

NORTH BAY WATER RECYCLING PROGRAM

North Marin Water District Recycled Water Expansion Project
South Service Area Project - Supplemental Environmental
Assessment to the Environmental Impact Statement and
Addendum to the Environmental Impact Report

North Marin Water District
US Bureau of Reclamation and
State Water Resources Control Board

August 2011



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CHAPTER 1

Introduction

1.1 Introduction

The North Marin Water District (NMWD) has prepared this Supplemental Environmental Assessment (EA) to the Environmental Impact Statement (EIS) and Addendum to the Environmental Impact Report (EIR) to address proposed changes to the approved North Bay Water Recycling Program (NBWRP) ¹ Phase 1 Implementation Plan, analyzed in the Environmental Impact Report/ Environmental Impact Statement (NBWRP EIR/EIS) (SCH No. 2008072096). This document is intended to satisfy requirements under both the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and to provide project-specific environmental documentation for the project elements proposed under a Clean Water State Revolving Fund (CWSRF) Program Application, required for review by the State Water Resources Control Board (SWRCB).

1.2 Overview of Proposed Action

The process of finalizing the design of the South Service Area Project has resulted in minor changes to the pipeline distribution system alignment within roadways in the Hamilton Area. Specific route changes are described in **Section 2, Project Description**.

1.3 Background and Approved Projects

NBWRA is a cooperative program established in the San Pablo Bay region under a Memorandum of Understanding in August 2005 that supports sustainability and environmental enhancement by expanding the use of recycled water. NBWRA is comprised of the following participating agencies: Las Gallinas Valley Sanitary District (LGVSD), Novato Sanitary District (Novato SD), Sonoma Valley County Sanitation District (SVCSD), Napa Sanitation District (Napa SD), Napa County, Sonoma County Water Agency (SCWA), and NMWD. NMWD provides water to a population of 61,000 in and around city of Novato in Marin County.

NBWRA developed the NBWRP in conformance with the requirements of the Reclamation's Public Law 102-575, Title XVI, which provides a mechanism for federal participation and cost-sharing in approved water reuse projects. Providing federal funding to implement the NBWRP

¹ Formerly known as the North San Pablo Bay Restoration and Reuse Project. State Clearinghouse No. 2008072096.

was a Federal action, and therefore a joint EIR/EIS was prepared to comply with the National Environmental Policy Act (NEPA).

NMWD participated with NBWRA Member Agencies, in coordination with the United States Department of Interior, Bureau of Reclamation (Reclamation) to prepare the Draft EIR for the NBWRP in May, 2009. Sonoma County Water Agency as the CEQA lead agency certified the EIR as complete and adequate under CEQA on December 8, 2009. Each Member Agency then approved the Phase 1 Project under its jurisdiction; prepared and adopted written findings of fact for each significant environmental impact identified in the EIR; made a Statement of Overriding Considerations, as needed (discussed below); and adopted a Mitigation Monitoring and Reporting Program. As a CEQA Responsible Agency, NMWD approved the projects in its service area (i.e., the North, Central, and South Novato Service Areas) on December 15, 2009.² The projects under the NBWRP that were proposed (and approved) by NMWD, and will be implemented in partnership with LGVSD³ are located in the Novato South Service Area. NMWD has previously partnered with LGVSD to implement recycled water projects in their collective service areas.

Reclamation issued a final EIS for the NBWRP on June 7, 2010 and signed a Record of Decision on January 28, 2011.

The North Bay Water Recycling Project Phase 1 Implementation Plan, Environmental Impact Report/ Environmental Impact Statement (SCH No. 2008072096), certified by Sonoma County Water Agency, December 2009, prepared by Environmental Science Associates for North Bay Water Reuse Authority, 2009, is incorporated by reference in this Draft Supplemental EA/Addendum and is available for review to gain an understanding of previously completed Master Planning efforts and environmental documents completed by the North Bay Water Reuse Authority (NBWRA) Member Agencies and applicable to the Proposed Action.

1.4 Regulatory Environment

This Supplemental EA/Addendum addresses minor changes in the alignment of distribution facilities examined in the NBWRP EIR/EIS pursuant to NEPA and CEQA requirements, described below.

1.4.1 NEPA Compliance

In accordance with the Council of Environmental Quality (CEQ) NEPA regulations, an Environmental Assessment (EA) provides the federal Lead Agency, Reclamation, with evidence and analysis to determine whether a full Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) is required; and determine if a proposed action may result in significant adverse effects on the environment. Consistent with CEQ regulations, this EA describes the purpose and need for the proposed modifications to the originally approved action

² A copy of the Notice of Determination is provided in **Appendix 1**.

³ The LGVSD wastewater treatment plant (WWTP) provides sanitation service to approximately 30,000 people within the area of Marinwood, Lucas Valley, Terra Linda, Santa Venetia, Los Ranchitos, and Smith Ranch Road.

and probable environmental impacts. Reclamation will use this EA to supplement the previously prepared NBWRP EIR/EIS, and support a FONSI for the proposed modified action.

1.4.2 CEQA Compliance

Pursuant to CEQA Section 15164, the lead or responsible agency may prepare an addendum to a previously certified EIR if changes or modifications are necessary, but none of the conditions calling for preparation of a subsequent EIR have occurred (CEQA Guidelines §15164). A brief explanation of the decision not to prepare a subsequent or supplemental EIR should be included in an addendum or elsewhere in the record (CEQA Guidelines §15164(e)). Once an EIR has been certified, a subsequent EIR is only required when the Lead Agency determines that one of the following conditions has been met:

1. Substantial changes are proposed in the project, or substantial changes occur with respect to the circumstances under which the project is undertaken, which require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects (CEQA Guidelines §15162(a)(1), (2));
2. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR;
 - b. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative (CEQA Guidelines §15162(a)(3)).

The minor alteration of the distribution facility alignments in the South Service Area Project area would not trigger any of the above conditions; therefore preparation of a subsequent or supplemental EIR is not required. As previously noted in Section 1.2, the SWRCB will use this addendum with the EIR/EIS to consider the environmental effects of the project as described in the CWSRF Application.

1.4.3 State Water Resources Control Board Consideration

Additionally, to implement the approved projects in the Novato South Service Area (Hamilton Area), NMWD is applying for a loan under the CWSRF administered by the SWRCB. As part of the CWSRF application process, NMWD has prepared this Supplemental EA/Addendum to comply with the SWRCB's CEQA-Plus requirements, in support of NMWD's CWSRF Application (herein termed as the South Service Area Project). As further described in **Section 2**,

Project Description, the South Service Area Project includes construction of treatment and conveyance facilities within the Novato South Service Area. The treatment and pumping facilities would be funded separately by LGVSD, and are presented as part of this project description to provide analysis for the “whole of the action”.⁴

As a funding agency overseeing the CWSRF program, and a state agency with jurisdiction by law to preserve, enhance, and restore the quality of California’s water resources, the State Water Resources Control Board (SWRCB) is a Responsible Agency under CEQA. The CWSRF Program is partially funded by the U.S. Environmental Protection Agency (USEPA), and requires “CEQA-Plus” environmental documentation and review. As provided for in Section 15096(f) of the CEQA Guidelines, a responsible agency must consider the environmental effects of the project as shown in the EIR. As noted in its comment letter to the Final NBWRP EIR/EIS, received July 20, 2010, the SWRCB requests that the individual member agencies specify the need for a Statement of Overriding Considerations (SOC) to be adopted for any adverse significant and unavoidable impacts. For each project to be funded by the CWSRF Program, each applicant must certify the EIR/EIS and make CEQA Findings of Fact, as well as adopt a Mitigation Monitoring and Reporting Program and a SOC that pertain to the specific funded project.⁵ As noted above, NMWD completed project approval and made CEQA Findings on December 15, 2009. This Addendum has been prepared in order to meet environmental requirements of the CWSRF Program administered by the SWRCB to support environmental findings, as described in the CWSRF Application.

1.5 Purpose of Proposed Modifications

Based upon subsequent engineering and design efforts, NMWD proposes to modify the transmission and distribution pipeline alignment in the Hamilton Area within the Novato South Service Area. This modification is required in order to provide connections for recycled water users, with consideration of willingness of landowners to grant easements, and construction access limitations. Therefore, the District has prepared this addendum to the EIR/EIS to review this proposed alignment modification within the context of the previous analysis provided in the EIR/EIS. A full description of proposed modification is provided in **Section 2, Project Description**.

1.6 Project Objectives

The purpose of the NBWRP, including NMWD’s South Service Area Project (the subject of this Addendum), is to promote the expanded beneficial use of recycled water in the North Bay region to achieve the following objectives:

-
- ⁴ NMWD has an existing pending CWSRF Application No. 5211-110 for a separate project that would be implemented in the Novato North Service Area. The Novato North Service Area Project is the portion of the NBWRP Phase 1 Implementation Plan within NMWD jurisdiction, in partnership with Novato Sanitary District. The SWRCB review as part of the CWSRF process is pending. The schedule for this project is separate from the project that is the subject of this addendum.
 - ⁵ Copies of the Findings of Fact, Mitigation Monitoring and Reporting Program (MMRP), and Statement of Overriding Considerations are provided in **Appendix 2**.

- Offset urban and agricultural demands on potable water supplies;
- Enhance local and regional ecosystems;
- Improve local and regional water supply reliability;
- Maintain and protect public health and safety;
- Promote sustainable practices;
- Give top priority to local needs for recycled water, and;
- Implement recycled water facilities in an economically viable manner.

1.7 Overview of the Approved Project under the NBWRP

The Novato South Service Area Project was included in the Phase 1 Implementation Plan to provide approximately 204 acre-feet per year of recycled water service to the Hamilton Field area. Service to the Hamilton Field area would be established through implementation of a of 0.7 million gallons per day (mgd) tertiary treatment upgrade at the LGVSD WWTP⁶, construction of a new booster pump station onsite (increased 72 horsepower of pumping capacity), and construction by NMWD of a pipeline distribution system from the LGVSD WWTP north to serve the Hamilton Field area (**Figure 1**). This system would consists of a loop of 6-inch pipeline along South Oakwood Drive, Crescent Drive, and Casa Grande Drive, a 12-inch pipe along Hangar Avenue to South Palm Drive, and a 10-inch pipe on Palm Drive. Recycled water storage would be provided by retrofit of the existing 0.5-million gallon (MG) Reservoir Hill Tank. The EIR/EIS examines three potential route options for the pipeline between LGVSD WWTP and the Hamilton Field area. Ultimately, Option C, shown in Figure 1, was selected as the preferred route, approved under the Phase 1 project, and incorporated into the federal USFWS Biological Opinion and Section 106 consultation processes. Chapter 3 of the NBWRP EIR/EIS presented a discussion of impacts of the NBWRP for the following resource areas: Land Use and Planning, Geology, Soils, and Seismicity, Hydrology, Water Quality, Biological Resources, Cultural Resources, Transportation and Traffic, Air Quality, Noise, Hazards and Hazardous Materials, Visual Resources, Recreation, Environmental Justice, and Socioeconomics. Impacts for each of the issue areas were found to be less than significant or less than significant with incorporation of identified mitigation. The mitigation measures were adopted by NMWD as part of project approval process in December 2009 and would be applicable to the Novato South Service Area Project described in this Addendum.

⁶ To provide the additional 0.7 mgd treatment capacity, tertiary treatment facilities and a pump station would be constructed within the fenceline of the existing LGVSD WWTP. This portion of the project is within LGVSD jurisdiction, was previously analyzed in the NBWRP EIR/EIS, and is not part of this CWSRF application; however is presented in this context to disclose the “whole of the action”.

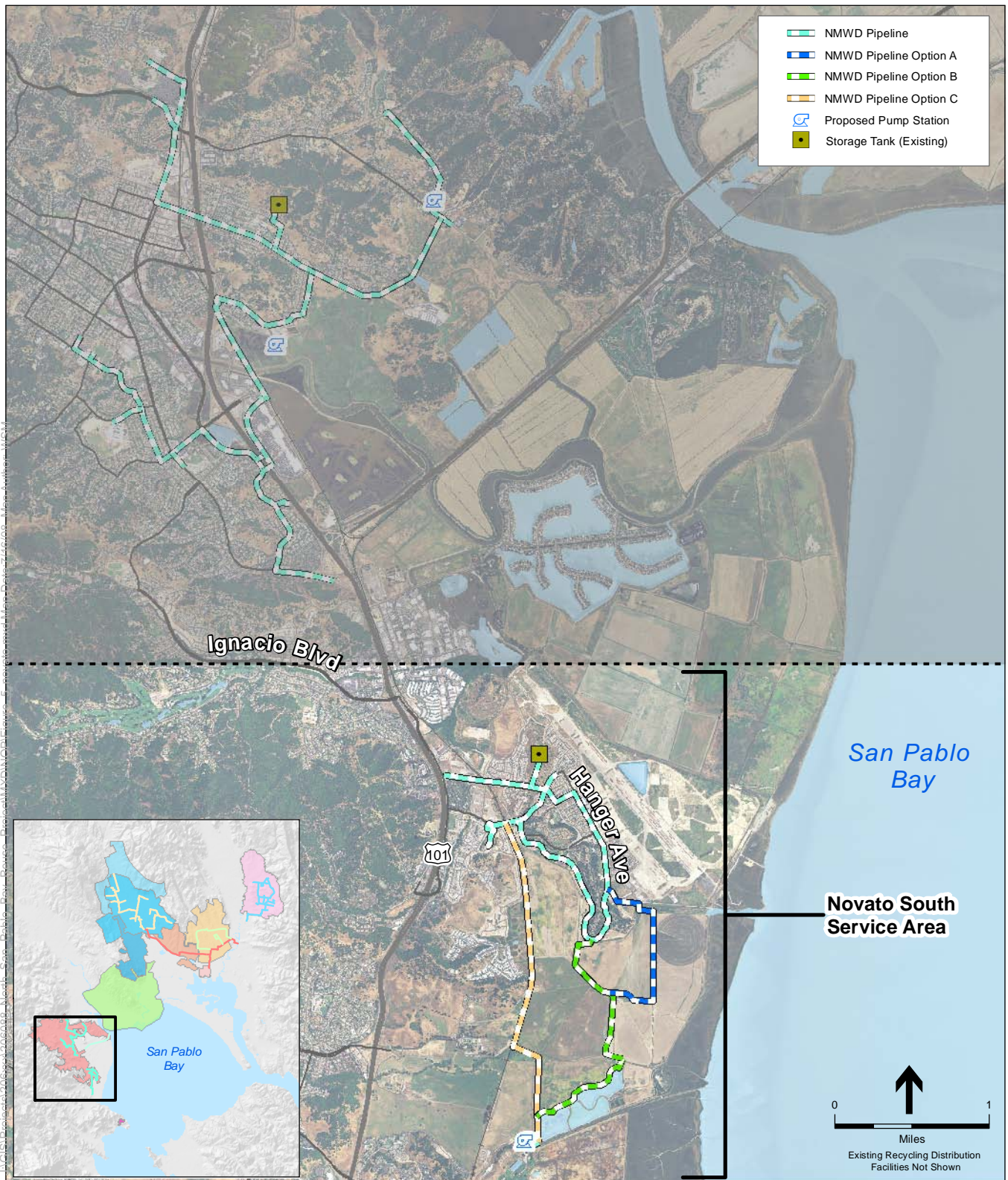
1.8 NBWRP EIR/EIS Findings and Statement of Overriding Considerations

As part of the project approval process, each Member Agency, including NMWD, made Findings of Fact regarding the NBWRP in December 2009 in support of the Draft EIR/EIS and the Final EIR/EIS for the NBWRP. As provided for under CEQA 15096 (a) and (f), NMWD approved the NMWD Recycled Water Expansion Project, including the North, Central, and South Novato Service Area Projects on December 15, 2009. To support this consideration and a decision on the project, NMWD prepared written findings for each impact identified in the EIR/EIS in accordance with the CEQA Guidelines §§ 15091, 15096(h). The Findings included a Statement of Overriding Considerations for any significant and unavoidable impacts associated with NBWRP.

