy:

This document transmits the U.S. Fish and Wildlife Service's (Service) reinitiated biological opinion based on our review of Monterey One Water's Expanded Pure Water Monterey Project (project) and its effects on the federally threatened Monterey spineflower (*Chorizanthe pungens* var. *pungens*) and the reinitiated informal consultation on project effects to the federally endangered Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*). This biological opinion is issued in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 et seq.).

The U.S. Environmental Protection Agency (EPA) is requesting reinitiation of consultation for the project, which is proposed for funding under the Water Infrastructure Finance and Innovation Act (WIFIA) program. The U.S. Fish and Wildlife Service issued a biological opinion (2016-F-0523) for the original project on December 20, 2016, and we have updated pertinent sections of that document as it relates to new project activities, and hereby incorporate by reference the original biological opinion (Service 2016) into this reinitiated biological opinion.

We received your March 3, 2022, request for consultation via electronic mail on that same date. We received additional information, which was required in order to complete the consultation, on June 15, 2022. We have based this biological opinion on information that accompanied your March 3, 2022, request, the revised biological assessment (BA) (DD&A 2022), and information in our files.

Not Likely to Adversely Affect Determination

The EPA's request for consultation also included the determination that the proposed action may affect, but is not likely to adversely affect the federally endangered Monterey gilia.

Avoidance and Minimization Measures:

1. A qualified biologist will conduct an Employee Education Program for the construction crew prior to any construction activities. The Program will include the following: 1) the appropriate access route(s) and review of project boundaries; 2) the federally listed species that may be present; 3) conservation measures that are intended to protect federally listed species; and 4) proper procedures to follow if a federally listed species is encountered within the site.
2. Exclusionary fencing or flagging will be installed to keep construction personnel out of Monterey gilia habitat. A qualified biologist will supervise fence and flagging installation and ensure it remains intact through weekly monitoring.
3. Bare and disturbed soils will be landscaped with California Department of Fish and Wildlife recommended seed mix or plantings from locally adapted species.
4. Prior to arriving at the site, construction equipment will be cleaned of mud and debris to reduce the potential of spreading noxious weeds.
5. All non-native, invasive plant species will be removed from disturbed areas prior to replanting.

After reviewing the information provided, we concur with your determination that the proposed action may affect, but is not likely to adversely affect the Monterey gilia. Our concurrence is based on the following:

1. Surveys in 2019 and 2022 did not detect any Monterey gilia in the action area.
2. The EPA and project proponent commit to implement several avoidance and minimization measures.

Our concurrence with the determination that the proposed action is not likely to adversely affect the Monterey gilia is contingent on the measures outlined above being implemented by the EPA or project proponent. If the EPA or project proponent fails to implement these measures, we will consider our concurrence invalid. If the proposed action changes in any manner or if new information reveals the presence of listed species in the project area, you should contact our office immediately and suspend all project activities until the appropriate compliance with the Act is completed.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Monterey One Water (M1W) proposes to implement the project, which would provide an additional 2,250 acre-feet per year (AFY) of purified recycled water for injection into the Seaside Groundwater Basin for subsequent extraction. In order to provide an additional 2,250 AFY of treated water, M1W proposes to expand project facilities including improvements at the existing Advanced Water Purification Facility to increase peak capacity; additional water conveyance facilities; additional injection well facilities, including the relocation of previously approved facilities to a new injection well area; additional monitoring wells, including the relocation of a previously approved monitoring well; and new potable water facilities consisting of four new extraction wells, related pipelines, and treatment facilities. Please refer to the BA (DD&A 2022) for a detailed description of project activities. Construction is anticipated to begin in October 2022 and be completed in 2024.

Conservation Measures

1. A qualified biologist will conduct an Employee Education Program for the construction crew prior to any construction activities. The Program will include the following: 1) the appropriate access route(s) and review of project boundaries; 2) the federally listed species that may be present; 3) conservation measures that are intended to protect federally listed species; and 4) proper procedures to follow if a federally listed species is encountered within the site.
2. Exclusionary fencing or flagging will be installed to keep construction personnel out of sensitive habitat. A qualified biologist will supervise fence and flagging installation and ensure it remains intact through weekly monitoring.
3. Bare and disturbed soils will be landscaped with California Department of Fish and Wildlife recommended seed mix or plantings from locally adapted species.
4. Prior to arriving at the site, construction equipment will be cleaned of mud and debris to reduce the potential of spreading noxious weeds.
5. All non-native, invasive plant species will be removed from disturbed areas prior to replanting.
6. All permanent and temporary impacts to Monterey spineflower and its habitat will be compensated for through the development of a Rare Plant Restoration Plan (Plan), that is approved by the Service prior to project implementation. The Plan intends to compensate for permanent and temporary impacts to individuals observed during survey efforts in 2019 and 2022, at a 1:1 ratio, which will be monitored for a minimum 3-year period.