The NBWRP (including the CWSRF Application project components) would provide recycled water for urban, agricultural, and environmental uses, and as such, would contribute to the provision of adequate water supply to support a level of growth that is consistent with the amount planned and approved within the General Plans of Marin, Sonoma and Napa Counties. No appreciable growth in population or employment would occur as a direct result of construction or operation of the proposed facilities. However, development under the General Plans accommodated by NBWRP would result in secondary environmental effects, which include effects that would be significant and unavoidable. Within the NMWD Service Area, these secondary significant and unavoidable environmental effects were identified by the Marin County and City of Novato General Plan EIRs as: potential conflicts with agricultural land use or other existing land uses, permanent loss of sensitive species or habitat, alteration of drainage patterns, impacts to water supply and water quality within unincorporated Marin County⁷. The project provides a level of recycled water supply consistent with the assumptions of the approved Marin County General Plan. As previously noted, some of the above impacts will be reduced by identified mitigation measures, but the impacts may not be reduced to a less than significant level.

In considering the Recycled Water Expansion Project, NMWD weighed the benefits of the NBWRP against the project's unavoidable environmental risks and potentially significant adverse impacts. NMWD determined that the benefits of the project outweigh its unavoidable environmental risks and unmitigated adverse impacts.

⁷ As identified in the NBWRP EIR/EIS, secondary effects of growth attributable to the project could occur if buildout under the relevant General Plans occur. The project would not directly result in significant and unavoidable environmental effects.



SOURCE: ESA, 2009

Note: Existing Tank Facilities Shown

NBWR North Bay Water Recycling Program. 206088.01
Figure 1
 Approved Phase 1 Project Under NBWRP -
 Novato South Service Area

The NMWD Board, in concert with the other Member Agencies, adopted the Statement of Overriding Considerations after finding that the Project (including the CWSRF Application project components) would have certain environmental, economic, legal, social, technical, and other benefits that make the unavoidable adverse environmental impacts associated with it acceptable, and that mitigation of certain environmental impacts is in the jurisdiction of other agencies. This finding and the Statement of Overriding Considerations would remain unchanged for the Novato South Service Area Project.

1.9 Intended Use of the Document

Reclamation intends to use this Supplemental EA to identify impacts associated with provision of federal funding under Title XVI for the proposed changes in the NBWRP and to determine whether a Finding of No Significant Impact can be signed.

The SWRCB will use this Addendum, in conjunction with the approved EIR/EIS and associated permits and consultations to consider administration of CWSRF funding.

NMWD will use this Supplemental EA/Addendum to approve the South Service Area Project and make Findings regarding identified impacts. The analyses contained within this Supplemental EA/Addendum would be used to support the acquisition of the following regulatory permits or approvals if needed:

- Clean Water Act Section 404– Individual or Nationwide Permits (USACE)⁸;
- Endangered Species Act – Section 7 Consultation (USFWS);
- Section 401 Water Quality Certification (San Francisco Bay Regional Water Quality Control Board);
- National Historic Preservation Act Section 106 consultation [State Historic Preservation Office (SHPO)].

Acquisition of right-of-ways and temporary construction easements may be necessary for construction of some of the proposed facilities. Temporary construction easements would also be required for contractor staging areas and equipment and materials storage.

Responsible and Trustee Agencies

Other potential responsible and trustee agencies beyond the NBWRA Member Agencies and cooperating agencies with authority over the Proposed Action include, but are not limited to, the following: USACE, USFWS, National Oceanic and Atmospheric Administration Fisheries (NMFS), CDFG, SWRCB, San Francisco Bay Regional Water Quality Control Board (RWQCB),

⁸ Additional permit applications and federal consultations have been initiated in parallel with this Supplemental ES/Addendum schedule. A preliminary wetland delineation has been prepared and submitted to USACE. Reclamation has recommended a modification of the Area of Potential Effects to SHPO.

California State Office of Historic Preservation, California Department of Health Services, Bay Area Air Quality Management District, and Sonoma County Department of Public Works.

1.10 NBWRP EIR/EIS Federal Regulatory Consultation Summary

As part of the NBWRP EIR/EIS process, Reclamation, as the NEPA Lead Agency, participated in formal consultation with National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) and U.S. Fish and Wildlife Service (USFWS) as part of the Section 7 consultation under the Federal Endangered Species Act (ESA). Reclamation is also in consultation with the California State Historic Preservation Office (SHPO) as part of the Section 106 process under the National Historic Preservation Act. A summary of consultation status is provided below. Conditions and requirements included in the following permits are herein incorporated into the record.⁹

1. United States Fish and Wildlife Service *Biological Opinion on the Proposed North San Pablo Bay Restoration and Reuse Project in Marin, Sonoma, and Napa Counties, California*, Reference No. 81420-2009-F-1272-2, July 2010.
2. National Marine Fisheries Service, Consultation Letter of Concurrence, Reference No 2009/04759:AEM, May 6, 2010.
3. Biological Assessment/Fisheries Biological Assessment for the *North San Pablo Bay Restoration and Reuse Project (North Bay Water Recycling Program)*, Prepared by Environmental Science Associates (ESA). August 2009.
4. Draft Agreement for Sale of Ohlone Mitigation Bank Conservation Credits, May 17, 2011.
5. California State Historic Preservation Officer, Letter Regarding North Bay Water Reuse Authority Phase 1 Project, Marin, Sonoma, and Napa Counties, California, Project No. 09-CCAO-132, Reference No. BUR110214A, March 21, 2011.

Federal Section 7 Consultation – USFWS and NMFS

Section 7 consultation with USFWS was completed with the issuance of a Biological Opinion in July 2010. Key terms and conditions, and minimization and avoidance measures applicable to the entire Phase 1 Program includes crossing of all creeks using trenchless technology, and provision of compensatory mitigation for disturbance of California red-legged frog habitat. The South Service Area Project would have the potential to disturb 5.4 acres consisting of upland habitat along roadway pavement that may or may not be potentially affected by pipeline installation. Pursuant to the 0.1:1 compensatory mitigation ratio required under the Biological Opinion, NMWD will participate with other NBWRA Member Agencies to purchase the required 0.54 acres, to meet the collective obligation for habitat credits from a Service-approved conservation bank. Credits will be purchased within 6 months of ground breaking activities. SCWA, on behalf

⁹ Copies of all documents available upon request.

of NBWRA and the Member Agencies is currently developing an agreement to purchase compensatory mitigation credits.

A Biological Assessment/ Fisheries Biological Assessment (BA) was submitted by Reclamation to NMFS and USFWS August 25, 2009. Section 7 consultation with NMFS has been concluded in accordance with 50 CFR 402.13(a). Based on best available information, NMFS concurs with Reclamation's finding that the proposed project is not likely to adversely affect ESA-listed species under the jurisdiction of NMFS (concurrence letter dated May 6, 2010). Under the FWCA, Reclamation is required to consult with NMFS on projects that propose stream modification. NMFS has no FWCA recommendations for the project regarding conservation of fish and wildlife resources because NMFS has found that the project contains adequate measures to protect aquatic habitat.

National Historic Preservation Act Section 106 Consultation – State Historic Preservation Office

Due to Federal funding, the NBWRP is required to comply with Section 106 of the National Historic Preservation Act, as amended. Section 106 consultation with SHPO was completed on March 21, 2011. SHPO issued a letter of concurrence with Reclamation's finding of no significant adverse effect to historic properties and cultural resources. Section 106 requires Federal agencies to take into account effects on historic properties. NBWRA prepared Area of Potential Effects maps and a Cultural Resources Survey Report (CRSR; ESA, 2011) that includes the results of background research and surface surveys conducted in the Area of Potential Effects (APE). Reclamation required NBWRA Member Agencies to complete extended cultural resources surveys in all of the NBWRP Service Areas, including the Novato South Service Area, in order to more accurately determine whether subsurface, or otherwise obscured, portions of several sites are in fact located within the APE. Extended subsurface surveys along the proposed alignment did not identify any resources that would be affected by project implementation (ESA, 2011a).

CHAPTER 2

Project Description

2.1 South Service Area Project

The facilities identified by NMWD in the CWSRF Application for funding were included in the NBWRP EIR/EIS.¹⁰ The Novato South Service Area Project would provide approximately 204 acre-feet per year of recycled water service to the Hamilton Field area. Service to the Hamilton Field area would be established through implementation of a of 0.7 million gallons per day (mgd) tertiary treatment upgrade at the LGVSD WWTP¹¹, construction of a new booster pump station onsite (increased 72 horsepower of pumping capacity), and construction by NMWD of Option C, the transmission pipeline system from the LGVSD WWTP north to serve the Hamilton Field area. The process of finalizing the design of the South Service Area Project has resulted in minor changes to the pipeline distribution system within the Hamilton Area (**Figure 2**). These changes are shown in **Figure 2**, compared to the alignments identified in the EIR/EIS and subsequent Cultural Resources Assessment Report. **Figure 2A** shows proposed route changes, as follows:

- Pipeline would be installed to serve the Bolling Circle neighborhood and increase the distribution network west of the railroad corridor, using existing roadways. These pipeline routes are shown in light blue.
- The pipeline route to serve the “Coast Guard loop” east of the railroad would not be implemented; these pipeline routes are shown in orange.

Specific Route Changes are described below:

- Pipeline from LGVSD WWTP (Option C) to Hamilton Field would connect to Main Gate Road via a distribution extension along Bolling Circle, and Randolph Drive. This would reduce the amount of overland installation. A jack and bore under the North Pacific Railroad (east to west) would occur to tie in at Bolling Circle.
- The “Coast Guard Housing loop”, which consisted of pipeline along South Oakwood Drive and Crescent Drive, Las Lomas Drive, and Caliente Real as proposed in the EIR/EIS, would not be constructed. Rather, the distribution system would be modified to consist of a pipeline extension on San Pablo Avenue, east to Hangar Avenue.

¹⁰ Refer to Figure 1 for approved NBWRP EIR/EIS Phase 1 projects as a comparison to the proposed South Service Area Project shown in Figure 2.

¹¹ To provide the additional 0.7 mgd treatment capacity, tertiary facilities would be constructed within the fenceline of the existing LGVSD WWTP. This portion of the project is within LGVSD jurisdiction, was previously analyzed in the NBWRP EIR/EIS, and is not part of this CWSRF application; however is presented in this context to disclose the “whole of the action”.

- The distribution system has been modified to extend from Nave Drive (Highway 101 frontage road) east on Main Gate Road near Hamilton Elementary then north along C Street to Hamilton Parkway. This portion of the alignment would require one stream crossing (jack and bore) at Pacheco Creek.
- Modified alignment from Hamilton Parkway to Reservoir Hill Tank.
- A sewer lateral (tank drain/overflow line) will be installed to Altamira Court.

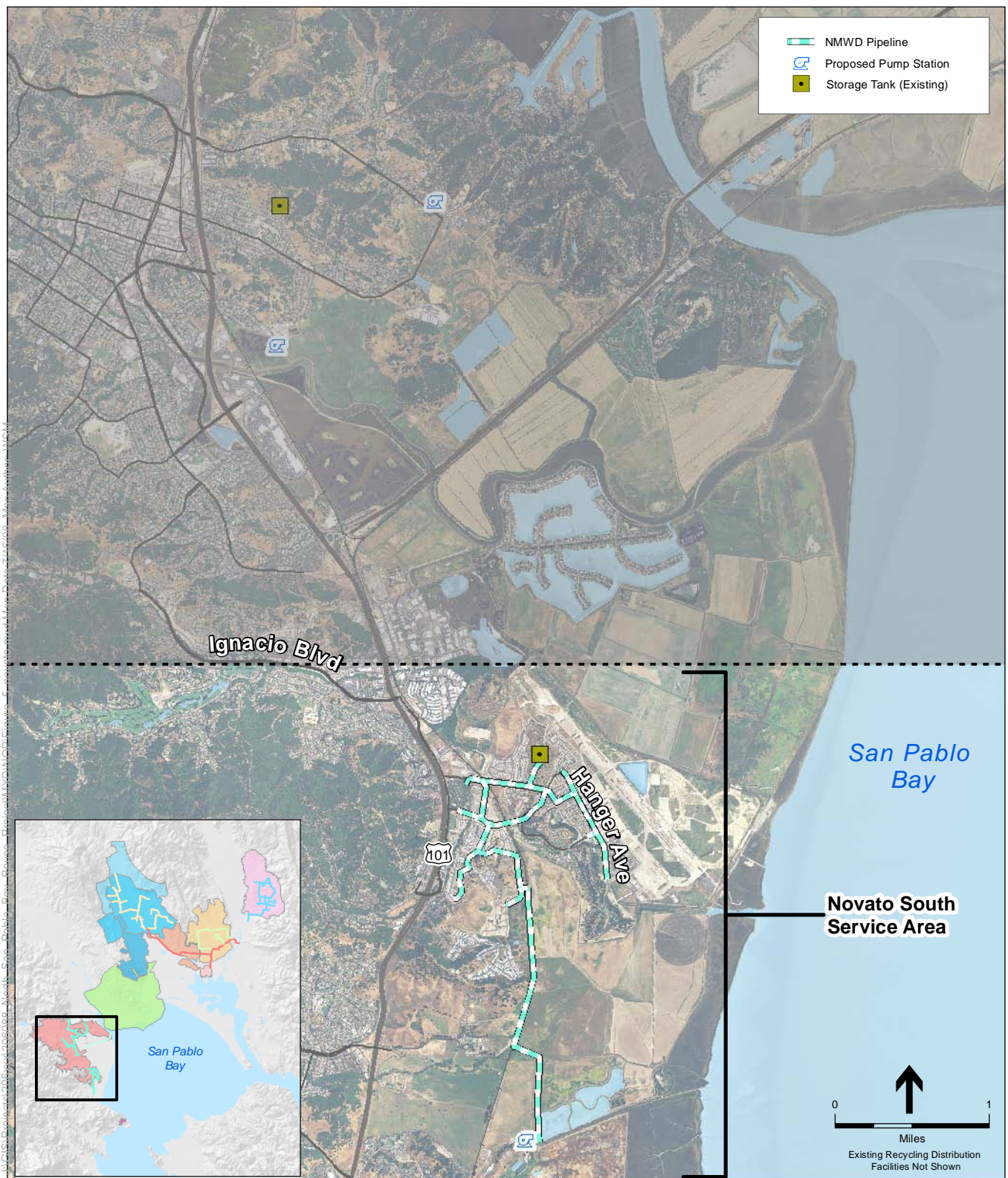
These changes will result in an overall reduction in the construction footprint of approximately 0.2 miles of pipeline, which is essentially equivalent to the proposed Phase 1 project. The City of Novato will work with NMWD for any easements on its properties and encroachment into its roadways to implement the recycled water project in the Hamilton Area.

As described in the NBWRP EIR/EIS, recycled water storage in the South Service Area would be provided by retrofit of the existing 0.5- MG Reservoir Hill Tank. The footprint of rehabilitation work would be limited to the immediate area surrounding the tank with a buffer to accommodate workers and equipment. As noted above, the distribution system would connect to the storage tank via a conveyance pipeline from Hamilton Parkway. As part of the Reservoir Hill Tank renovation, NMWD will construct a lateral tank drain/overflow line from the tank east down gradient to the sewer system along Altamira Court to provide overflow capacity.

A comparison of project components, including pipeline locations and lengths, reservoir storage, and other facilities is provide in **Table 1**, which demonstrates that the proposed modifications are commensurate with, and slightly reduced from, the originally approved components.