ANALYTICAL FRAMEWORK FOR THE JEOPARDY DETERMINATION

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 relies on four components: (1) the Status of the Species, which describes the current rangewide condition of the Monterey spineflower, and the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the Monterey spineflower in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the Monterey spineflower; (3) the Effects of the Action, which determines all consequences to the Monterey spineflower caused by the proposed action that are reasonably certain to occur in the action area; and (4) the Cumulative Effects, which evaluates the effects of future, non-Federal activities, that are reasonably certain to occur in the action area, on the Monterey spineflower.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the current status of Monterey spineflower, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both its survival and recovery in the wild by reducing the reproduction, numbers, and distribution of the species.

STATUS OF THE SPECIES

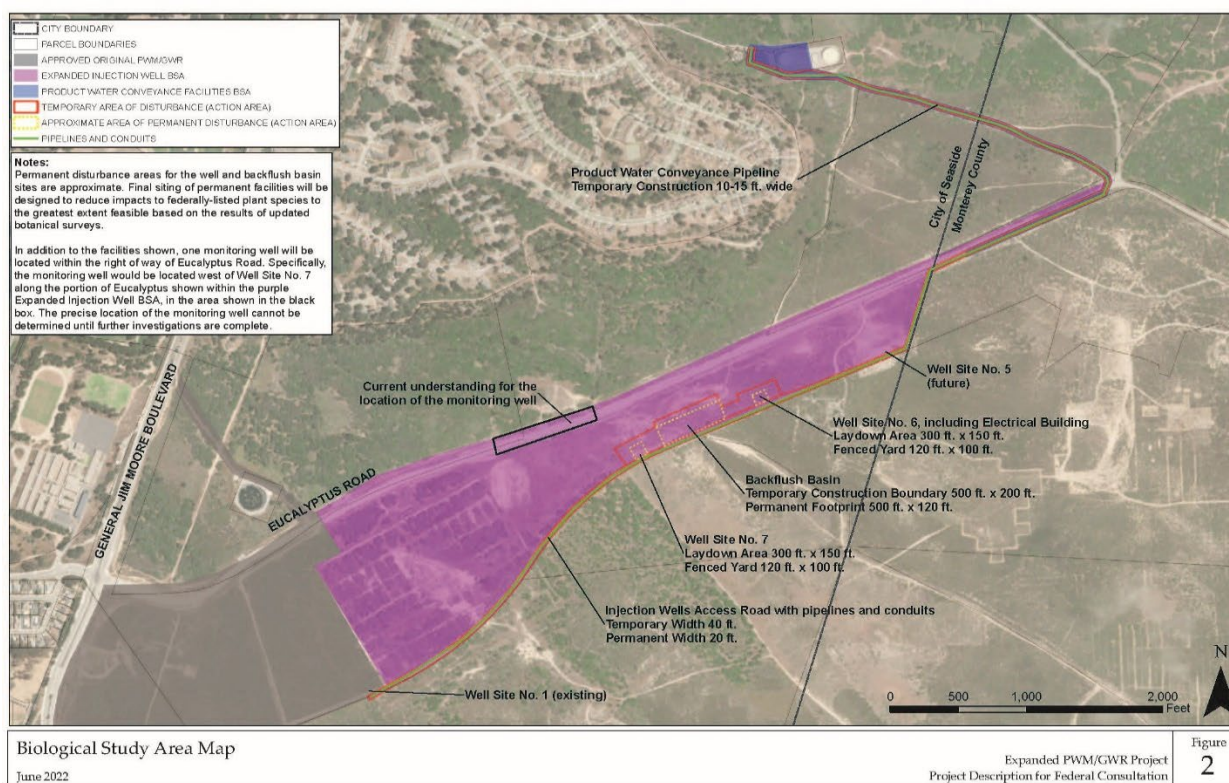
Our original biological opinion (2016-F-0523) (Service 2016, pp. 24-26) includes the status of the species and is hereby incorporated by reference.

ENVIRONMENTAL BASELINE

Action Area

The implementing regulations for section 7(a)(2) of the Act (50 CFR 402.02) define the “action area” as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. The action area includes all areas where permanent and temporary impacts are expected to occur, including all areas that would be involved in restoration activities. Please refer to the figure below (Biological Study Area Map, Figure 2) from the biological assessment (DD&A 2022) for detailed mapping of the action area. Our original biological opinion (Service 2016) describes previous consultations in the action area

(former Fort Ord), general habitat characteristics, and recovery of the species on the former Fort Ord (Service 2016 pp. 29-31), which are applicable to this project, and are hereby incorporated by reference.



Condition (Status) of Monterey Spineflower in the Action Area

Monterey spineflower has been observed within and adjacent to the action area during survey efforts in 2019 and 2022. Please refer to the BA (DD&A 2022, appendix B2-B15) for detailed mapping of Monterey spineflower occurrences in the action area. Occurrences were observed within central maritime chaparral, central coastal scrub, coast live oak woodland, and ruderal habitats.

EFFECTS OF THE ACTION

The implementing regulations for section 7(a)(2) define effects of the action as “all consequences to listed species 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” (50 CFR 402.02).

All habitat occupied by Monterey spineflower within the action area (0.2 acre) could be disturbed by project activities. Approximately 0.13 acre of temporary impacts and 0.07 acre of permanent impacts are expected to result from implementation of the project. Temporary and permanent losses of Monterey spineflower individuals would be compensated for at a 1:1 ratio through implementation of the rare plant restoration plan.

We do not expect that the proposed action would substantially affect recovery of the Monterey spineflower. At worst, the project could result in the disturbance or loss of approximately 0.2 acre of occupied habitat. These small effects would be reduced by implementation of a rare plant restoration plan that would compensate for impacts at a 1:1 ratio.

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. We do not consider future Federal actions that are unrelated to the proposed action in this section because they require separate consultation pursuant to section 7 of the Act. At this time, we are unaware of any non-Federal actions that are reasonably certain to occur in the action area.

CONCLUSION

Our conclusion is unchanged from the original biological opinion (Service 2016, pp. 36-37). It is the Service’s biological opinion that EPA’s proposed funding of the Monterey One Water’s Expanded Pure Water Monterey Project, is not likely to jeopardize the continued existence of the Monterey spineflower.

INCIDENTAL TAKE STATEMENT

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species; however, limited protection of listed plants is provided at section 9(a)(2) to the extent that the Act prohibits the removal and reduction to possession of federally listed plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of listed plants on non-Federal areas in violation of State law or regulation or in the course of a violation of a State criminal trespass law.

Additionally, the EPA must continue to comply with the incidental take statement of our previous biological opinion including the specified take levels at which formal consultation for the California red-legged frog (*Rana draytonii*) must be reinitiated (Service 2016, pp. 38-40), hereby incorporated by reference.

REPORTING REQUIREMENTS

Pursuant to 50 CFR 402.14(i)(3), the EPA must comply with the reporting requirements outlined in the original biological opinion's incidental take statement (Service 2016, p. 41), which is hereby incorporated by reference. The report(s) should be sent to fw8venturasection7@fws.gov, and must describe all activities that were conducted under this biological opinion, including activities and conservation measures that were described in the proposed action and required under the terms and conditions, and discuss any problems that were encountered in implementing conservation measures or terms and conditions and any other pertinent information.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use 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. In addition to the conservation measures recommended on page 42 of the original biological opinion (Service 2016), we recommend the following:

1. As a Federal agency subject to section 7(a)(1) of the Act, the EPA should promote the conservation of all federally listed species under the Act. Mitigation that is intended to offset take of listed species or the loss of their habitat should not only offset the effects of the proposed action, but promote the recovery of listed species. We are available to assist you in developing appropriate mitigation or you may use the Service's recovery plans and 5-year reviews where we outline actions needed to promote conservation of listed species. The Act defines "conservation" as "to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary."

The Service requests notification of the implementation of any conservation recommendations so we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats.

REINITIATION NOTICE

This concludes formal consultation on the proposed action outlined in the reinitiation request. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances

where the amount or extent of incidental take is exceeded, the exemption issued pursuant to section 7(o)(2) may have lapsed and any further take could be a violation of section 4(d) or 9. Consequently, we recommend that any operations causing such take cease pending reinitiation.

If you have any questions about this biological opinion, please contact Chad Mitcham of my staff by electronic mail at chad_mitcham@fws.gov.

Sincerely,

Stephen P. Henry
Field Supervisor

LITERATURE CITED

- [DD&A] Denise Duffy and Associates. 2022. Biological Assessment for the U.S. Fish and Wildlife Service, Pure Water Monterey Groundwater Replenishment Project. Re-initiation of Consultation. Monterey, California.
- [Service] U.S. Fish and Wildlife Service. 2016. Biological Opinion for Pure Water Monterey Groundwater Replenishment Project, Monterey County, California (2016-F-0523). Ventura Fish and Wildlife Office, Ventura County, California.
- [Service] U.S. Fish and Wildlife Service. 2021. 5-Year Review. White-rayed Pentachaeta (*Pentachaeta bellidiflora*). U.S. Fish and Wildlife Service, Sacramento, California. 8 pp.