TABLE 1
COMPARISON OF APPROVED DRAFT EIR/EIS PHASE 1 PROJECT
COMPONENTS VERSUS PROPOSED MODIFIED SOUTH SERVICE AREA PROJECT

Draft EIR/EIS Phase 1 Project Components		Proposed Modified South Service Area Project Components		Net Difference (miles)
Pipeline Segment/Location (cross streets)	Length (miles)	Pipeline Segment /Location (cross streets)	Length (miles)	
Option C (LGVSD WWTP to Main Gate Road)	2.07	Option C (LGVDS WWTP to Bolling Circle tie-in)	1.76	+0.31
Main Gate Road/Palm Drive (Randolph to Hangar Avenue)	0.64	Main Gate Road/Palm Drive (Martin Drive to Hamilton Parkway)	0.70	-0.06
State Access Route/Hamilton Parkway (Highway 101 to South Palm Drive)	0.66	State Access Route/Hamilton Parkway (Martin Drive to South Palm Drive)	0.81	-0.15
Hangar Avenue (South Palm Drive to Caliente Real)	0.90	Hangar Avenue (Palm Drive to Caliente Real)	1.07	-0.17
Coast Guard Housing Loop (South Oakwood Drive/ Crescent Drive)	1.51	Coast Guard Housing Loop (South Oakwood Drive/ Crescent Drive)	0.00	+1.51
San Pablo Avenue	0.07	San Pablo Avenue (Hangar Avenue to Hamilton Parkway)	0.07	0.00
Bolling Circle (eastern portion Hutchins Way to Bolling Circle tie-in)	0.00	Bolling Circle (eastern portion Hutchins Way, Muroc Lake Drive to Bolling Drive tie-in)	0.46	-0.46
Bolling Circle from Randolph Drive and Captain Nurse Circle (eastern portion)	0.00	Bolling Circle and Captain Nurse Circle (eastern portion)	0.74	-0.74
Randolph Drive (Bolling Circle to Main Gate Road) and Moffett Court	0.35	Randolph Drive (Bolling Circle to Main Gate Road)	0.19	+0.16
C Street (Main Gate Road to State Access Route)	0.00	C Street (Main Gate Road to State Access Route)	0.25	-0.25
Reservoir Hill	0.21	Reservoir Hill	0.21	0.00
Total	6.41		6.26	-0.15



SOURCE: ESA, 2009

Note: Existing Tank Facilities Shown

NBWRA North Bay Water Recycling Program. 206088.01

Figure 2

Proposed Novato South Service Area
(Hamilton) Project



SOURCE: ESA, 2011; NMWD, 2011

North Bay Water Resuse Authority . 206088

Figure 2a
Proposed Modification for the South Service
Area and Comparison to Draft EIR/EIS
Phase 1 Components

CHAPTER 3

Environmental Analysis

This section describes the impacts related to implementation of facilities proposed under the Novato South Service Area Project. The South Service Area Project would not create any new environmental impacts or change the severity of the impacts that are described in the NBWRP EIR/EIS. Mitigation measures identified in the EIR/EIS, adopted as part of the Mitigation and Monitoring Plan (MMRP), are identified for each issue area. Mitigation measures are formatted for implementation by the appropriate NBWRA Member Agencies; in this case NMWD.

3.1 Geology and Soils

Section 3.1 of the NBWRP EIR/EIS described the geologic, seismic, and soil conditions within the NBWRP Phase 1 project area, and identified potentially significant impacts including susceptibility of the project facilities to seismic effects, subsidence, or liquefaction, the presence of expansive soils in the project area, and erosion due to project construction. The modified transmission and distribution pipelines from LGVSD WWTP to the Hamilton Area, and along Bolling Circle, Captain Nurse Circle, and C Street, as well as the tank drain/overflow line from Reservoir Hill Tank, would be located within the same proximity to active fault zones, and overlay similar soil and geologic features as those described relative to the NBWRP Phase 1 project; therefore, potential effects associated with surface fault rupture, landslides, lateral spreading, and liquefaction would be consistent with those described in the EIR/EIS. Potential impacts related to surface hydrology would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Construction of the pipelines would primarily use the open-trench and/or trenchless techniques, which would involve excavation and stockpiling of soils. . As required by Mitigation Measure 3.1.2 below, the NMWD would be required to prepare a SWPPP that would identify best management practices (BMPs) for open trenching, including include erosion control measures such as covering stockpiles, use of straw bales, silt fences, etc. that are designed to minimize the potential for erosion, loss of topsoils, and sedimentation of stormwater runoff.

Consistent with the information disclosed in the EIR/EIS, the modified pipeline route between LGVSD WWTP and the Hamilton Area is located relatively close to the Bay shore areas that contain marsh and intertidal deposits that are generally soft and compressible, and underlying geologic materials in the area of the modified pipeline alignment from the LGVSD WWTP to the Hamilton Area include a Reyes clays and urban land complex soils (USDA, 2008). Placement of additional loads to these soils, if not engineered appropriately, could result in subsidence or

settlement that can damage structures and appurtenances. The Reyes clays, based on their close proximity to the Bay, likely consist of soft saturated sediments that are susceptible to subsidence if not engineered appropriately. . The Reyes clays underlying the pipeline alignment from LGVSD WWTP to the Hamilton Area have a high shrink-swell potential whereas the Tocaloma-McMullin series have low potential. The urban land complex soils, particularly in the Hamilton Area, could consist of artificial fill materials that have either been appropriately compacted or not. The roadways have likely been sufficiently compacted to prevent subsidence. The modified distribution pipelines along Bolling Circle, Captain Nurse Circle, and C Street, and alignment for the Reservoir Hill Tank lateral overflow drain line, are consistent with the urban land complex soils described in the NBWRP EIR/EIS. The roadways within the Hamilton Area, including Bolling Circle, Captain Nurse Circle, and C Street areas, where pipelines are proposed have likely been backfilled with fills that have a low potential for expansion. However, there is a potential for a significant impact, which would be reduced by implementation of EIR/EIS Mitigation Measure 3.1.1 for the additional components.

The South Service Area Project impacts would be consistent with impacts previously identified in the EIR/EIS; the project would not increase the severity of impacts identified. Potential impacts related to geology and soils would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.1.1: The Member Agencies will implement the following measures:

- All proposed improvements will be designed and constructed in accordance with current geotechnical industry standard criteria, including the California Building Code (CBC) and American Waterworks Association (AWWA) criteria.
- The project construction materials and backfill materials will be designed according to a geotechnical investigation by a California-licensed geotechnical engineer or engineering geologist to address landslide, subsidence, liquefaction, and expansive soils and seismic hazards such as ground shaking and liquefaction.
- Implementation of industry standard geotechnical measures such as replacing excavated soils with engineered fill materials are effective means to overcome the potential for subsidence. If excavated soils are to be reused for backfill, they would still be appropriately compacted to mitigate the potential for subsidence or settlement and evaluated for expansion and amended, if necessary, to reduce the potential for expansion in accordance with accepted geotechnical practices.
- Proposed facilities will be designed to include flexible connections, where deemed necessary, along with backfill requirements that minimize the potential for significant damage. All other associated improvements will employ standard design and construction using the most recent geotechnical practices and California Building Code (CBC) seismic criteria, which would provide conservative design criteria.

Mitigation Measure 3.1.2: The Member Agencies will implement the following measures:

- Consistent with SWPPP requirements, the construction contractor shall be required to implement BMPs for erosion control onsite. The use of construction BMPs will minimize

the potential for erosion and loss of topsoil, and shall include, without limitation, the following:

- Avoid scheduling construction activities during a rain event, but be prepared for sudden changes in conditions;
- Construct berms, silt fences, straw bales, fiber rolls, and/or sand bags around stockpiled soils;
- Cover stockpiled soils during a rain event and monitor perimeter barriers, repair as necessary;
- Stabilize entrances to work area to prevent tracking of dirt or mud onto roadways; and
- Implement dust control practices as appropriate on all stockpiled material¹².

3.2 Surface Hydrology

Section 3.2 of the NBWRP EIR/EIS identified potentially significant impacts to surface hydrology, including changes to drainage patterns, increased stormwater runoff due to increase impervious surfaces, and impacts to facilities associated with sea level rise. Impacts associated with the modified South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to surface hydrology would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

As stated in the EIR/EIS, NMWD pipelines would generally be constructed within roadways, rights-of-way, and would only cross drainages where necessary. In these instances, construction of the proposed pipelines would involve activities such as grading, excavation, and trenching, which could alter existing surface drainage patterns. However, such activities would be temporary and limited to areas of active construction within the construction corridor. The excavated areas would be returned to the pre-construction condition; therefore the impacts would be less than significant. As discussed in the EIR/EIS, construction of the NMWD pipeline from LGVSD WWTP to the Hamilton Area would require crossings at Miller Creek and three unnamed drainage culverts. The pipeline would be suspended from the vehicle bridge at Miller Creek. An additional crossing at Pacheco Creek would occur under the modified project, which extends the pipeline distribution west on Main Gate Road. Pipeline would be installed over or under the culverts to protect the existing culverts in place. No additional stream crossings would be required for implementation of the modified distribution pipelines along Bolling Circle, Captain Nurse Circle, and C Street, or the alignment for the Reservoir Hill Tank lateral tank drain/overflow line. Under the approved project in the NBWRP EIR/EIS, the pipelines in Hamilton Area comprising the Coast Guard Housing loop would involve four stream crossings;

¹² Common dust control measures include watering exposed/unpaved surfaces, covering spoils and topsoil stockpiles with tarp, covering haul truck loads with tarps, reducing vehicle speeds on unpaved access routes. Appropriate best management practices will be determined based on project site-specific conditions.

under the proposed modified project, the Coast Guard Hosing loop is removed and two creek crossings are eliminated. Additionally, implementation of EIR/EIS Mitigation Measure 3.2.1, which incorporates measures to protect the stream from construction activities, would reduce impacts to a less than significant level.

As stated in the EIR/EIS, the South Service Area Project would not significantly increase impervious surface areas that would affect drainage and surface water runoff. Similarly, pipelines under the modified project would be underground; the Reservoir Hill storage tank is an existing facility and renovation would not add to impervious surfaces or change the existing drainage patterns. Drainage designs would be integrated with existing drainage systems, and would be designed to avoid or minimize effects to downstream areas and infrastructure. Implementation of EIR/EIS Mitigation Measure 3.2.2 would ensure a less than significant impact.

As shown in **Figure 3**, implementation of the South Service Area Project would result in construction of facilities, including the modified pipeline between LGVSD WWTP to Hamilton Area and along Hangar Avenue and Hamilton Parkway, within the 100-year flood plain. Under the modified project, construction of new facilities within 100-year flood plains would be limited to pipeline installation across drainages located close to the edge of the 100-year flood plain. Placement of structures within the mapped 100-year flood plain would have the potential to expose structures to periodic flooding and water damage. However, the design of proposed facilities to convey recycled water would reduce the potential for these facilities to be impacted by flood waters. The existing Reservoir Hill Tank and Tank lateral tank drain/overflow line are not located in a 100-year flood plain.

The original sea-level rise analysis provided in the NBWRP EIR/EIS encompassed all geographic portions of the modified project. As previously disclosed, due to the topography, elevation, and proximity to San Pablo Bay, all facilities proposed as part the South Service Area Project would be at risk of potential impact as a result of a one meter sea level rise. Implementation of EIR/EIS Mitigation Measures 3.2.4 would reduce impacts associated with sea level rise to less than significant.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or increase the severity of impacts identified. Implementation of EIR/EIS Mitigation Measures identified in the EIR/EIS and listed below would ensure potential impacts to a less than significant level. As such, the surface hydrology impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.2.1: The Member Agencies would implement the following measure during pipeline installation at stream crossings:

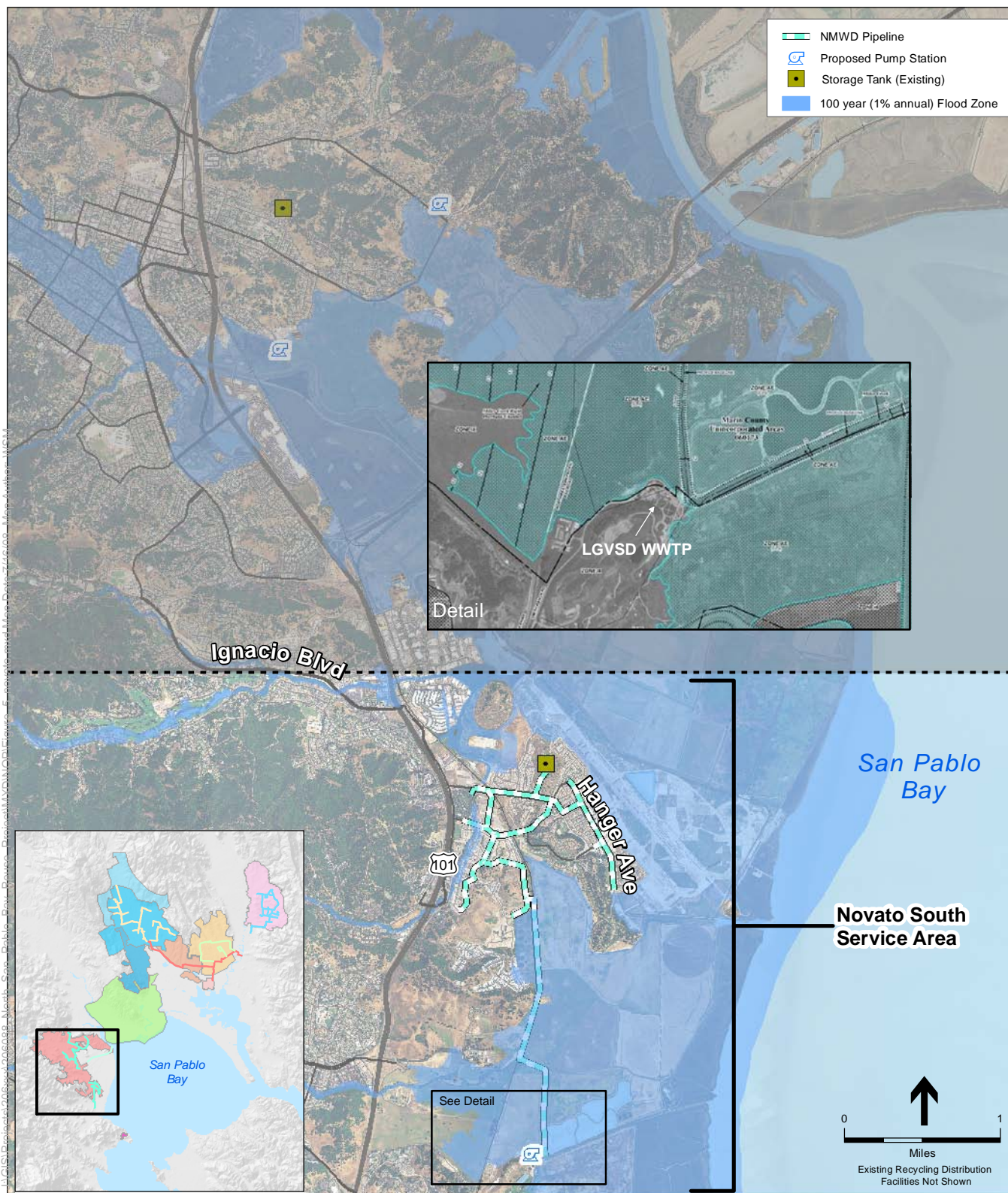
- Schedule construction so as to avoid storm events to the extent feasible ;
- Use trenchless techniques such as jack and bore tunneling to avoid direct impacts to the streams;

- Employ short-term drainage diversion and control measures such as sandbags, dikes, pumps, or other means; and
- Following construction, restore the construction area to pre-existing conditions
- Implement **Mitigation Measure 3.5.1** (see Section 3.5 of the EIR/EIS).

Mitigation Measure 3.2.3: The Member Agencies will implement the following measures:

- Comply with the local storm drainage requirements;
- Incorporate site design features to control any site runoff onsite; and
- Install storm runoff, collection, and treatment system, as applicable, to control the runoff flow offsite.

Mitigation Measure 3.2.4: Design of proposed facilities shall consider sea level rise potential, and shall include appropriate measures in facility siting and design to address potential impacts related to sea level rise, similar to those applied to facility installation within 100-year flood plains. Design measures may include, but are not limited to: facility siting, access placement, access vault extension above projected water elevation, water tight vaults, and site protection.



SOURCE: ESA, 2009; FEMA, 2009
 Note: Existing Tank Facilities Shown

NMWD Recycled Water Expansion Project South Service Area. 206088.04

Figure 3
 Flood Zones in the Project Area

3.3 Groundwater

Section 3.3 of the NBWRP EIR/EIS analyzed existing conditions and identified beneficial impacts to long-term groundwater levels, and less than significant impacts to hydrostatic pressure, groundwater quality, flooding due to high groundwater levels, public health impacts associated with groundwater wells, and increased groundwater recharge due to increase of impervious surfaces. Impacts associated with the modified South Service Area Alignment Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to groundwater would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS. Although Hamilton Field is served by surface water supplies from NMWD, there are private groundwater wells within the LGVSD and NMWD service areas; groundwater is the main water supply used for farmland irrigation in the southern portion of the project area. Therefore, it is assumed that a portion of the recycled water would be used for agricultural irrigation and would offset groundwater pumping. Proposed facilities, including pipeline, pump stations, would be constructed several feet below the ground surface and therefore would be subject to hydrostatic pressure relating to groundwater. Standard design features, including drainage blankets, perimeter pumps to temporarily decrease hydrostatic pressure, and perimeter drainage trenches, would be implemented to reduce the potential for damage due to fluctuating groundwater levels. Implementation of EIR/EIS Mitigation Measure 3.3.1 for the proposed storage facilities would ensure that the impacts are less than significant.

The use of recycled water for agricultural irrigation or urban landscape irrigation under the South Service Area Project is not expected to contribute to adverse water quality impacts associated with existing groundwater wells. All recycled water users would be required to adhere to the following Title 22 minimum distance requirements for recycled water use near domestic groundwater wells; therefore distribution supported by the South Service Area Project is not expected to contribute to adverse water quality impacts associated with existing groundwater wells.

As discussed in the Section 3.2, Surface Water, above, LGVSD WWTP treatment upgrades and the Reservoir Hill would not impact groundwater recharge in this area. Reservoir Hill Tank is a concrete-lined open cut in-ground structure; however rehabilitation of the impermeable liner will prevent recycled water seepage into the groundwater system.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measure identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the groundwater impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.3.1: The Member Agencies will implement the following measures:

- All proposed improvements will be designed and constructed in accordance with current geotechnical industry standard criteria.
 - Implement industry standard geotechnical measures to address high groundwater conditions as appropriate to reduce the potential for impacts related to groundwater fluctuation, in accordance with accepted geotechnical practices. Possible design features include drainage blankets, perimeter pumps to temporarily decrease hydrostatic pressure, perimeter drainage trenches, and specific groundwater monitoring scenarios.
-

3.4 Water Quality

Section 3.4 of the NBWRP EIR/EIS analyzed existing conditions, regulatory framework, and impacts to water quality including incidental runoff of recycled water. The EIR/EIS identified potentially significant impacts to water quality, including erosion and sedimentation, dewatering of shallow groundwater resources, and less than significant impact to water quality due to incidental runoff, storage facilities, and pipeline rupture. The EIR/EIS also identified that the project will have less than significant impacts to public health and agricultural uses associated with loading of specific constituents to groundwater.

Impacts associated with the South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and location is consistent compared to the Phase 1 project previously examined. Potential impacts related to water quality would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS. Implementation of the South Service Area Project would require earthmoving activities such as excavation, soil stockpiling, and filling that could result in increased erosion and discharge of sediment to neighboring surface water bodies through the disturbance of currently stable soils. As stated in the EIR/EIS, the proposed NMWD pipelines would cross Miller Creek, Pacheco Creek, and unnamed drainages in the Hamilton Area. Construction activities could result in soil erosion and subsequent discharge of sediment to surface water or drainages. Pipelines at the stream crossing would be installed using trenchless technology to avoid impacts to surface water features and water quality. At the remaining pipeline locations, trenching would be restricted to dry season conditions and would be subject to a NPDES (National Pollutant Discharge Elimination System) Construction Activity Stormwater Permit. NMWD would be required prepare a Storm Water Pollution Prevention Plan (SWPPP) requiring implementation of BMPs for erosion and sediment control. These include the use of straw wattles, silt fencing, water detention structures, baker tanks, and other control measures that would limit construction-related storm runoff. Because these measures would reduce the erosion of soils and release of hazardous materials into water courses, facility construction would not violate water quality standards for construction activities. Implementation of EIR/EIS Mitigation Measure 3.4.1a, which includes preparation of the SWPPP and compliance with implementation and reporting measures identified in the SWPPP would ensure compliance with state regulatory policies to minimize the potential for water quality impacts from construction activities would reduce impacts to stormwater quality to a less than significant level.

Consistent with the discussion in the NBWRP EIR/EIS, recycled water produced and transported by the proposed South Service Area Project would comply with California Code of Regulations (CCR) Title 22 requirements for tertiary treated water, which prohibits over-irrigation that would cause ponding or surface runoff (EIR/EIS Mitigation Measure 3.4.6a). Therefore, potential impacts to surface water quality associated with indirect runoff from irrigation are considered less than significant. Reservoir Hill Tank is a self-contained open-cut concrete-lined tank, and therefore would not have the potential to impact surface or groundwater quality. This impact would be less than significant.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or increase the severity of impacts identified above. Implementation of EIR/EIS Mitigation Measures identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the water quality impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.4.1a: NPDES Construction Activity Stormwater Permit. Member Agencies or their contractor shall comply with the provisions of the NPDES Construction Activity Stormwater permit, including preparation of Notice of Intent to comply with the provisions of this General Permit and preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP will identify implementation measures necessary to mitigate potential water quality degradation as a result of construction-related runoff. These measures will include BMPs and other standard pollution prevention actions, such as erosion and sediment control measures, proper control of non-stormwater discharges, and hazardous spill prevention and response. The SWPPP will also include requirements for BMP inspections, monitoring, and maintenance.

The following items are examples of BMPs that would be implemented during construction to avoid causing water quality degradation:

- Erosion control BMPs, such as use of mulches or hydroseeding to prevent detachment of soil, following guidance presented in the California BMP Handbooks – Construction (CASQA 2003). A detailed site map will be included in the SWPPP outlining specific areas where soil disturbance may occur, and drainage patterns associated with excavation and grading activities. In addition, the SWPPP will provide plans and details for the BMPs to be implemented prior, during, and after construction to prevent erosion of exposed soils and to treat sediments before they are transported offsite.
- Sediment control BMPs such as silt fencing or detention basins that trap soil particles.
- Construction staging areas designed so that stormwater runoff during construction will be collected and treated in a detention basin or other appropriate structure.
- Management of hazardous materials and wastes to prevent spills.
- Groundwater treatment BMPs such that localized trench dewatering does not impact surface water quality.

- Vehicle and equipment fueling BMPs such that these activities occur only in designated staging areas with appropriate spill controls.
- Maintenance checks of equipment and vehicles to prevent spills or leaks of liquids of any kind.

Mitigation Measure 3.4.6a: Under the Master Recycling Permit for each Member Agency and Cooperating Agency, user agreements shall include provisions for compliance with Title 22 and the State Recycled Water Policy regarding storage and use of recycled water onsite at individual properties.

3.5 Biological Resources

Section 3.5 of the NBWRP EIR/EIS analyzed impacts to vegetation, wildlife, and wetlands. The EIR/EIS identified less than significant impacts to common plant and animal species. Potentially significant impacts were identified for wetlands, streams, and riparian habitats, waters of the U.S., disturbance of habitat for special status species and plants, and disturbance of nesting habitat. Impacts associated with the South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to biological resources would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Wetlands and Jurisdictional Waters

As stated in the EIR/EIS, the NMWD construction activities could involve temporary and permanent impacts to jurisdictional wetlands and other waters of the U.S. Additionally, wetlands or drainages could be affected by pipeline trenching activities, bore and jack installation under streams, and temporary filling of seasonal wetlands in work areas. Potential impacts to riparian habitat include temporary and permanent disturbance of stream channels during construction activities, including removal or disturbance to riparian vegetation, and alteration of bed and banks of drainages due to trenching. The NBWRP EIR/EIS considered stream and drainage crossings under three pipeline options; the modified project is consistent with the Option C alignment (from the LGVSD WWTP to the Hamilton Area) analyzed in the EIR/EIS. Wetland impacts for this alignment are consistent with those identified in the EIR/EIS, and have been clarified through the ongoing permitting process, including quantification as part of a preliminary wetland delineation, described below. Under the modified project, most of the pipelines would be installed within existing roadways; the modified transmission pipeline from LGVSD WWTP to the Hamilton Area would impact seasonal wetlands or other jurisdiction features. Under the approved project in the NBWRP EIR/EIS, the pipelines in Hamilton Area comprising the Coast Guard Housing loop would involve four stream crossings; under the proposed modified project, portions of the Coast Guard Housing loop are removed and two creek crossings are eliminated. One additional stream crossing at Pacheco Creek would be required at the western edge of the alignment on Main Gate Road. No additional stream crossings would be required for implementation of the modified

distribution pipelines along Bolling Circle, Captain Nurse Circle, and C Street, or the Reservoir Hill Tank lateral tank drain/overflow line.

Environmental Science Associates (ESA) conducted a formal delineation of waters of the United States within the project area on April 13, 18, and 19, 2011. The delineation identified the location and extent of potentially jurisdictional wetlands and other waters present. Within the delineation study area, wetlands occur along within the Miller Creek channel, at culverts that drain surface runoff (neighborhood and agricultural), and along the berms of the levees and SMART railroad alignment.

A total of 1.905 acre (82,915 square feet [sf], 8,938 linear feet) of potentially jurisdictional waters of the United States, comprised of a combination of wetland tributaries, perennial streams, and seasonal wetland areas, occur within the study area. This total can be broken down as follows: 0.321 acre (13,969 square feet) of wetland tributaries, 1.511 acres (65,753 square feet) of seasonal wetlands, and 0.073 acre (3,193 square feet) of other waters (perennial stream).¹³ Within the 20-foot construction right-of-way, a total of 0.464 acres of potentially jurisdictional waters that are potentially within USACE jurisdiction under Section 404 of the federal Clean Water Act occur within the construction corridor area. Implementation of EIR/EIS Mitigation Measure 3.5.1, which provides measures to avoid and minimize impacts to jurisdictional wetlands and other waters of the U.S., and provides compensation for impacts through wetland restoration and enhancement, would reduce the impact to a less-than-significant level.

Listed Salmonid Species

As noted in Section 1, NMFS concurred with Reclamation's finding that the NBWRP is not likely to adversely affect listed species under the jurisdiction of NMFS (concurrence letter dated May 6, 2010). The original records search radius and previous fisheries analysis encompass all portions of the modified project area. As described above, an additional stream crossing at Pacheco Creek would be required at the western edge of the alignment on Main Gate Road; however this is not designated as essential fish habitat. No additional stream crossings, and therefore no additional impacts to aquatic species, would occur for implementation of the modified distribution pipelines along Bolling Circle, Captain Nurse Circle, and C Street, or the Reservoir Hill Tank lateral tank drain/overflow line. Significant impacts would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measure 3.5.2.

Other Special Status Species

The original records search radius and previous biological analysis encompass all portions of the modified project area. Construction activities for the modified project could potentially impact special status species, including western pond turtle, California red-legged frog, bats, raptors, songbirds, if present in the project area.¹⁴ Implementation of EIR/EIS Mitigation Measures 3.5.2,

¹³ Pending formal verification by USACE.

¹⁴ The pipeline alignment from LGVSD WWTP to the Hamilton Area would traverse agricultural fields and ruderal areas that do not provide habitat for California clapper rail, California black rail, or western snowy plover. No impacts to these species are expected. No American badger occurrences are known to occur in the South Service Area Project area, and though American badger was historically present in Marin County and habitat is available

3.5.5, and 3.5.6 would reduce impacts to western pond turtle and California red-legged frog to a less than significant level. Additionally, as noted in Section 1, pursuant to the 0.1:1 compensatory mitigation ratio required under the Biological Opinion, NMWD will participate with other NBWRA Member Agencies to purchase the required 0.54 acres, to meet the collective obligation for habitat credits from a Service-approved conservation bank.

As described in the EIR/EIS, potential nesting sites for burrowing owls¹⁵, raptors, and songbirds include large trees, riparian corridors, streamside vegetation, shrubs, open grasslands, and roadside vegetation. Specific nests and rookeries are not known to occur in the action area, but nesting birds may be present and could be impacted by pipeline installation. EIR/EIS Mitigation Measures 3.5.8 and 3.5.9 would reduce potential impacts during the nesting period to less than significant levels.

Sensitive Plant Species

The EIR/EIS determined that project construction could impact rare plant species, including Mt. Tamalpais Manzanita and Tiburon buckwheat. At the time of EIR/EIS completion, focused botanical surveys had not been completed in this service area. Pursuant to EIR/EIS Mitigation Measure 3.5.13, ESA field biologist M. Lowe surveyed the South Service Area project site on May 13, 2011 to determine presence or absence of special status plants. No special-status plant species were observed during the survey of the southern portion of the modified alignment between the LGVSD WWTP and the Hamilton Area. Surveys were conducted during the bloom period for most of the plants under consideration. Several species under consideration have earlier or later bloom periods; however, the study area is not considered to provide suitable habitat for these species due to long standing disturbance and the prevalence of non-native species within the rare plant study area.

A sensitive vegetation community, purple needle grass grassland, is located within the study area on Reservoir Hill, adjacent to the proposed recycled water alignment. NMWD will incorporate the following measures, pursuant to Mitigation Measure 3.5.13, into a revegetation and monitoring plan:

- Fence off purple needlegrass grassland areas that are not to be disturbed.
- Purple needle grass is a perennial bunch grass—plants can be salvaged from the alignment and tank area prior to any earth- or vegetation disturbing activities.

along portions of this off-road pipeline alignment, this area is isolated by Highway 101 from undeveloped hills to the west. Impacts on American badger are not anticipated. Pipeline alignments in the LGVSD service area do not traverse appropriate habitat for salt marsh harvest mouse and Suisun ornate shrew. Myrtle's silverspot butterfly, Opler's longhorn moth and monarch butterfly wintering sites are not known to occur in the action area, and no impacts would occur to these species. No special-status bats are known in the LGVSD service area.

¹⁵ Burrowing owl was known to occur in the area between the LGVSD WWTP to the Hamilton Area near the Miller Creek levee during the early 1980s (CDFG, 2008) but has not been recently observed. Under the modified alignment from LGVSD WWTP to the Hamilton Area, the berm between Miller Creek and the dirt road offers a narrow strip of potential habitat, and ruderal grazing areas to the west offer fair quality habitat, but no owls or small mammal burrow complexes were observed during field surveys.

- Salvage topsoil to preserve the existing native seed bank.
- Replace salvaged topsoil in areas of temporary disturbance and replant with salvaged purple needlegrass.
- Implement a post-construction monitoring period to ensure revegetation success.

Heritage or Significant trees including valley oak, coast live oak, California bay, blue oak, madrone, eucalyptus, sycamore, cypress, and other species occur near roads and in off-road areas proposed for pipeline construction and in the vicinity of project components. The EIR/EIS determined it is likely that some trees will need to be trimmed or removed; based on modified project designs, tree alteration would be limited to certain areas along the Reservoir Hill Tank alignments, and the majority of the trees would be protected in place. Implementation of EIR/EIS Mitigation Measure 3.5.14 will reduce potential impacts to a less than significant level.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or increase the severity of impacts identified above. Implementation of EIR/EIS Mitigation Measures identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the biology impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.5.1: Implement the following measures to avoid, minimize and compensate for impacts to jurisdictional wetlands and other waters of the U.S. and impacts to riparian habitat.

Construction activities resulting in the introduction of fill or other disturbance to jurisdictional wetlands and other waters of the U.S. will require permit approval from the U.S. Army Corps of Engineers and water quality certification from the Regional Water Quality Control Board, pursuant to Section 401 of the Clean Water Act. The South Service Area Project will most likely be authorized under Nationwide Permit #12 (Utility Lines) pursuant to Section 404 of the Clean Water Act. The CDFG has jurisdiction in the action area over riparian habitat, including stream bed and banks, pursuant to Sections 1600-1616 of the Fish and Game Code. Pipeline construction resulting in alteration to channel bed or banks, extending to the outer dripline of trees forming the riparian corridor, is subject to CDFG jurisdiction. The project proponent will be required to obtain a Streambed Alteration Agreement (SAA) from the CDFG. Terms of these permits and SAA will likely include, but will not necessarily be limited to, the mitigation measures listed below.

1. Specific locations of pipeline segments, storage reservoirs, and pump stations shall be configured, wherever feasible, to avoid and minimize direct and indirect impacts to wetlands and stream drainage channels. Consideration taken in finalizing configuration placement shall include:
 - Reducing number and area of stream channel and wetland crossings where feasible. Crossings shall be oriented as close to perpendicular (90 degree angle) to the drainage or wetland as feasible.

- Placement of project components as distant as feasible from channels and wetlands.
 - For pipeline construction activities in the vicinity of wetland and stream drainage areas, the construction work area boundaries shall have a minimum 20-foot setback from jurisdictional features¹⁶. Pipeline construction activities in proximity to jurisdictional features include: 1) entrance and exit pits for directional drilling and bore and jack operations; and 2) portions of pipeline segments listed as “parallel” to wetland/water features.
2. Sites identified as potential staging areas will be examined by a qualified biologist prior to construction. If potentially jurisdictional features are found that could be impacted by staging activities, the site will not be used.
 3. Construction methods for channel crossing shall be designed to avoid and minimize direct and indirect impacts to channels to the greatest extent feasible. Use of trenchless methods including suspension of pipeline from existing bridges, directional drilling, and bore and jack tunneling will be used when feasible. Trenchless methods are required for all perennial drainage crossings. Construction occurring in the vicinity of riparian areas shall be delimited with a minimum 20-foot setback to avoid intrusion of construction activities into sensitive habitat.

The following additional measures shall apply to channel crossings in which the trenching construction method is used:

- Limiting of construction activities in drainage channel crossings to low-flow periods: approximately April 15 to October 15.
 - At in-road drainage crossings where drainages pass beneath the road in existing culverts, and where there is sufficient cover between the culvert and road surface, the new pipeline will be installed above the existing culvert without removing or disturbing it. If the pipeline must be installed below the existing culvert, then the culvert will be cut and temporarily removed to allow pipeline installation.
 - At off-road drainage crossings, the construction corridor width will be minimized to the greatest extent feasible at the crossing and at least 20 additional feet to either side of the drainage at the crossing.
 - If disturbance of the existing culvert is required, sediment curtains upstream and downstream of the construction zone shall be placed to prevent sediment disturbed during trenching activities from being transported and deposited outside of the construction zone.
4. Implement BMPs required in Mitigation Measure 3.4.1 to reduce risk of sediment transport into all construction areas in proximity of drainages.
 5. For channels or wetlands for which soil removal is necessary (off-road crossings or wetlands to be trenched or otherwise directly disturbed), the top layer of the drainage or wetland bottom shall be stockpiled and preserved during construction. After the pipeline has been installed, the stockpiled material shall be placed back into the drainage or wetland feature to return the beds to approximately their original composition.

¹⁶ Setbacks of channels with associated riparian vegetation will be from the outer dripline edge of the riparian corridor canopies and/or the upper bank edge, or per City or County code, whichever is greater.

6. To offset temporary and permanent impacts to wetlands and other waters of the U.S., and impacts to riparian habitat, compensatory mitigation will be provided as required by regulatory permits and SAAs.

Mitigation Measure 3.5.2: [Applicable to California Red-legged frog in the South Service Area] Specific measures shall be implemented to protect aquatic habitats potentially inhabited by special-status fish and California freshwater shrimp.

Sensitive fisheries and other aquatic resources shall be protected by minimizing in-stream and near-stream habitat impacts during project design, informally consulting with resource agencies (NMFS, USFWS, CDFG, and USACOE), and implementing protective measures. For Sonoma Creek, Petaluma River, Napa River, and other perennial drainages, special-status fish are presumed present. California freshwater shrimp are presumed present in Sonoma Creek. Because of the sensitivity of seasonal and ephemeral drainages, the following measures will be required to avoid and minimize impacts to aquatic habitat:

1. Project designs shall be reconfigured, whenever feasible, to avoid direct impacts to sensitive wetland areas and minimize disturbances to wetland and riparian corridors. Ground disturbance and construction footprints in these areas shall be minimized to the greatest degree feasible.
2. If trenching or directional boring stream crossing methods are used, the construction schedule of such activities shall be implemented according to conditions of the SAAs.
3. In-stream construction shall be avoided at all locations that are known, or presumed, to support threatened or endangered species, if at the time of construction such locations contain flowing or standing water.
4. In the event that equipment shall operate in any watercourse with flowing or standing water, the project proponent will ensure that they have the appropriate permit authorizations.
5. Prior to construction, a qualified biologist shall install fencing to establish a minimum 20-foot setback from sensitive habitat.
6. For work sites located adjacent to sensitive aquatic sites, a biological resource education program shall be provided by a qualified biologist, as per conditions of the SAAs.

Mitigation Measure 3.5.5: The appropriate Member Agency shall implement protection measures to avoid and minimize impacts to western pond turtles.

- When working within 200 feet of stream crossings, all construction personnel shall receive awareness training relating to the protection of western pond turtles, in accordance with the SAAs. Also, to minimize the likelihood of encountering turtles in upland areas near stream crossings, construction footprints shall be minimized to the greatest extent feasible. Based on reconnaissance-level surveys, if staging and construction activities occur principally within or immediately adjacent to project alignment roads the project will be outside of principal pond turtle habitat.

- Within 48 hours prior to the start of construction activities, a qualified biologist shall perform pond turtle surveys within suitable habitat within projected work areas. If a pond turtle nest is located within a work area, a biologist with the appropriate permits may move the eggs to a suitable facility for incubation, and release hatchlings into the creek system in late fall.

Mitigation Measure 3.5.6: The appropriate Member Agency shall implement the following protection measures to avoid and minimize impacts on California red-legged frog.

1. The implementation of measures identified for the protection of special-status fish and California freshwater shrimp would also protect California red-legged frogs within aquatic habitat. All protection measures identified in Mitigation Measure 3.5.2 shall be applied to the protection of red-legged frogs at sites that provide potential aquatic habitat for this species. These include informal USFWS consultation, avoiding aquatic habitat, establishing a suitable buffer from the aquatic habitat (e.g., 50 feet), and implementing a worker education program.
2. All work activities within or adjacent to aquatic habitat that is potentially occupied by red-legged frogs will be completed between May 1 and November 1.
3. A qualified biological resource monitor will conduct a training session for construction personnel working in upland habitat near potentially occupied drainages, as per conditions of the SAAs.
4. All trash that could attract predators will be regularly contained and removed from the work site.

In the event trenchless methods cannot be employed, the project proponent would obtain appropriate permit authorizations and implement construction methods per applicable Streambed Alteration Agreements.

Mitigation Measure 3.5.8: The following measures to avoid, minimize, or mitigate impacts on burrowing owls would be incorporated into the project by the appropriate Member Agency:

- In areas identified to provide potential burrowing owl habitat, preconstruction surveys for burrowing owls would be conducted by a qualified biologist 14-30 days prior to the start of construction. Surveys would cover grassland areas within 500-foot buffer and check for adult and juvenile burrowing owls and their habitat.
- Construction exclusion areas would be established around the occupied burrows in which no disturbance would be allowed to occur. During the non-breeding season (September 1 through January 31), the exclusion zone would extend 160 feet around occupied burrows. During the breeding season (February 1 through August 31), exclusion areas would extend 250 feet around occupied burrows. Passive relocation of owls is not proposed.
- A qualified biologist (the on-site monitor or otherwise) will monitor owl activity on the site to ensure the species is not adversely affected by the project.

Mitigation Measure 3.5.9: To avoid disturbing common and special-status nesting birds, the following protection measures shall be implemented:

- Whenever feasible, vegetation shall be removed during the non-breeding season (generally defined as September 1 to January 31).
- For ground disturbing activities occurring during the breeding season (generally defined as February 1 to August 31), a qualified wildlife biologist will conduct preconstruction surveys of all potential nesting habitat for birds within 500 feet of earthmoving activities.
- If active bird nests are found during preconstruction surveys, a 500-foot no-disturbance buffer will be created around active raptor nests during the breeding season or until it is determined that all young have fledged. A 250-foot buffer zone will be created around the nests of other special-status birds. These buffer zones are consistent with CDFG avoidance guidelines; however, they may be modified in coordination with CDFG based on existing conditions at work locations.
- If preconstruction surveys indicate that nests are inactive or potential habitat is unoccupied during the construction period, no further mitigation is required. Trees and shrubs that have been determined to be unoccupied by special-status birds or that are located at least 500 feet from active nests may be removed.

Mitigation Measure 3.5.13. Before the initiation of any vegetation removal or ground-disturbing activities in areas that provide suitable habitat for special-status plants, the following measures shall be implemented by the appropriate Member Agency:

- A qualified botanist will conduct appropriately-timed surveys for special-status plant species, including those identified in Table 3.5.1¹⁷, in all suitable habitats that would be potentially disturbed by the project.
- Surveys shall be conducted following CDFG- or other approved protocol.
- If no special-status plants are found during focused surveys, the botanist shall document the findings in a letter to the appropriate agencies and no further mitigation will be required.

If special-status plants are found during focused surveys, the following measures shall be implemented:

- Information regarding the special-status plant population shall be reported to the CNDDDB.
- If the populations can be avoided during project implementation, they shall be clearly marked in the field by a qualified botanist and avoided during construction activities. Before ground clearing or ground disturbance, all on-site construction personnel shall be instructed as to the species' presence and the importance of avoiding impacts to this species and its habitat.
- If special-status plant populations cannot be avoided, consultations with CDFG and/or USFWS would be required. A plan to compensate for the loss of special-status plant species could be required, detailing appropriate replacement ratios, methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures that would be implemented if the initial mitigation fails; the plan would

¹⁷ Table 3.5-1 included in the original NBWRP EIR/EIS. No special status plants are anticipated in the Novato North Service Area; however NMWD has adopted Mitigation Measure 3.5.13 as part of the larger Mitigation Monitoring and Reporting Program, and will implement surveys as required.

be developed in consultation with the appropriate agencies prior to the start of local construction activities.

- If mitigation is required, the project proponent shall maintain and monitor the mitigation area for 5 years following the completion of construction and restoration activities. Monitoring reports shall be submitted to the resource agencies at the completion of restoration and for 5 years following restoration implementation. Monitoring reports shall include photo-documentation, planting specifications, a site layout map, descriptions of materials used, and justification for any deviations from the mitigation plan.

Mitigation Measure 3.5.14: The following measures shall be implemented by the appropriate Member Agency to avoid or reduce impacts to heritage or other significant trees:

1. Prior to the commencement of construction activities, trees necessary to remove or at risk of being damaged will be identified.
 2. A certified arborist will inventory these trees, with the results of the inventory providing species, size (diameter at breast height, or *dbh*), and number of protected trees. Also, in consultation with the appropriate County, the arborist will determine if any are heritage or landmark trees.
 3. If any protected trees are identified that will be potentially removed or damaged by construction of the South Service Area Project, design changes will be implemented where feasible to avoid the impact.
 4. Any protected trees that are removed will be replaced per applicable City and County tree protection ordinances. Foliage protectors (cages and tree shelters) will be installed to protect the planted trees from wildlife browse. The planted trees will be monitored as required by the ordinance, or regularly during a minimum two-year establishment period and maintenance during the plant establishment period will include irrigation. After the establishment period, the native tree plantings are typically capable of survival and growth without supplemental irrigation.
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3.6 Land Use and Agricultural Resources

Section 3.6 of the NBRWP EIR/EIS analyzed land use and planning impacts including short-term disruption from construction activities and long-term conversion of land uses that would apply to the South Service Area Project. Impacts associated with the modified South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to land use and agriculture would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS. Under the NBWRP Phase 1, proposed pipelines would be installed below the ground surface within the existing right of way along residential and commercial roads including Main Gate Road/Palm Drive, Hangar Avenue, Randolph Drive, and State Access Route/Hamilton Parkway. Under the modified project, the pipeline alignment would occur within the roadway on Bolling Circle, Captain Nurse Circle, and C Street. Impacts to land uses are consistent with those disclosed in the EIR/EIS. Renovation of the existing Reservoir Hill Tank, and associated underground lateral tank drain/overflow line would not physically divide the community. Under

the modified project, the pipeline alignment would not occur on along the Coast Guard Housing loop (South Oakwood Drive/Crescent Drive); therefore residential land uses on these roadways would not be affected. Construction activities could generate noise, dust, and construction traffic and could affect sensitive receptors such as residences; however the impact would be short-term and would not divide an existing community.

The pipeline route from LGVSD WWTP to the Hamilton Area extends through locally important farmland which is currently dry-farmed for fodder crops. Construction activities could cause direct disturbance to agricultural lands or indirectly disrupt agricultural lands and activities through such effects as soil compaction and dust generation. No agricultural land would be permanently converted to land uses other than agriculture. This impact would be less than significant with the incorporation of EIR/EIS Mitigation Measure 3.6.1. Following construction, the land would be returned to its pre-construction conditions. Consistent with the analysis in the EIR/EIS, the project would not preclude agricultural practices from continuing following construction.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or increase the severity of impacts identified above. As such, the land use impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.6.1: To support the continued productive use of Important Farmlands in the action area, the appropriate Member Agency shall implement the following measures during project construction:

- Replace soils over pipelines in a manner that will minimize any negative impacts on crop productivity. The surface and subsurface soil layers will be stockpiled separately and returned to their appropriate locations in the soil profile.
- To avoid over-compaction of the top layers of soil, monitor pre-construction soil densities and return the surface soil (approximately the top 3 feet) to within 5 percent of original density.
- Where necessary, rip the top soil layers to achieve the appropriate soil density. Ripping may also be used in areas where vehicle and equipment traffic have compacted the top soil layers, such as the construction staging areas.
- Avoid working or traveling on wet soil to minimize compaction and loss of soil structure. Before construction begins, geotechnical testing will be done to determine the moisture content limit above which work should not occur. Where working or driving on wet soil cannot be avoided, roadways will be capped with spoils that will be removed at the end of construction and/or ripped and amended with organic material as needed.
- Remove all construction-related debris from the soil surface. This will prevent rock, gravel, and construction debris from interfering with agricultural activities.

- Perform soil density monitoring during backfill and ripping to minimize excessive compaction and minimize effects on future agricultural land use.
 - Remove topsoil before excavating in fields. Return it to top of fields to avoid detrimental inversion of soil profiles.
 - Control compaction to minimize changes to lateral groundwater flow which could affect both irrigation and internal drainage.
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3.7 Traffic and Transportation

Section 3.7 of the NBWRP EIR/EIS analyzed traffic and circulation impacts associated with the South Service Area Project and identified short-term increases in construction-related traffic. As described in the EIR/EIS, NMWD project would not introduce any new land uses within the project corridor that would generate noticeable long-term changes in traffic; operational traffic would be limited to infrequent trips by maintenance personnel and by vehicles delivering chemicals to the treatment plant. Impacts associated with the modified South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to noise would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Modified project alignments located in roadways are within the general vicinity previously considered for the NBWRP EIR/EIS. Consistent with the EIR/EIS, construction activities to support implementation of the modified project that would generate off-site traffic during the construction period include the initial delivery of construction vehicles and equipment to the site, the daily arrival and departure of construction workers and material delivery throughout the construction period. Construction traffic would be dispersed throughout the day. Construction-generated traffic would be temporary and would not result in any long-term degradation in operating conditions on any roadways. These project-generated trips would not be substantial relative to existing traffic volumes, and would fall within the daily fluctuations of traffic volumes for these roadways. Therefore, this short-term effect of the South Service Area Project on traffic load and capacity of the street system would be less than significant.

As discussed previously in the EIR/EIS, project construction of pipelines would include temporary closure of one lane of traffic (with alternate one-way traffic flow past the construction zone) on the following roads: Main Gate Road, Palm Drive, Crescent Drive, San Pablo Avenue, Hangar Avenue, Hamilton Parkway/State Access Road. Under the modified project, the pipeline alignment would be located within the roadway on Bolling Circle and Captain Nurse Circle, and connect to Main Gate Road via Randolph Drive. Under the modified project, pipeline installation on Bolling Circle and Main Gate Road would occur in roadways that provide emergency vehicle access to Novato Fire Station No. 5 (5 Bolling Drive) and access to Hamilton Elementary School (One Main Gate Road) (see also Section 3.11 below). Implementation of EIR/EIS Mitigation

Measures 3.7.2a and 3.7.2b would require NMWD to coordinate with the Novato Unified School District regarding construction schedule in the vicinity of Hamilton Elementary School and school access routes during construction. Implementation of EIR/EIS Mitigation Measure 3.7.1b would require the construction contractor to establish methods for maintaining traffic flow in and along the project corridor and minimizing disruption to emergency vehicle access to land uses along the alignment. Under the modified project, pipeline will not be installed along the Coast Guard Housing loop (South Oakwood Drive/Crescent Drive); therefore no construction-related traffic impacts will occur at these locations. Traffic control measures would be identified by the local jurisdiction's (City of Novato) roadway encroachment permit. Renovation of the Reservoir Hill Storage Tank, including installation of the lateral tank drain/overflow line, could generate additional construction worker vehicle round trips per work day. Due to their short-term duration, and implementation of EIR/EIS Mitigation Measures 3.7.1a through 3.7.1e, impacts would be reduced to a less than significant level.

Although the pipeline alignment is modified to include additional in-road construction, the type and significance of impacts are commensurate to those disclosed in the EIR/EIS; therefore, the South Service Area Project would not result in any new impacts to traffic and circulation beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. As such, the traffic and transportation impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.7.1a: The appropriate Member Agency for each project component shall obtain and comply with local road encroachment permits for roads that are affected by construction activities.

The *Work Area Protection and Traffic Control Manual* includes requirements to ensure safe maintenance of traffic flow through or around the construction work zone, and safe access of police, fire, and other rescue vehicles (CJUTCC, 1996). In addition, the Traffic Management Plan (subject to local jurisdiction review and approval) required by **Mitigation Measure 3.7.1b**, below, would direct how traffic flow is safely maintained during project construction.

Mitigation Measure 3.7.1b: The construction contractor for each project component shall prepare and implement a Traffic Control/Traffic Management Plan subject to approval by the appropriate local jurisdiction prior to construction. The plan shall:

- Identify hours of construction (between 8:00 AM and 7:00 PM; no construction shall be permitted between 10:00 PM and 7:00 AM);
- Identify hours for deliveries (Monday – Friday, 9:00 AM to 3:30 PM, or other hours if approved by the appropriate local jurisdiction);
- Include a discussion of haul routes, limits on the length of open trench, work area delineation, traffic control and flagging;

- Identify all access and parking restriction, pavement markings and signage requirements (e.g., speed limit, temporary loading zones);
- Layout a plan for notifications and a process for communication with affected residents and businesses prior to the start of construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access point/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints;
- Include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times;
- Include a plan to coordinate all construction activities with the appropriate local school district at least two months in advance. The school district shall be notified of the timing, location, and duration of construction activities. Coordinate with the appropriate local school district to identify peak circulation periods at schools along the alignment(s) (i.e., the arrival and departure of students), and require their contractor to avoid construction and lane closures during those periods. The construction contractor for each project component shall be required to maintain vehicle, pedestrian, and school bus service during construction through inclusion of such provisions in the construction contract. The assignment of temporary crossing guards at designated intersections may be needed to enhance pedestrian safety during project construction;
- Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access; and
- Specify the street restoration requirements pursuant to agreements with the local jurisdictions.

Mitigation Measure 3.7.1c: The appropriate Member Agency for each project component shall identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling or night construction) will be used to minimize impacts to traffic flow.

Mitigation Measure 3.7.1d: The appropriate Member Agency for each project component shall develop circulation and detour plans to minimize impact to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone.

Mitigation Measure 3.7.1e: The appropriate Member Agency for each project component shall encourage construction crews to park at staging areas to limit lane closures in the public right-of-way.

Mitigation Measure 3.7.1f: The appropriate Member Agency for each project component shall consult with the appropriate public transit service providers at least one month prior to

construction to coordinate bus stop relocations (as necessary) and to reduce potential interruption of transit service.

Mitigation Measure 3.7.2a: Pipeline construction near schools shall occur when school is not in session (i.e., summer or holiday breaks). If this is not feasible, a minimum of two months prior to project construction, the appropriate Member Agency for each project component shall coordinate with the appropriate local school district to identify peak circulation periods at schools along the alignment(s) (i.e., the arrival and departure of students), and require their contractor to avoid construction and lane closures during those periods.

3.8 Air Quality

Section 3.8 of the NBWRP EIR/EIS analyzed potential impacts to air quality and determined project construction would result in significant but mitigable effects associated with emissions from excavation activities, construction equipment exhaust, haul truck trips, and related construction worker commute trips, in addition to operational emissions, during installation of the proposed recycled water pipelines. Impacts associated with the modified South Service Area would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to air quality would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Pipeline construction and renovation at the existing Reservoir Hill Tank, including the lateral tank drain/overflow line, would involve transportation of materials via trucks to the existing and proposed facility sites. Construction-related emissions, therefore, would be minimal and would be associated with exhaust emissions from the equipment hauling and employee trucks. During system operation, vehicle trips associated with maintenance of the pipelines and storage tank would occur. However, the worker trips generated would be expected to be substantially below the BAAQMD screening threshold of 2,000 trips per day. Exhaust emissions would result from the use of equipment such as boring machines, jackhammers, backhoes/loaders, excavators, and other heavy-duty construction equipment. Operational activity would be passive and would include the conveyance of recycled water through pipes. Therefore, impacts would be less than significant.

The modified portions of the South Service Area Project would be located in the vicinity of residences; the closest residence is approximately 50 feet from the South Service Area Project site. Consistent with the NBWRP EIR/EIS discussion, construction activities would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, which could expose sensitive receptors to pollutant concentrations. Construction activities would be required to comply with Bay Area Air Quality Management District's (BAAQMD) CEQA requirements for control of fugitive dust emissions. Short-term construction impacts would be less than significant with implementation of NBWRP Mitigation Measures 3.8.1a. Additionally, implementation of EIR/EIS Mitigation Measure 3.8.1b would mitigate construction exhaust emissions by enforcing idling restrictions, requiring the use

of higher tier engines, and requiring use of other control technologies such as diesel particulate filters.

The emissions increases that would result under the South Service Area Project would not be expected to individually have a significant impact on global climate change or conflict with the State goals for reducing greenhouse gas emissions. As part of the EIR/EIS analysis, it is determined that the estimated CO₂ emissions (metric tons annually) are significantly under the CARB interim threshold. To meet the General Conformity rule requirements required by NEPA, an analysis of criteria air pollutants was provided in the NBWRP EIR/EIS. The Phase 1 Implementation Plan projects, which include the proposed South Service Area project, would not exceed the de minimis thresholds. The project was also analyzed with respect to regional emission levels. Construction emissions of carbon monoxide (CO), nitrogen dioxide (NO₂), and particulate matter less than 2.5 microns in diameter (PM_{2.5}) are estimated to be well under the de minimis threshold levels applicable to the project area. Therefore the project would be exempt from General Conformity determination requirements and would be in compliance with the National Ambient Air Quality Standards (NAAQS) and the State Implementation Plan; therefore long term emissions impacts would be less than significant.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measure identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, air quality impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.8.1a: Construction Fugitive Dust Control Plan. The appropriate Member Agency shall require its contractor(s) to implement a dust control plan that shall include the following dust control procedures during construction as required by the BAAQMD:

- Water all active construction areas at least twice daily, taking into consideration temperature and wind conditions.
- Cover all trucks hauling soil, sand, and other loose materials or require trucks to maintain at least two feet of freeboard.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on unpaved access roads, parking areas and staging areas at construction sites.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.
- Sweep streets daily (with water sweepers) if visible soil material is carried onto adjacent public streets.
- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).
- Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.)

- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways, consistent with Mitigation Measure 3.1.2, Erosion Control.
- Replant vegetation in disturbed areas as quickly as possible.

Mitigation Measure 3.8.1b: Construction Exhaust Emissions Control Plan. The appropriate Member Agency shall require its contractor(s) to implement an exhaust emissions control plan that shall include the following controls and practices:

- On road vehicles with a gross vehicular weight rating of 10,000 pounds or greater shall not idle for longer than five minutes at any location as required by Section 2485 of Title 13, Division 3, Chapter 10, Article 1 of the California Code of Regulations. This restriction does not apply when vehicles remain motionless during traffic or when vehicles are queuing.
- Off road equipment engines shall not idle for longer than five minutes per Section 2449(d)(3) of Title 13, Division 3, Chapter 9, Article 4.8 of the California Code of Regulations. All vehicle operators shall receive a written idling policy to inform them of idling restrictions. The policy shall list exceptions to this rule that include the following: idling when queuing; idling to verify that the vehicle is in safe operating condition; idling for testing, servicing, repairing or diagnostic purposes; idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); idling required to bring the machine to operating temperature as specified by the manufacturer; and idling necessary to ensure safe operation of the vehicle.
- Off road engines greater than 50 horsepower shall, at a minimum, meet Tier 2 emissions standards. When available, higher Tier engines shall be utilized. Additionally, contractor(s) shall comply with current CARB and BAAQMD regulations for off-road engines greater than 50 horsepower.

3.9 Noise

Section 3.9 of the NBRWP EIR/EIS described existing noise levels and applicable regulations and analyzed noise impacts associated with project construction and operation. As described in the EIR/EIS, temporary construction noise and vibration related to the South Service Area Project could affect nearby sensitive receptors. Impacts associated with the modified South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to noise would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS. The modified pipeline alignment would be located within the City of Novato, and subject to local noise ordinances. Additional roadways, and associated residential receptors, affected by construction would include portions of Main Gate Road, Bolling Circle, Captain Nurse Circle, and Altamira Drive. Impacts to these residential receptors are commensurate with those disclosed previously in the EIR/EIS. Under the modified project, pipeline will not be installed along the Coast Guard Housing loop (South Oakwood Drive/Crescent Drive); therefore the residential

receptors in this location would not be affected. Noise levels from pipeline construction activity could range up to 101 dBA at these residences from jack and bore tunneling and up to 89 dBA for trenching. The highest noise levels would occur during jack and bore tunneling under the SMART railroad corridor at the tie in near Bolling Circle. The City of Novato noise ordinance limits construction hours to between the hours of 7 a.m. and 6 p.m. on weekdays and between the hours of 10 a.m. and 5 p.m. on Saturdays. Construction activities in the city of Novato are not permitted on Sundays or on any federal holidays. Authorized grading activities are only permitted on weekdays when City inspectors are available to monitor activities. The construction activities within the South Service Area be short-term, consistent with those identified in the EIR/EIS, would not likely violate a local code or standard and implementation of EIR/EIS Mitigation Measures 3.9.1 and 3.9.2, would reduce the impact to a less than significant level.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measure identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, noise impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.9.1: The appropriate Member Agency shall develop and implement a Construction Noise Reduction Plan that requires, at a minimum, the following:

- The contractor shall locate all stationary noise-generating equipment, including hammer bore and drill rigs, as far as possible from nearby noise-sensitive receptors. Stationary noise sources located within 500 feet of noise-sensitive receptors shall be equipped with noise reducing engine housings, and the line of sight between such sources and nearby sensitive receptors shall be blocked by portable acoustic barriers.
- The contractor shall assure that construction equipment with internal combustion engines have sound control devices at least as effective as those provided by the original equipment manufacturer. No equipment shall be permitted to have an unmuffled exhaust.
- All construction activities within unincorporated Marin County shall be limited to between the hours of 7 a.m. and 6 p.m. on weekdays and between 9 a.m. and 5 p.m. on Saturdays.
- Residences and other sensitive receptors within 200 feet of a construction area shall be notified of the construction schedule in writing, at least two weeks prior to the commencement of construction activities. This notice shall indicate the allowable hours of construction activities as specified by the applicable local jurisdiction or as defined by this mitigation measure. The construction contractor shall designate a noise disturbance coordinator who would be responsible for responding to complaints regarding construction noise. The coordinator shall determine the cause of the complaint and ensure that reasonable measures are implemented to correct the problem. A contact number for the noise disturbance coordinator shall be conspicuously placed on construction site fences and entrances and included in the construction schedule notification sent to nearby residences and sensitive receptors.

Mitigation Measure 3.9.2: The appropriate Member Agency will implement the following measure:

- The construction contractor shall use a trenchless technology (e.g., horizontal directional drill, lateral drilling, etc.) other than jack and bore when there are structures within 100 feet of the proposed activities. If the construction contractor provides the Member Agency with acceptable documentation indicating that alternative trenchless technology is not feasible for the crossing, the contractor shall develop and implement a Construction Vibration Mitigation Plan to minimize construction vibration damage using all reasonable and feasible means available, including siting the jack and bore as far as possible from all nearby structures. The plan shall provide a procedure for establishing thresholds and limiting vibration values for potentially affected structures based on an assessment of each structure's ability to withstand the loads and displacements due to construction vibrations. The plan should also include the development of a vibration monitoring plan to be implemented during construction of particular crossing.

3.10 Hazards and Hazardous Materials

Section 3.10 of the NBRWP EIR/EIS characterized the existing conditions in the project area, discussed the applicable regulations and analyzed potential hazardous materials impacts associated with implementation of project. The EIR/EIS identified potentially significant but mitigable impacts associated with excavation of, storage, and transport of hazardous materials during construction. South Service Area Project impacts would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to hazardous materials would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Modified project alignments and the refined route to the Reservoir Hill Tank were previously encompassed in the service area surveyed during the original 2008 hazardous materials database review (EDR, 2008). As disclosed in the EIR/EIS, the Hamilton Air Force Base (Novato) is recorded in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) database, a Formerly Used Defense Sites Properties (FUDS) site, a Leaking Underground Storage Tank (LUST) site, and a hazardous spill site on the Spills, Leaks, Investigation, and Cleanup (SLIC) Program database. McInnis Golf Course (adjacent to LGVSD WWTP, San Rafael) is listed as a LUST site. A query for the project area on the California Hazardous Material Incident Report System (CHMIRS) identified 373 Bolling Circle (Novato) in the database. Consistent with the disclosure in the EIR/EIS, the above listed facilities are located within approximately 660 feet of the modified project components in the South Service Area and may pose a threat to human health or the environment from potential releases of hazardous materials. Based on additional review of a hazardous materials database search (EDR, 2008), construction in the South Service Area along the modified pipeline routes along Main Gate Road (at C Street), and Hangar Avenue, could encounter hazardous materials in excavated soil or shallow groundwater, since contaminants in soil have the potential to migrate via shallow groundwater from the properties identified. Implementation of EIR/EIS Mitigation Measures

3.10.1a through 3.10.1d, which includes development of a contingency plan in the event of soil contamination, proper removal of impacted soil, preparation of a Health and Safety Plan that applies to excavation, and inclusion of a Dust Abatement Program, would reduce the impact to less-than-significant-level. Use of hazardous materials during construction could result in an accidental release of fuel or oils into the environment. Implementation of EIR/EIS Mitigation Measures 3.10.2a through 3.10.2d, which would require to implementation of BMPs for handling hazardous materials onsite, would reduce the impact to less-than-significant-level. According to the map of wildland areas available on the Novato Fire Protection (2008), portions of the proposed pipeline route in the South Service Area is located in fire hazard zone near wildland areas. However, EIR/EIS Mitigation Measures 3.10.4a and 3.10.4b would reduce the level of impact to less-than-significant. Therefore, the original recommendations and findings remain unchanged given the new footprint. Implementation of EIR/EIS Mitigation Measures 3.10.1a through 3.10.1d would reduce impacts to a less than significant level.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measure identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the hazards and hazardous materials impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.10.1a: Project contract specifications shall require that, in the event that evidence of potential soil contamination such as soil discoloration, noxious odors, debris, or buried storage containers, is encountered during construction, the contractor will have a contingency plan for sampling and analysis of potentially hazardous substances, including use of a photoionization detector. The required handling, storage, and disposal methods shall depend on the types and concentrations of chemicals identified in the soil. Any site investigations or remediation shall comply with applicable laws and will coordinate with the appropriate regulatory agencies,

Mitigation Measure 3.10.1b: If unknown USTs are discovered during construction, the UST, associated piping, and impacted soil shall be removed by a licensed and experienced UST removal contractor. The UST and contaminated soil shall be removed in compliance with applicable county and state requirements governing UST removal.

Mitigation Measure 3.10.1c: Prepare a project-specific Health and Safety Plan that would apply to excavation activities. The plan shall establish policies and procedures to protect workers and the public from potential hazards posed by hazardous materials. The plan shall be prepared according to federal and California OSHA regulations and submitted to the appropriate agency with jurisdiction prior to beginning site activities.

Mitigation Measure 3.10.1d: Project contract specifications shall include a Dust Abatement Program to minimize potential public health impacts associated with exposure to contaminants in soil dust.

Mitigation Measure 3.10.2a: Consistent with the SWPPP requirements, the construction contractor shall be required to implement BMPs for handling hazardous materials onsite.

The use of construction BMPs will minimize any adverse effects on groundwater and soils, and will include, but not limited to, the following:

- Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction;
- Spill control and countermeasures, including employee spill prevention/response training;
- Avoid overtopping construction equipment fuel gas tanks;
- During routine maintenance of construction equipment, properly contain and remove grease and oils; and
- Properly dispose of discarded containers of fuels and other chemicals.

Mitigation Measure 3.10.2b: The contractor shall follow the provisions of California Code of Regulations, Title 8, Sections 5163 through 5167 for General Industry Safety Orders to protect the action area from being contaminated by the accidental release of any hazardous materials and/or wastes. The local CUPA agency will be contacted for any site-specific requirements regarding hazardous materials or hazardous waste containment or handling.

Mitigation Measure 3.10.2c: Oil and other solvents used during maintenance of construction equipment shall be recycled or disposed of in accordance with applicable regulatory requirements. All hazardous materials shall be transported handled, and disposed of in accordance with applicable regulatory requirements.

Mitigation Measure 3.10.2d: In the event of an accidental release of hazardous materials during construction, containment and clean up shall occur in accordance with applicable regulatory requirements.

Mitigation Measure 3.10.4a: For applicable Member Agencies, in consultation with local fire agencies, a Fire Safety Plan will be developed for each of the service areas associated with the project. The Fire Safety Plan(s) will describe various potential scenarios and action plans in the event of a fire.

Mitigation Measure 3.10.4b: For applicable Member Agencies, during project construction, all staging areas, welding areas, or areas slated for development using spark-producing equipment will be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working order. All vehicles and crews working at the project site(s) will have access to functional fire extinguishers at all times. In addition, construction crews will be required to have a spotter during welding activities to look out for potentially dangerous situations, including accidental sparks.

3.11 Public Services and Utilities

Section 3.11 of the NBRWP EIR/EIS discussed existing public services and utilities, applicable regulations, and project impacts. The EIR/EIS identified that pipeline installation would occur predominantly within existing roadways and would temporarily disrupt normal access to homes and business along Bolling Circle, Main Gate Road, Palm Drive, Crescent Drive, San Pablo Avenue, Hangar Avenue, and Hamilton Parkway/State Access Road. As discussed in the EIR/EIS, primary access to Hamilton Elementary School may be affected by pipeline installation.

The proposed project analyzed in the EIR/EIS identified potential impacts to fire services; however under the modified South Service Area Project, the pipeline alignment would be located proximate to the Fire Station No. 5. Primary ingress and egress would occur via Bolling Circle to Bolling Drive, and the proposed alignment would not directly cross or obstruct this fire station location. Renovation of the Reservoir Hill storage tank would not result in any public services or utility impacts, as it is an existing facility built off road and away from existing services or facilities. Construction activities could temporarily require police and fire assistance if accidents occur during construction, for traffic management, and/or for temporary disconnecting or relocating of existing utility lines. In the Hamilton Area, most existing utilities are underground, so South Service Area Project construction could result in damage to or interference with existing water, sewer, storm drain, natural gas, oil, electric, and/or communication lines, potentially causing interruption in service. In most cases, service disruptions would be temporary and would not exceed one day. All utility lines and cables that would be disrupted during pipe installation would be identified during preliminary design. Temporary and accidental impacts to smaller utility lines would be considered adverse, but not significant, because the affected area and duration of the impacts would be short-term. Implementation of EIR/EIS Mitigation Measures 3.11.1, 3.11.2, and 3.11.3 would reduce any construction-related impacts to a less than significant level.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measure identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the public services and utilities impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.11.1: The Member Agencies will coordinate with local emergency service providers in its service area to inform them of the proposed construction activities and schedule, and provide temporary alternate access routes around construction areas as necessary.

Mitigation Measure 3.11.2: Public service providers shall provide, upon request, a copy of the Traffic Control Plan to the related police and fire agencies for their review prior to construction. The appropriate Member Agency shall provide 72-hour notice to the local service providers prior to construction of individual pipeline segments. Discussion on the Traffic Control Plan is provided in Section 3.7, Traffic and Circulation.

Mitigation Measure 3.11.3: The Member Agencies will identify utilities along the proposed pipeline routes and project sites prior to construction and implement the following measures:

- a. Utility excavation or encroachment permits shall be obtained as required from the appropriate agencies. These permits include measures to minimize utility disruption. The service provider and its contractors shall comply with permit conditions regarding utility disruption.

- b. Utility locations shall be verified through the use of the Underground Service Alert services and/or field survey (potholing).
- c. As necessary, detailed specifications shall be prepared as part of the design plans to include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility services shall be notified of construction plans and schedule. Arrangements shall be made with these entities regarding protection, relocation, or temporary disconnection of services.
- d. In areas where the pipeline would traverse parallel to underground utility lines within five feet, the project applicant shall employ special construction techniques, such as trench wall-support measures to guard against trench wall failure and possible resulting loss of structural support for the excavated areas.
- e. Residents and businesses in the project corridor shall be notified of any planned utility service disruption two to four days in advance, in conformance with county and state standards.

3.12 Cultural Resources

Section 3.12 of the NBWRP EIR/EIS described the existing cultural resources in the area, applicable regulatory framework, and potential impacts resulting from the South Service Area Project. As part of EIR/EIS development, a records search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University in April 2008 (File No. 07- 1558). The original records search radius and previous geoarchaeological analysis encompass all portions of the modified area of potential effect (APE). The search consisted of a review of maps and site records for an area including the proposed facilities and one half-mile buffer of proposed alignments. As described in Section 1, due to Federal funding, the project must comply with Section 106 of the National Historic Preservation Act, as amended. On March 21, 2011, the SHPO concurred with Reclamation's determination of "no adverse effect to historic properties" for the NBWRP. A memorandum was submitted to Reclamation on May 25, 2011 describing the modified South Service Area Project changes and requesting an APE modification.

Consistent with the EIR/EIS, portions of the modified alignment are proximate to recorded Site P-21-000174. The LGVSD Service Area was originally surveyed by an ESA Registered Professional Archaeologist and Nick Tipon of the Federated Indians of Graton Rancheria on September 4, 2008. The APE in the LGVSD Service Area is primarily paved with no surface visibility. Adjacent locations with limited surface visibility such as landscaped areas were reviewed for cultural materials, especially in the recorded vicinity of the P-21-000174 site. Filling and grading activity in the area has likely eliminated any surface components to this site. Because of the potential for a subsurface deposit, the area is considered generally sensitive for prehistoric resources. While no archaeological sites were located in the APE, the archaeological investigation indicates that certain areas are sensitive for buried prehistoric archaeological resources that may be considered significant resources. Recorded historic architectural resources adjacent to the LGVSD Service Area APE include the Enlisted Barracks located on South Palm Drive, and the

Hangars on Hangar Avenue, at Hamilton Field in Novato. Consistent with the impact disclosed in the EIR/EIS, construction of the modified project alignments would involve excavation activities that could inadvertently uncover and affect existing cultural resources and/or archaeological materials, which could be a significant impact. Based on background research, there is no indication that any particular site in the APE has been used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during construction. However, in the unlikely event that human remains were discovered during project construction, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact.

Modified project alignments are located in paved or otherwise obscured areas, and the refined route to the Reservoir Hill Tank was previously surveyed during the original 2008 survey effort; no surface visibility is available to warrant additional survey efforts. Therefore, the original recommendations and findings remain unchanged given the new footprint. Implementation of EIR/EIS Mitigation Measures 3.12.1, 3.12.2, and 3.12.3 would reduce impacts to a less than significant level. The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measures identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the cultural resources impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.12.1: The appropriate Member Agency will incorporate the following measures:

Mitigation Measure 3.12.1a: Prepare a Cultural Resources Monitoring Plan. Prior to authorization to proceed, or issuance of permits, the applicant shall prepare and submit a cultural resources monitoring plan to the appropriate jurisdiction for review and approval. Monitoring shall be required for all surface alteration and subsurface excavation work including trenching, boring, grading, use of staging areas and access roads, and driving vehicles and equipment within all areas delineated as sensitive for cultural resources. A qualified professional archaeologist (cultural resources monitor) that is approved by each Member Agency in consultation with all affected jurisdictions shall prepare the plan. The plan shall address (but not be limited to) the following issues:

- Training program for all construction and field workers involved in site disturbance;
- Person(s) responsible for conducting monitoring activities, including Native American monitors;
- How the monitoring shall be conducted and the required format and content of monitoring reports, including any necessary archaeological re-survey of the final pipeline alignment (including the need to conduct shovel-test units or auger samples to identify deposits in advance of construction), assessment, designation and mapping of the sensitive cultural resource areas on final project maps, assessment and survey of any previously unsurveyed areas;
- Person(s) responsible for overseeing and directing the monitors;

- Schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
- Procedures and construction methods to avoid sensitive cultural resource areas (i.e. boring conduit underneath recorded or discovered cultural resource site);
- Clear delineation and fencing of sensitive cultural resource areas requiring monitoring;
- Physical monitoring boundaries (e.g., 200-foot radius of a known site);
- Protocol for notifications in case of encountering of cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation);
- Methods to ensure security of cultural resources sites;
- Protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction.

Mitigation Measure 3.12.1b: Archaeological and Native American Monitoring. If an intact archaeological deposit is encountered, all soil disturbing activities in the vicinity of the deposit shall cease until the deposit is evaluated. The appropriate Member Agency, as necessary, shall retain the services of a Native American monitor and a qualified archaeological consultant that has expertise in California prehistory to monitor ground-disturbing within areas designated as being sensitive for buried cultural resources. The archaeological monitor shall immediately notify the appropriate Member Agency of the encountered archaeological deposit. The monitors shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, present the findings of this assessment to NBWRA and the appropriate Member Agency. During the course of the monitoring, the archaeologist may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.

If a Member Agency, in consultation with the monitors, determines that a significant archaeological resource is present within their jurisdiction and that the resource could be adversely affected by the NBWRP, the Member Agency shall:

- Re-design the NBWRP to avoid any adverse effect on the significant archaeological resource; *or*,
- Implement an archaeological data recovery program (ADRP) (unless the archaeologist determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible). If the circumstances warrant an archaeological data recovery program, an ADRP shall be conducted. The project archaeologist and the Member Agency shall meet and consult to determine the scope of the ADRP. The archaeologist shall prepare a draft ADRP that shall be submitted to the appropriate Member Agency for review and approval. The ADRP shall identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ADRP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, shall be limited to the portions of the historic property that could be adversely affected by the NBWRP.

Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

Mitigation Measure 3.12.1c: Cultural Resources Assessment for Staging Areas. When locations for staging are defined the areas of potential effect should be subject to a cultural resources investigation that includes, at a minimum:

- An updated records search at the Northwest Information Center;
- An intensive survey of all areas within the lots;
- A report disseminating the results of this research; and,
- Recommendations for additional cultural resources work necessary to mitigate any adverse impacts to recorded and/or undiscovered cultural resources.

Mitigation Measure 3.12.1d: Inadvertent Discoveries. If discovery is made of items of historical or archaeological interest, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of discovery. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation the contractor shall immediately contact the NBWRA and appropriate Member Agency. The contractor shall not resume work until authorization is received from the appropriate Member Agency.

- In the event of unanticipated discovery of archaeological indicators during construction, the Member Agency shall retain the services of a qualified professional archaeologist to evaluate the significance of the items prior to resuming any activities that could impact the site.
- In the case of an unanticipated archaeological discovery, if it is determined that the find is unique under NHPA and/or potentially eligible for listing in the National Register, and the site cannot be avoided, appropriate Member Agency shall provide a research design and excavation plan, prepared by an archaeologist, outlining recovery of the resource, analysis, and reporting of the find. The research design and excavation plan shall be submitted to NBWRA and appropriate Member Agency and approved by the appropriate Member Agency prior to construction being resumed.

Mitigation Measure 3.12.1e: Project-level Cultural Resources Assessment. When project-level plans are completed for the Basic System; the Partially Connected System; and the Fully Connected System, NBWRA the appropriate Member Agency will conduct a cultural resources investigation for the APE that includes, at a minimum:

- An updated records search at the NWIC;
- An intensive cultural resources survey of the APE;
- A report disseminating the results of this research; and,
- Recommendations for additional cultural resources work necessary to mitigate any adverse impacts to recorded and/or undiscovered cultural resources.

Mitigation Measure 3.12.2: Discovery of Human Remains. If potential human remains are encountered, the appropriate Member Agency shall halt work in the vicinity of the find and contact the county coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner shall contact the NAHC. As provided in Public Resources Code Section 5097.98, the NAHC shall identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

3.13 Recreation

Section 3.13 of the NBWRP EIR/EIS analyzed impacts to recreation and determined that construction activities could temporarily conflict with access to recreational resources. Relocation of the proposed transmission pipeline alignment would not result in any new or more severe impacts to recreational resources. As discussed in the EIR/EIS, the San Francisco Bay Trail¹⁸ is adjacent to John F. McInnis Park, located near the LGVSD WWTP and connects to the southern Hamilton Area. However, this would be a short-term effect as full access to the trail would be restored upon completion of construction operations. Under the approved project in the NBWRP EIR/EIS, the pipeline alignment would be located adjacent to Hamilton Amphitheater Park on Hamilton Parkway and a neighborhood park on Hangar Avenue, south of the intersection with San Pablo Avenue; under the modified South Service Area Project, the pipeline alignment would be located on proximate streets, but would not directly impact these parks. Under the modified project, construction of the distribution pipeline along Bolling Circle may temporarily affect access to a Clark A. Blasdel Park, a neighborhood park. Renovation of the Reservoir Hill storage tank is an existing facility; however during renovation and construction of the lateral tank drain/overflow line, the recreational Reservoir Hill (Vista) Trail would be temporarily impacted during construction, as disclosed previously in the EIR/EIS. Construction-related impacts would be reduced to a less than significant level with implementation of EIR/EIS Mitigation Measures 3.13.1, 3.13.2, and measures identified in Sections 3.8, Air Quality, 3.9, Noise, and 3.7, Transportation and Traffic. No additional bikeways, beyond those disclosed in the EIR/EIS, would be affected by the modified project components.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measures identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the recreational resource impacts would be consistent with those identified in the EIR/EIS.

¹⁸ This portion of the Bay Trail is not open to the public at the time of release of this document.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.13.1a: The appropriate Member Agency shall coordinate with the appropriate local and regional agencies to identify detour routes for the bikeways and trails during construction where feasible, as part of the Traffic Control/Traffic Management Plan (see **Measure 3.11.1a**).

Mitigation Measure 3.13.1b: Implement **Mitigation Measures 3.8-1a** through **3.8.1b**, **Mitigation Measures 3.9.1** through **3.9-3**.

Mitigation Measure 3.13.2: Before beginning construction, the contractor will develop, in consultation with the appropriate representative(s) of the affected park's managing agency, a plan indicating how public access to the park will be maintained during construction. If needed, flaggers will be stationed near the construction activity area to direct and assist members of the public around the activity areas while maintaining access to the parks.

3.14 Aesthetics

Section 3.14 of the NBWRP EIR/EIS analyzed visual resource impacts associated with construction of the Phase 1 project and determined construction activities would temporarily affect residential views during construction,¹⁹ and above ground facilities could result in new sources of light and glare.²⁰ Impacts associated with the modified South Service Area Project would be consistent with impacts identified in the NBWRP EIR/EIS, as the pipeline length and general geographic location is consistent compared to the Phase 1 project previously examined. Potential impacts related to aesthetics would be reduced to a less than significant level through implementation of EIR/EIS Mitigation Measures identified in the NBWRP EIR/EIS.

Although pipeline installation would progress along local roadways, construction would only affect a specific location for a short period of time. NMWD transmission pipeline installation would occur from LGVSD WWTP across open/farmland to the Hamilton Area via Bolling Circle, and, as described in the EIR/EIS, extend on Main Gate Road, Palm Drive, San Pablo Avenue, Hangar Avenue, and Hamilton Parkway/State Access Road. Storage facilities on Reservoir Hill would be retrofitted, including the tank drain/overflow line down gradient to Altamira Drive. Views experienced by the users from these roadways include scenic vistas of hillsides, oak woodlands, and agricultural resources and construction of recycled water pipelines would result in short-term impacts to scenic resources. Additionally, views from and of locally designated scenic areas protected under the *City of Novato General Plan* and the *Marin Countywide Plan* could be temporarily affected. As disclosed in the EIR/EIS, the pipeline from LGVSD WWTP to the Hamilton Area would traverse through designated open space and agricultural land and occur adjacent to St. Vincent's and Silveira Ranch. Since this area is important to the character of the community and is a prominent feature on the landscape, the South Service Area Project could affect the views of St. Vincent's from surrounding roads and structures. Construction activities

¹⁹ There are no Caltrans designated scenic highways in the project area; therefore, there would be no impact.

²⁰ The proposed project modifications would not result in new or more severe impacts from light and glare beyond those identified in the NBWRP EIR/EIS.

would be visible to the residential communities along the hillside at the border between the Novato and San Rafael, particularly along Club View Drive.

Under the modified project, the pipeline alignment would be located within the roadway on Bolling Circle and Captain Nurse Circle, and connect to Main Gate Road via Randolph Drive. The tank drain/overflow line from Reservoir Hill Tank would be installed on the hill slope down gradient to Altamira Drive. Impacts to these roadways would be short-term and consistent with those identified in the EIR/EIS and would be temporary and mitigated to a less than significant level through mitigation identified in the EIR/EIS. Under the modified project, pipeline will not be installed along the Coast Guard Housing loop (South Oakwood Drive/Crescent Drive); therefore no visual impacts will occur at these locations.

During construction, excavated areas, stockpiled soils, and other materials within the construction easement and staging areas would constitute negative aesthetic elements in the visual landscape. Impacts from dust, excavation, drilling, and road closures could reduce pedestrian access, uproot street trees, displace landscaping and streetscaping, and damage sidewalk materials. However, these impacts are temporary and associated with short-term construction and would be reduced to a less than significant level with implementation of EIR/EIS Mitigation Measures 3.14.1a through 3.14.1c. Surface restoration would involve repaving roadways and replanting grasses, shrubs, and trees in unpaved areas outside of the roadways. The Reservoir Hill storage tank is an existing part of the landscape and consistent with the existing visual character of the area, and therefore retrofit activities would not affect aesthetics. Pipelines would be buried underground and all roadways and disturbed areas restored following construction completion, and therefore would have a less-than-significant impact on aesthetics.

The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. Implementation of the mitigation measure identified in the EIR/EIS and listed below would reduce potential impacts to a less than significant level. As such, the aesthetic impacts would be consistent with those identified in the EIR/EIS.

Mitigation Measures listed in the EIR/EIS

Mitigation Measure 3.14.1a: Following construction activities, disturbed areas shall be restored to baseline conditions, including repaving roadways, replanting trees, and/or reseeding with a native seed mix typical of the immediately surrounding area.

Mitigation Measure 3.14.1b: Berms around constructed reservoirs shall be vegetated with native seed mixes to soften the visual effect of the reservoirs from adjacent roadways.

Mitigation Measure 3.14.1c: Design elements shall be incorporated to enhance visual integration of the booster pump station and distribution pump station with their surroundings. Proposed facilities shall be painted low-glare earth-tone colors that blend with the surrounding terrain. Highly reflective building materials and/or finishes shall not be used in the designs for proposed facilities.

3.15 Environmental Justice

Section 3.15 of the NBRWP EIR/EIS analyzed impacts to environmental justice. As discussed in the EIR, the overall construction-related project impacts would be short-term and temporary. Construction of the NMWD project would involve activities and use equipment typical for any construction project and would not cause a disproportionate impact to the minority and low-income community in the area; therefore no impact is expected. The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. As such, the environmental justice impacts would be consistent with those identified in the EIR/EIS.

3.16 Socioeconomics

Section 3.16 of the NBRWP EIR/EIS describes socioeconomic conditions in the project area and analyzes effects on the economy from implementation of the project including project construction; operation and maintenance; increased vineyard production and costs; increased recreational expenditures; and potential changes in customer water and sewer fees. As discussed in the EIR/EIS, impacts related to socioeconomics would be less than significant or beneficial. Short-term construction activities would create jobs and generate additional economic activity within the region during the period of construction. Recycled water use instead of groundwater or surface water for irrigation purposes would be more reliable and could support long-term agricultural production and farm income, which would be a beneficial impact to the agricultural economy. The South Service Area Project would not result in any new impacts beyond those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. As such, socioeconomic impacts would be consistent with those identified in the EIR/EIS.

3.17 Growth

Chapter 5, Growth Inducement and Secondary Effects of Growth, of the NBRWP EIR/EIS analyzed the growth inducement potential of the NBWRP and secondary effects of growth resulting from the NBWRP. As described in the EIR/EIS, no appreciable growth in population or employment would occur as a direct result of construction or operation of the proposed facilities. The South Service Area Project would provide recycled water for urban irrigation and as such would contribute to the provision of adequate water supply to support a level of growth that is consistent with the amount planned and approved within the General Plans of the City of Novato and Marin County. No additional impacts are anticipated beyond those identified in General Plan EIRs for Marin County and City of Novato. The mitigation measures listed in the Marin County and Novato General Plan EIRs and described in the NBWRP EIR/EIS for the North Novato Service Area would apply to the proposed NMWD project. The proposed NMWD Recycled Water Expansion Project for the South Service Area would not result in any new impacts beyond

those previously identified in the EIR/EIS, or any increase in the severity of impacts identified. As such, any secondary effects associated with the proposed South Service Area Project would be consistent with those discussed in the EIR/EIS.

3.18 Indian Trust Assets

Section 3.12 of the NWBRP EIR/EIS analyzed potential effects to Indian Trust Assets (ITAs). ITAs are legal interests in property held in trust by the United States (U.S.) for federally-recognized Indian tribes or individual Indians. Indian reservations, Rancherias, and Public Domain Allotments are common ITAs in California. The Proposed Action or alternatives would not be implemented on or affect tribal lands, areas where mineral or water rights may be held by a tribe, traditional hunting or fishing grounds, or other ITAs. There are no ITAs at or near the South Service Area Project area. The nearest proposed project construction activity to the Graton Rancheria would occur at a distance of approximately 12 miles away. Reclamation will comply with procedures contained in Departmental Manual Part 512.2, guidelines, which protect ITAs. Therefore, the Proposed Action would not adversely affect ITAs.

SECTION 4

Conclusion

This Supplemental EA/Addendum demonstrates that the environmental impacts of the South Service Area Project are consistent with those analyzed adequately in the EIR/EIS certified and approved by NMWD Board of Directors in December 2009. Based on the environmental analysis in this Supplemental EA/Addendum, the modified South Service Area Project (i.e., minor changes to the approved project described in Section 1) would not result in any new significant impacts or any substantial increase in the severity of impacts beyond those discussed in the NBWRP EIR/EIS. The project would incorporate and comply with all appropriate mitigation measures that have already been identified and incorporated into the NBWRP Mitigation Monitoring and Reporting Program. In addition, no new information of substantial importance has become available since the EIR/EIS was prepared regarding new significant impacts, or feasibility of EIR/EIS Mitigation Measures or alternatives.

SECTION 5

Consultation and Coordination

5.1 Federal Endangered Species Act

Section 1.10 of this Supplemental EA/Addendum discusses Federal Section 7 consultation with the USFWS and NMFS during the EIS/EIR process. According to Sec. 402.16 of the Endangered Species Act Section 7 Regulations, reinitiating formal consultation may be required if (1) new information becomes available indicating that listed species or critical habitat may be affected by the project in a manner or to an extent not previously considered; (2) current project plans change in a manner that causes an effect to listed species or critical habitat in a manner not previously considered; or (3) a new species is listed or critical habitat designated that may be affected by the action. The proposed modifications for the NBWRP do not meet these criteria and therefore further consultation with USFWS or NMFS is not necessary.

5.2 Section 106 of the National Historic Preservation Act

Section 1.10 of this Supplemental EA/Addendum discusses National Historic Preservation Act Section 106 Consultation. Section 106 requires Federal agencies to take into account effects on historic properties. Section 106 consultation with SHPO for the NBWRP was completed on March 21, 2011. SHPO issued a letter of concurrence with Reclamation's finding of no significant adverse effect to historic properties and cultural resources.

Based on proposed project modifications, subsequent consultation with SHPO was necessary to modify the Area of Potential Effect (APE). ESA prepared a letter report, dated May 25, 2011, to address a proposed change in the APE. The letter confirmed that construction methods would be consistent with the methodology described for the approved NBWRP and the previous cultural resources investigations completed for the project (ESA, 2011). The original records search radius and previous geoarchaeological analysis encompass all portions of the revised APE. SHPO found that the additions to the APE were included in the original records search and that a pedestrian survey was conducted. As such, SHPO issued a letter of concurrence with Reclamation's finding of no significant adverse effect to historic properties and cultural resources on June 28, 2011.

5.3 Clean Water Act

As noted in Section 1.9 of this Supplemental EA/Addendum, the project is subject to the Clean Water Act (CWA) Section 404. The CWA requires that a permit be obtained from USACE when discharge of dredged or fill material into wetlands and waters of the U.S. occurs. The NBWRP EIR/EIS determined that pursuit of permits to protect jurisdictional waters of the U.S., would be necessary. A preliminary wetland delineation, and associated pre-construction notification package has been submitted to USACE to identify and mitigate impacts to jurisdictional waters of the U.S. As noted in Section 3.5 of this Supplemental EA/Addendum, jurisdictional wetlands are presumed within the project area; and as such NMWD expects to obtain a Nationwide Permit 12, Utility Line Activities (NWP 12) under CWA Section 404, and will comply with all conditions of the permit.

SECTION 6

List of Preparers

US Bureau of Reclamation

Doug Kleinsmith, Reviewer

Tony Overly, Archaeologist

North Marin Water District

Drew McIntyre, Chief Engineer

Environmental Science Associates

Jim O'Toole, Project Director

Katie Blank, Technical Analyst

SECTION 7

References

All references included in the *Draft EIR/EIS for the North San Pablo Bay Restoration and Reuse Project (North Bay Water Recycling Program)*, SCH # 2008072096, Prepared for the United States Bureau of Reclamation and North Bay Water Reuse Authority, May 2009, are herein incorporated by reference. Specific citations are listed below.

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State Water Resources Control Board (SWRCB), *Final Recycled Water Policy*, February 11, 2009.

United States Department of Agriculture (USDA), *Web Soil Survey*, <http://websoilsurvey.nrcs.usda.gov/app/>, accessed October 17, 2008.

APPENDIX 1

Notice of Determination

To be Inserted following NMWD Board Action

APPENDIX 2

SHPO Concurrence Letter, June 28, 2011

**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

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June 28, 2011

In Reply Refer To: BUR110214A

Michael A. Chotkowski
Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, CA 95825-1898

Re: North Bay Water Reuse Authority (NBWRA) Phase I Project, Marin, Sonoma, and Napa Counties, California (Project No. 09-CCAO-132).

Dear Mr. Chotkowski:

Thank you for seeking consultation with me regarding the above noted undertaking. Pursuant to 36 CFR Part 800 (as amended 8-05-04) regulations implementing Section 106 of the National Historic Preservation Act (NHPA), the Bureau of Reclamation (BUR) is the lead federal agency for this undertaking and is seeking my comments on the effects that the proposed project will have on historic properties. The project will be implemented in part by the BUR using American Recovery and Reinvestment Act (ARRA) funds and title XVI funds. The BUR has identified this use of federal expenditures as an undertaking subject to compliance with Section 106 regulations. The Bur is continuing consultation, as a result of revisions to the original APE, namely a change in proposed pipeline alignment.

The proposed project is Phase I of the NBWRA program that is designed to provide recycled water for agricultural, urban, and environmental uses as an alternative to discharging recycled water into San Pablo Bay. The main components of the proposed undertaking are the construction of 41 miles of recycled water conveyance pipeline, seven booster pumps, upgrades to treatment capacity at existing wastewater treatment plants, and the retrofit of two existing storage tanks. The BUR has determined that the Area of Potential Effects (APE) consists of approximately 220 acres, which includes a 50-foot wide corridor along the proposed pipeline route and necessary staging and access locations. The vertical APE for the pipeline installations will be approximately 8-feet except at locations of jack and bore and directional drilling which will extend to a maximum of 20 feet. In addition to your letters of February 14, 2011, March 18, 2011, and June 6, 2011 you have submitted the following reports as documentation of your efforts to identify and evaluate historic properties in the project APE:

- *North Bay Water Recycling Project, Proposed Pipeline Modification – NMWD LGVSD Service Area* (Heidi Koenig and Brad Brewster, ESA– Cultural Resources Group: May 25, 2011)

- *North Bay Water Reuse Authority North Bay Water Recycling Program, Marin, Sonoma, and Napa Counties Cultural Resources Survey Report* (Heidi Koenig and Brad Brewster, ESA – Cultural Resources Group: January 25, 2011a).

- *North Bay Water Reuse Authority North Bay Water Recycling Program, Marin, Sonoma, and Napa Counties Cultural Resources Survey Report Confidential Attachment 2* (Heidi Koenig and Brad Brewster, ESA – Cultural Resources Group: January 25, 2011b).

- *North Bay Water Reuse Authority North Bay Water Recycling Program, Marin, Sonoma, and Napa Counties Archaeological Extended Phase I Report* (Heidi Koenig, ESA – Cultural Resources Group: January 25, 2011).

- *Memorandum: Supplementary Information for North Bay Water Recycling Program Cultural Resources* (Heidi Koenig, ESA to Kevin Booker and Marc Bautista, SCWA: March 14, 2011).

Identification efforts, including records search and field survey, concluded that there are no archaeological sites located within the project APE. Eight previously recorded archaeological sites were, however, plotted on maps at the Northwest Information Center at locations near the APE. Although there were no surface manifestations of any of these sites observed during the field survey, subsurface techniques, including 2-inch geoprobes and 4-inch augers, produced negative findings at all eight locations.

Efforts directed toward identification of built-environment historic properties resulted in the identification of four previously documented historic properties and four newly identified historic period cultural resources. The four previously recorded historic properties are the Hamilton Army Air Field Discontiguous Historic District (listed on the NRHP under criteria A and C in 1998, site #98001347) in Marin County, the Napa State Hospital in Napa County, several segments of the Northwestern Pacific Railroad in Marin County and Sonoma County, and a segment of the Southern Pacific Railroad-Schellville Branch in Sonoma County. The BUR has concluded that the project effects in the vicinity of the Hamilton Army Air Field Discontiguous Historic District and the Napa State Hospital will be restricted to transitory visual impacts during project construction only. As the proposed pipeline will be installed under the existing railroad grades using either directional drilling and/or jack and bore techniques, none of these documented linear historic properties will be adversely affected. The additions to the APE were included in the original records search and a pedestrian survey was conducted. No new historic properties were identified.

In addition to my previous concurrence with determinations of eligibility and identification efforts, after reviewing your consultation letters and supporting documentation, I have the following comments:


- 1) I concur that your identification of an Area of Potential Effects is appropriate pursuant to 36 CFR Part 800.4(a)(1) and that your efforts to identify and evaluate historic properties in the APE represent a reasonable and good faith effort in accordance with 36 CFR Part 800.
- 2) I acknowledge that, for the purposes of this undertaking only, the BUR is treating the Napa State Hospital, a segment of the Northwestern Pacific Railroad in Sonoma County, and a segment of the Southern Pacific Railroad-Schellville

Branch in Sonoma County as eligible for the NRHP for the purposes of this undertaking

- 3) In conclusion, based on my comments above and my review of your Section 106 consultation letters and supporting documentation, I have no objection to your proposed finding of No Adverse Effect for this undertaking.

Be advised that under certain circumstances, such as unanticipated discovery or a change in project description, the BUR may have additional future responsibilities for this undertaking under 36 CFR Part 800. Thank you for seeking my comments and for considering historic properties in planning your project. If you require further information, please contact Trevor Pratt of my staff, at phone 916-445-7017 or email tpratt@parks.ca.gov

Sincerely,

A handwritten signature in cursive script, reading "Susan H. Stratton for".

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer