Final

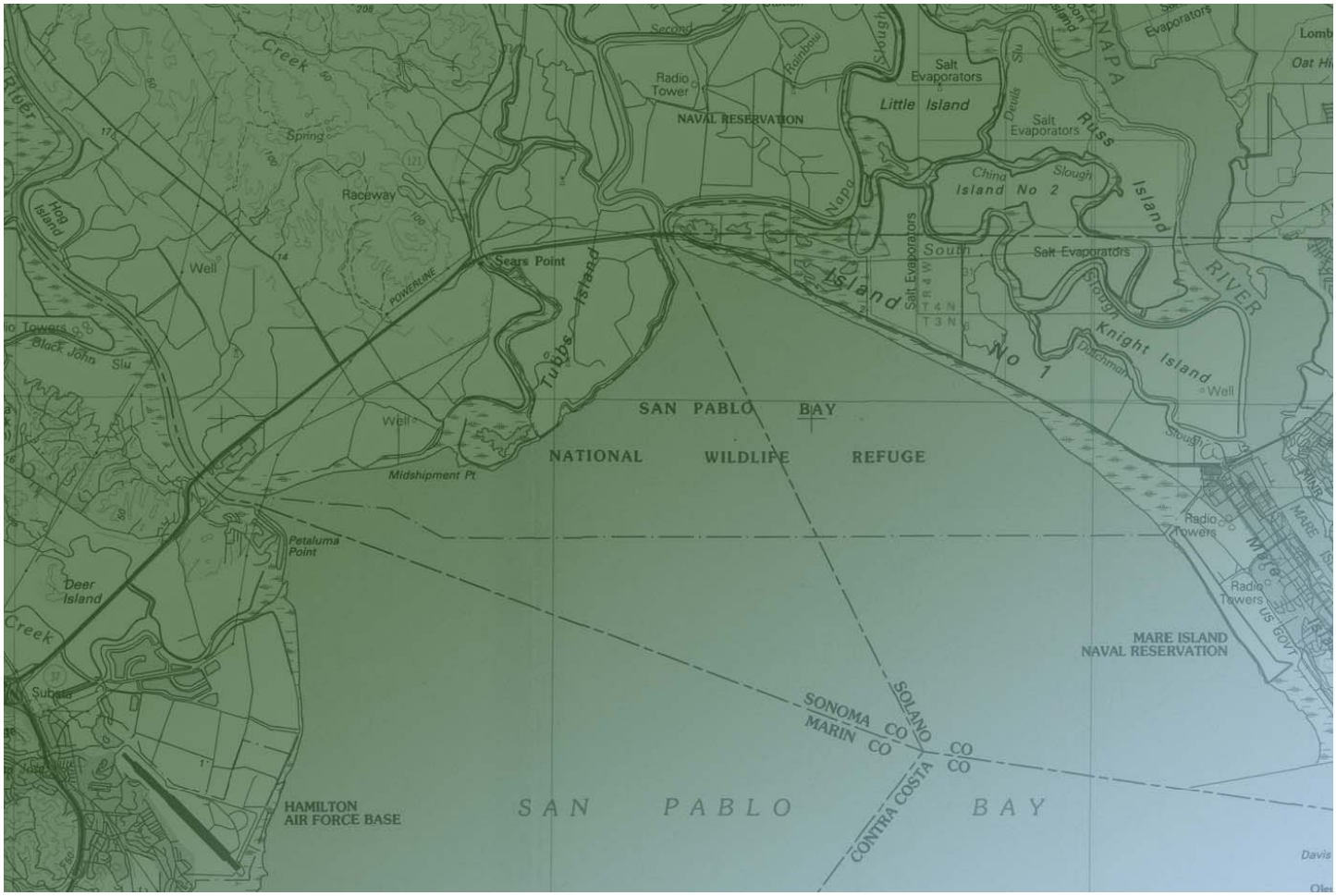
NORTH SAN PABLO BAY RESTORATION AND REUSE PROJECT (NORTH BAY WATER RECYCLING PROGRAM)

Environmental Impact Statement
SCH# 2008072096

Prepared for:
Bureau of Reclamation

North Bay Water Reuse Authority

June 2010



Member Agencies

Contributing Agencies

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FINAL ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL IMPACT STATEMENT for the North Bay Water Recycling Program

Project Title: North Bay Water Recycling Program (NBWRP), also known as the North Bay Restoration and Reuse Project

Project Abstract: The North Bay Water Reuse Authority (NBWRA) has prepared a joint Final Environmental Impact Report/ Impact Statement (EIR/EIS) pursuant to the California Environmental Quality Act (CEQA) and the National Environment Policy Act (NEPA) for the proposed North Bay Water Recycling Program or NBWRP (also known as North San Pablo Restoration and Reuse Project). As contract administrator for the NBWRA, the Sonoma County Water Agency (SCWA) is acting as the Lead Agency under CEQA and the Department of Interior, Bureau of Reclamation is acting as the federal Lead Agency under NEPA.

NBWRA is exploring "the feasibility of coordinating interagency efforts to expand the beneficial use of recycled water in the North Bay Region thereby promoting the conservation of limited surface water and groundwater resources." This Final EIR/EIS responds to comments received on the Draft EIR/EIS that described the potential environmental, social, and economic effects of the North Bay Water Recycling Program. The NBWRP would provide increased recycled water supply to urban, agricultural and environmental uses in the North San Pablo Bay region. The Draft EIR/EIS described three alternatives (i.e., Alternatives 1, 2, and 3) and the Phase 1 Implementation Plan under Alternative 1. The alternatives represent a range of recycled water reuse and regional facility integration.

SCWA as the Lead Agency certified the EIR/EIS on December 8, 2009 as complete under Section 15090 of the CEQA Guidelines. The individual Member Agencies approved the projects identified under the Phase 1 Implementation Plan that are located within their respective jurisdictions as follows: LGVSD on December 10, 2009, Novato SD on December 14, 2009, Napa County on December 15, 2009, NMWD on December 15, 2009, and Napa SD on December 16, 2009.

The document will be available at: Bureau of Reclamation, Mid-Pacific Regional Office Library (Sacramento), Sonoma County Water Agency (Santa Rosa), the NBWRA member agencies' offices, and local libraries in Marin, Sonoma, and Napa Counties. For additional information, contact Mr. David T. White, Reclamation, at 916-978-5074, TDD (916) 978-5608 or by e-mail at dwhite@mp.usbr.gov and Marc Bautista by calling Sonoma County Water Agency (707) 547-1923 or by e-mail at mbautista@scwa.ca.gov.

NORTH SAN PABLO BAY RESTORATION AND REUSE PROJECT

Final Environmental Impact Statement

ACRONYMS AND ABBREVIATIONS

This section includes a list of acronyms and abbreviations contained in the Final EIR/EIS. Please note that some of these acronyms appear in the Draft EIR/EIS. This list is intended to be used in conjunction with the list of acronyms, abbreviations, and glossary terms provided in the Draft EIR/EIS.

Acronyms and Abbreviations

ABAG	Association of Bay Area Governments
ADWF	average dry weather flow
AFY	acre-feet per year
APE	Area of Potential Effect
ARG	antibiotic resistant genes
ASA	Area of Sensitivity Assessment
AWWF	average wet weather flow
Caltrans	California Department of Transportation
CDPH	California Department of Public Health
CEQ	Council of Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
dBA	A-weighted decibels
DPB	disinfection by-product
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency

FERC	Federal Energy Regulation Commission
FOER	Friends of the Eel River
FOEst	Friends of the Esteros
HP	horsepower
kWhr	kilowatt-hours
LCWD	Los Carneros Water District
LGVSD	Las Gallinas Valley Sanitary District
LO	Lack of Objections
LRC	Living Rivers Council
Mg/L	milligrams per liter
MMWD	Marin Municipal Water District
MOU	Memorandum of Understanding
MST	Miliken-Sarco-Tulocay
Napa SD	Napa Sanitation District
NBWRA	North Bay Water Reuse Authority
NBWRP	North Bay Water Recycling Program
NDMA	N-nitroso dimethylamine
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NMWD	North Marin Water District
NOD	Notice of Determination
Novato SD	Novato Sanitary District
NPDES	National Pollutant Discharge Elimination System
NTR	National Toxics Rule
OWL	Open Space, Water Resource Protection, Land Use Foundation
PPCP	personal care product
PG&E	Pacific Gas and Electric Company
Reclamation	US Bureau of Reclamation
ROD	Record of Decision
RPA	Reasonable Potential Analysis
RWQCB	Regional Water Quality Control Board

SCEIP	Sonoma County Energy Independence Program
SCWA	Sonoma County Water Agency
SCWC	Sonoma County Water Coalition
SMART	Sonoma-Marin Area Rail Transit
SPAWN	Salmon Protection and Watershed Network
SR	State Route
SVCSD	Sonoma Valley County Sanitation District
SVWRP	Sonoma Valley Recycled Water Project
SWRCB	State Water Resource Control Board
USACE	United States Army Corps of Engineers
USEPA	United State Environmental Protection Agency
USFWS	United State Fish and Wildlife Service
USGS	United States Geologic Survey
VRAD	Vacuum Retort Anaerobic Digester
VSFCD	Vallejo Sanitation and Flood Control District
WQO	water quality objective
WWTP	waste water treatment plant

CHAPTER 1
Introduction

1.1 Project Background

The U.S. Department of Interior, Bureau of Reclamation (Reclamation) and the North Bay Water Reuse Authority (NBWRA) prepared a Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for the North San Pablo Bay Restoration and Reuse Project. The document is a joint EIR/EIS and satisfies the requirements of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

The NBWRA, established under a Memorandum of Understanding (MOU) in August 2005, is comprised of four wastewater utilities and one water agency: Las Gallinas Valley Sanitary District (LGVSD), Novato Sanitary District (Novato SD), Sonoma Valley County Sanitation District (SVCSD), Napa Sanitation District (Napa SD), and Sonoma County Water Agency (SCWA). Additional agencies supporting the NBWRA through contribution of funds and staff time include North Marin Water District (NMWD) and County of Napa.

Under the MOU, the NBWRA is exploring "the feasibility of coordinating interagency efforts to expand the beneficial use of recycled water in the North San Pablo Bay Region thereby promoting the conservation of limited surface water and groundwater resources." The proposed action would alter the disposition of treated wastewater in the North Bay Region by providing increased recycled water supply for urban, agricultural and environmental uses.

As implementation of the project would likely require external funding assistance, the investigation and development of the project is being carried out in conformance with the requirements of the U.S. Department of the Interior's Bureau of Reclamation Public Law 102-575, Title XVI, which provides a mechanism for federal participation and cost-sharing in approved water reuse projects. . It will also be funded from non-Title XVI funds. The proposed Federal Action is the provision of federal funds by Reclamation under the Title XVI Program and non-Title XVI funds to NBWRA Member and Cooperating Agencies for the implementation of water recycling projects examined in this EIR/EIS. The Bureau of Reclamation is the NEPA Lead Agency for this proposed action. The funding agreement will allocate the funding among the individual project components.

The North San Pablo Bay Restoration and Reuse Project has been developed in conformance with the requirements of the Reclamation's Public Law 102-575, Title XVI, including preparation of a Feasibility Study. The Project was authorized in Public Law 111-11. For the purposes of this EIR/EIS, this project or action will be referred to as the **North Bay Water Recycling Program (NBWRP)**.

The basic purpose of the NBWRP is to provide recycled water for agricultural, urban, and environmental uses and to promote the expanded beneficial use of the recycled water system in the North San Pablo Bay region. As noted in Reclamation's NEPA Handbook (Reclamation, 2000), this section has been prepared in accordance with Title 40 Code of Federal Regulations (CFR) Section 1508.9 to present why the proposed action is being considered. Implementation of the NBWRP would include upgrades to treatment processes and construction of pipelines, pump stations, and storage facilities to distribute recycled water for use in compliance with Article 4 in Title 22 of the California Code of Regulations, which sets water quality standards and treatment reliability criteria for recycled water. The Draft EIR/EIS was developed to provide the public and responsible and trustee agencies reviewing the NBWRP an analysis of the potential effects, both beneficial and adverse, on the local and regional environment associated with construction and operation of the NBWRP.

1.2 Draft EIR/EIS Public Review Process

On May 5, 2009, Reclamation as the NEPA Lead Agency, and SCWA as the CEQA Lead Agency, released for public review the Draft EIR/EIS for the North San Pablo Bay Restoration and Reuse Project or NBWRP. Appendix A provides the distribution list of individuals, organizations, and agencies that received the Draft EIR/EIS. A 45-day public review and comment period on the Draft EIR/EIS ended June 26, 2009 and was extended through July 20, 2009.

Three public hearings on the Draft EIR/EIS were held during the public review period at the following locations:

June 9, 2009	**June 10, 2009**	**June 11, 2009**
6:00 p.m. – 7:30 p.m.	2:30 p.m. – 4:00 p.m.	6:00 p.m. – 7:30 p.m.
Margaret Todd Senior Center	Sonoma Community Center	Napa Elks Lodge
1560 Hill Road, Novato	276 East Napa Street, Sonoma	2840 Soscol Avenue, Napa

1.3 Purpose of the Final EIR/EIS

Both NEPA and CEQA require a lead agency that has completed a Draft EIR or EIS to consult with and obtain comments from public agencies that have legal jurisdiction with respect to the proposed action, and to provide the general public with opportunities to comment on the Draft EIR or EIS. This Final EIR/EIS has been prepared to respond to comments received from agencies and members of the public on the Draft EIR/EIS for the NBWRP.

The Draft EIR/EIS for NBWRP, together with this response to comments document, constitute the Final Environmental Impact Report/ Environmental Impact Statement (Final EIR/EIS) for the project. The Final EIR/EIS is an informational document prepared by the Lead Agencies that must be considered by decision makers (including the SCWA Board of Directors and Reclamation) before approving or denying the proposed action.

1.3.1 NEPA Requirements

Reclamation has prepared this document pursuant to Council of Environmental Quality (CEQ) and 40 CFR 1500 of the CEQ's NEPA Regulations. The Final EIS must include the Lead Agency's responses to all received comments and discussion of any opposing views on issues raised [40 CFR 1502.9(b)]. The Final EIS may contain summaries of the comments, in which case, the Final EIS must list the names and parties commenting on the Draft EIS and prepare a directory of where the summary response in the Final EIS addresses the comment. This Final EIR/EIS incorporates comments from public agencies and the general public and contains appropriate responses by the Lead Agency to those comments.

Lead agency responses may include the need to:

- modify the proposed action or alternatives;
- develop and evaluate new alternatives;
- supplement, improve, or modify the substantive environmental analyses;
- make factual corrections to the text, tables, or figures contained in the Draft EIS; or
- explain why no further response is necessary.

1.3.2 CEQA Requirements

SCWA has prepared this document pursuant Section 15132 of the CEQA Guidelines, which specifies the following:

The Final EIR shall consist of:

a. The Draft EIR or a revision of that draft.

b. Comments and recommendations received on the Draft EIR either verbatim or in a summary.

c. A list of persons, organizations, and public agencies commenting on the Draft EIR.

d. The response of the Lead Agency to significant environmental points raised in review and consultation process.

e. Any other information added by the Lead Agency.

1.4 CEQA and NEPA Project Approval

In accordance with NEPA and CEQA, the Draft EIR/EIS was circulated for public and agency review and comment and a 60-day public review period was provided, closing on July 20, 2009. Comments were received from Federal, State, and local agencies; organizations and individuals. Three public hearings to receive public input on the Draft EIR/EIS were held during the review period. The public hearings were recorded and transcripts were made.

Pursuant to Section 15088 of the CEQA Guidelines, the Final EIR/EIS was made available to the commenters for a minimum 10-day period prior to its consideration by the CEQA Lead Agency for certification.

On December 8, 2009, the SCWA Board certified the EIR/EIS as complete under Section 15090 of the CEQA Guidelines. Individual NBWRA Member Agencies then approved the Phase 1 Implementation Plan projects under Alternative 1. Each Member Agency approved the projects under their jurisdiction as Responsible Agencies on the following dates: LGVSD on December 10, 2009; Novato SD on December 14, 2009; Napa County on December 15, 2009; NMWD on December 15, 2009; and Napa SD on December 16, 2009. Each Member Agency approved the Phase 1 Project; prepared and adopted written findings of fact for each significant environmental impact identified in the EIR/EIS; made a Statement of Overriding Considerations, as needed; and adopted a Mitigation Monitoring and Reporting Program. A Notice of Determination (NOD) was then filed by each Responsible Agency. A summary of the Phase 1 Implementation Plan under Alternative 1 is provided in **Table 1-1**.

TABLE 1-1
IMPLEMENTATION PLAN – PHASE 1

		New Pipeline (miles)	New Demand (AFY)	Capacity Increase (mgd)	New Pumps (HP)	New Storage (AF)
LGVSD	Peacock Gap	--	--	--	--	--
	NMWD URWP (South)	5.9	204	0.7	72	(3)
	Sears Point	--	--	--	--	--
Novato SD	NMWD URWP (North/Central)	9.8	542	1.2	259	(3)
	Sears Point	--	--	--	--	--
SVCSD	Southern Sonoma Valley	--	--	--	--	--
	Central Sonoma Valley	--	--	--	--	--
	Sonoma Valley (1A)[1]	5.2	874	0	662	65
	Napa Salt Marsh	7.9	(2)	0	0	0
Napa SD	Carneros East	--	--	--	--	--
	MST Area	17.5	2,137	4.5	880	0
	Napa (local)	--	--	--	--	--
	Napa Salt Marsh	--	--	--	--	--
Total		**46.3**	**3,757**	**6.4**	**1,873**	**65**

1 Sonoma Valley (1A) is a pipeline alignment originally analyzed as a part of the Sonoma Valley Recycled Water Project EIR and proposed under Phase 1 for the NBWRP.
2 Additional 3,460 AFY release of recycled water to Napa Salt Ponds 7 and 7A, depending upon year type. Because this is a beneficial use that is not related to recycled water supply, this number is tracked separately in each of the alternatives.
3 Existing 0.5 mg reservoir would be rehabilitated to provide recycled water system storage.

SOURCE: CDM, 2009

Reclamation is circulating this Final EIR/EIS prior to taking action on the project and issuing its Record of Decision (ROD). The ROD will address the decision, alternatives considered, the environmentally preferable alternative, relevant factors considered in the decision, and mitigation and monitoring. Reclamation will not sign the ROD until at least 30 days after the Environmental Protection Agency publishes their weekly notice of all EISs received the previous week. The EIR/EIS (Draft and Final EIR/EIS) is intended to be used by Reclamation when considering approval of the Proposed Action or an alternative to the Proposed Action.

1.5 Organization of this Document

This document has the following chapters:

- **Chapter 1**, Introduction, describes the purpose and content of the Final EIR/EIS.
- **Chapter 2**, Master Responses, presents responses to environmental issues raised in multiple comments. These have been termed "master responses." They are organized by topic to provide a more comprehensive response than may be possible in responding to individual comments, and so that reviewers can readily locate all relevant information pertaining to an issue of concern.
- **Chapter 3**, Response to Comments, contains the comment letters received and individual responses to the comments. Responses are keyed to the individual comments as indicated in the right margin of the comment letters.
- **Chapter 4**, Revisions to the Draft EIR/EIS, presents revisions to the Draft EIR/EIS text based on issues raised by comments, clarifications, or corrections. Additions, deletions and corrections to the Draft EIR/EIS are made by indicating the page, and paragraph to be revised and a description of the text changes. Additions are indicated by an underline, deletions are indicated by a "strike-out" where practical.
- **Chapter 5**, "List of EIR/EIS Preparers," lists the individuals who assisted in the preparation of this Final EIR/EIS.
- **Chapter 6,** Index, lists important terms and concepts and identifies the page numbers they appear in the document.
- **Appendix A:** Distribution List
- **Appendix B:** Record of Consultation

1.6 Comments Received on Draft EIR/EIS

Table 1-2 below lists the agencies, organizations, and individuals that submitted written and oral comments on the Draft EIR/EIS during the public review period. **Table 1-3** provides the author of each comment letter, the author's affiliation, a letter designation of each author's comments, and a brief summary of each comment.

Written comments on the Draft EIR/EIS were received during the public comment period from May 5, 2009 through July 20, 2009. SCWA staff received the correspondence by mail, email, fax, or other delivery by 5:00 p.m. on July 20, 2009, the publicly-noticed end of the public comment period on the Draft EIR/EIS. Correspondence received after the closure of the public comment period are included and noted. Additional comments received during EIR CEQA certification, as well as information summarizing the status of federal consultations, have been included as part of the Final EIS.

1.7 Regulatory Consultation Summary

Reclamation, as the NEPA Lead Agency, is participating 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.

Section 7 Consultation – National Marine Fisheries Service

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[1]. 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. The concurrence letter, dated May 6, 2010, is presented in **Appendix B, Consultation**.

Federal Section 7 Consultation – USFWS

Section 7 consultation with USFWS is anticipated to be completed with the issuance of a Biological Opinion (BO) in July 2010. Reclamation will not sign the ROD until the BO is issued. Key terms and conditions, and minimization and avoidance measures anticipated to be included in the BO, include, but are not limited to the following. [2]

- Reclamation shall adhere to the Description of the Proposed Action through the NBWRA specific funding agreement. As the funding will require the recipient to remain complaint with all pertinent rules, regulations, and permits (including this biological opinion), awarding the funding agreement will ensure the NBWRA remains compliant with the avoidance and minimization measures of this biological opinion.
- All pipelines would be installed within public rights of way, and would be located within paved roadways to the degree feasible. Disturbance to vegetation from overland routes was estimated based on a 25-foot wide construction easement. Disturbance to roadside vegetation was estimated by assuming that construction would extend to the road right of way fenceline. All disturbed areas would be restored to pre-existing conditions. Additionally, compensation would be provided at a 0.1:1 ratio for temporary effects to vegetation with potential to provide red-legged frog upland refugial habitat.
- Construction activities will be confined to the dry season. No project related activities will occur within 48 hours of precipitation. No project related activities will occur from November 1 through April 31.

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1 Further consultation may be required if new information becomes available indicating that listed species or critical habitat may be affected by the project in a manner or extent not previously considered; current project plans change in a manner that cause effects to listed species or critical habitat in a manner or extent not previously considered; or a new species is listed or critical habitat designated that me be affected by the action.

2 Additional measures or modification of the language of measures would be subject to issuance of the final Biological Opinion by USFWS. The discussion is provided to inform the public regarding anticipated conditions in the Biological Opinion. Reclamation will consider the final Biological Opinion as part of Record of Decision issuance.

- All streams will be crossed using trenchless techniques.
- A qualified biologist, approved by the Service (Service-approved biologist), will train all project staff regarding habitat sensitivity, identification of red-legged frogs, and these minimization and avoidance measures before the start of construction. All employees or contractors must complete this training prior to beginning any project-related work. A Service-approved biologist is defined as any person who has completed at least four years of university training in wildlife biology or a related science and/or has demonstrated field experience with red-legged frogs. The training must include the minimization and avoidance measures that are being implemented to avoid and minimize adverse affects to listed species as they relate to the project, the penalties for non-compliance, and the boundaries of the project area.
- Within 15 calendar days, prior to the onset of activities, the applicant shall submit the names and credentials of any biologists who would conduct activities specified in the following measures. No earthmoving or other project activities will begin until written approval from the Service has been received that the biologists are qualified to conduct the work.
- Within 15 calendar days, prior to the onset of activities and the start of construction, a Service-approved biologist will conduct pre-construction surveys for red-legged frogs. If listed species are found, the Service will be contacted and the Service-approved biologist will be allowed sufficient time to move any animal(s) from the work site to a safe location before work activities begin. Only Service-approved biologists will participate in activities associated with the capture, handling, and monitoring of red-legged frogs. Any biologist involved with the surveying/handling will employ sterilization techniques appropriate to avoid the transmission of diseases to or from the site.
- A Service-approved biologist will be present at the work site until all California red-legged frog removal, work instruction, and habitat disturbance has been completed. After this time, the applicant or contractor will designate a person to monitor on-site compliance with all minimization measures. The Service-approved biologist will ensure that this individual receives the training outlined in minimization and avoidance measure number three and in the identification of the red-legged frog. The Service-approved biologist and on-site monitor will have the authority to and shall halt any action that might result in effects that exceed the levels anticipated by the Service during review of the proposed action. If work is stopped, the Service will be notified within one working day of the incident by the approved biologist or on-site biological monitor.
- Vehicle speed will be limited to 10 miles per hour within the project footprint.
- Vehicular traffic will be confined to existing roads, designated project staging areas, and the project footprint.
- To prevent inadvertent entrapment of listed species, all excavated steep-walled holes or trenches will be sufficiently covered at the end of each workday with plywood or similar materials that prevent entrapment of red-legged frogs. All holes will be inspected for entrapped red-legged frogs daily, prior to any work activities, and before any such trenches or holes are filled.
- Pipes measuring four (4) inches or greater in diameter that are stored at the site will be sealed at each end to prevent any listed species from becoming trapped in such pipes.
- Before construction begins, the project engineer and a Service-approved biologist will identify locations for equipment, personnel access, and materials staging to minimize disturbance to red-legged frog habitat.
- All construction equipment must be in good working condition, showing no signs of fuel or oil leaks.

- All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 65 feet from any riparian or aquatic habitat.
- Machinery operators must have spill clean-up supplies on-site and be knowledgeable in their proper use and deployment.
- In the event of a spill, operators must immediately cease work, start clean-up, and notify the appropriate authorities.
- Erosion control fabric will consist of natural fibers that will biodegrade over time. No mesh erosion control fabric that contains mesh holes smaller than ¾ inch by 1½ inch will be installed. Only loosely woven jute, used to contain straw and prevent erosion, will be used.
- Prior to the close of the work window, temporarily disturbed areas will be revegetated with native species specific to the project location.
- No trash will be deposited on the site during construction activities. All trash will be placed in trash receptacles with secure lids or stored in vehicles, and removed at the end of each work day from the project site.
- Following construction, all construction debris will be removed from work areas.
- To compensate for the temporary disturbance of 22.32 acres of red-legged frog habitat, the applicant will purchase 2.25 acres of red-legged frog habitat credits from a Service-approved conservation bank. Credits will be purchased within 6 months of ground breaking activities.
- Prior to initiating any ground breaking activities at the Sonoma Valley Recycled Water Project Service Area for the purpose of constructing the 24-acre water storage pond where a vineyard currently exists, red-legged frog protocol surveys will be conducted along 4,000 linear feet of Schell Creek, from 8th Street to San Louis Road. If evidence of red-legged frog frogs is found within this reach of Schell Creek, the applicant will compensate for the permanent loss of red-legged frog dispersal habitat by purchasing red-legged frog habitat credits from a Service-approved conservation bank at a ratio of 1:1.

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 requires Federal agencies to take into account effects on historic properties. Once an undertaking has been established, the Section 106 review involves a step-by-step procedure described in detail in the implementing regulations (36 CFR Part 800).

NBWRA has prepared Area of Potential Effects maps and a Cultural Resources Survey Report (CRSR). The CRSR includes the results of background research and surface surveys conducted in the APE. The CRSR will serve as the primary supporting document for Section 106 consultation efforts that will be completed by the Bureau. A finding of no effect to historic properties may be made pending Reclamation's review; however this determination will be supported by further consultation with SHPO.

TABLE 1-2
COMMENTERS ON DRAFT EIR/EIS

Designator	Signatory	Correspondence Received	Correspondence Dated
Public Agencies			
A	United States Environmental Protection Agency, Kathleen Goforth	August 6, 2009	no date
B	California Department of Transportation, Lisa Carboni	July 20, 2009	July 20, 2009
C	State Water Resources Control Board, James Hockenberry	July 20, 2009	July 20, 2009
D	Los Carneros Water District, John W. Stewart	June 11, 2009	June 11, 2009
E	County of Sonoma Department of Health Services, James Tyler	June 24, 2009	June 22, 2009
F	Sonoma County Department of Public Works		no date
G	Assembly California Legislature, Jared Huffman	July 22, 2009	July 17, 2009
Organizations			
H	Living Rivers Council (LRC), John Stephens	June 8, 2009	June 5, 2009
I	Valley of the Moon Alliance, Del Rydman	July 14, 2009	July 13, 2009
J	Sonoma County Water Coalition (SCWC), Stephen Fuller-Rowell	July 17, 2009	July 16, 2009
K	Friends of the Esteros (FOEst) and Salmon Protection and Watershed Network (SPAWN), Tom Yarish	July 17, 2009	July 16, 2009
L	Open Space, Water Resource Protection, Land Use (O.W.L) Foundation, HR Downs	July 17, 2009	July 13, 2009
M	Friends of the Eel River (FOER), David Keller	July 20, 2009	July 20, 2009
N	North Coast River Alliance, Frank Egger	July 20, 2009	July 20, 2009
O	San Francisco Bay Trail Project, Maureen Gaffney	August 13, 2009	August 11, 2009
Individuals			
P	Anonymous	June 7, 2009	no date
Q	John Dunlap	June 25, 2009	June 23, 2009
R	Karen and Vagn Nielsen	July 14, 2009	June 10, 2009
S	Barry Buckley	August 3, 2009	August 3, 2009
T	Kathy Pons	July 14, 2009	July 14, 2009
U	Tom Yarish	July 17, 2009	July 17, 2009
Public Hearings			
V	Public Hearing, Margaret Todd Senior Center, Marin County	June 9, 2009	
V1	*Barry Buckley*		
V2	*Drew McIntyre*		
V3	*Megan Clark*		
W	Public Hearing, Sonoma Community Center, Sonoma County	June 10, 2009	
W1	*Tom Yarish*		
W2	*Kathy Pons*		
W3	*Mitchell Mulas*		
W4	*Bill Montini*		
X	Public Hearing, Napa Elks Lodge, Napa County	June 11, 2009	
X1	*David Keller*		
X2	*Tom Yarish*		
X3	*John Stewart*		
Board of Supervisors Certification Hearing			
Y	Friends of the Eel River (FOER), David Keller	November 28, 2009	November 28, 2009
Z	Tom Yarish	December 8, 2009	December 8, 2009

TABLE 1-3
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Federal Agencies				
A	United States Environmental Protection Agency (EPA) Region 9	Kathleen Goforth	A-1	Supports project purpose to expand beneficial use of recycled water for agricultural, urban, and environmental uses; asserts recycled water is efficient and sustainable for meeting drought, climate change, and population growth challenges; commends cooperative NBWRA program.
			A-2	Encourages use of recycled water for existing and infill development prior to use for new development.
			A-3	Encourages NBWRA and Member Agencies to support ongoing research on toxicology of microconstituents and emerging contaminants that may be present in recycled water. Encourages collaboration with SWRCB on data collection, monitoring of recycled water use and human, biological, and ecological effects.
			A-4	Recommends FEIR/EIS include a clear commitment to additional project-level environmental review for new storage reservoirs and subsequent project phases once site-specific design alternatives are determined.
			A-5	Rates the DEIR/EIS as "Lack of Objections", indicating that there are no potential environmental impacts requiring substantive changes.
State Agencies				
B	California Department of Transportation (Caltrans)	Lisa Carboni	B-1	EIR/EIS should discuss project's fair share contribution, scheduling, and implementation responsibilities for all proposed mitigation measures and be presented in the Mitigation Monitoring and Reporting Plan.
			B-2	All required roadway improvements should be completed prior to issuance of project occupancy permits. Recommends resolution of Department's concerns prior to application for encroachment permit.
			B-3	EIR/EIS Section 3.7, Transportation should address impacts on bicycle lanes during construction.
			B-4	Location and layout of pipelines should not interfere with existing drainage.
			B-5	Department requires a copy of the Cultural Resource Technical Report (ESA, 2009).
			B-6	Concerns related to allocation, utilization challenges, and health risks of recycled water for Department use.
			B-7	Damage to existing utilities or underground pipelines are SCWA responsibility. Department must be notified prior to commencement of work on these pipelines.
			B-8	NBWRP work will require Transportation permits for movement of oversized or excessive load vehicles on State Roadways.
			B-9	Encroachment permits are required for project work within the State's right-of-way. Traffic related mitigation measures would need to be incorporated into construction plans during the encroachment permit process.
C	State Water Resources Control Board (SWRCB)	James Hockenberry	C-1	Comment addresses Clean Water State Revolving Fund (CWSRF) financing requirements, responsibilities and authority of SWRCB, and additional environmental documentation and review under "CEQA-Plus"
			C-2	CSWRF funding applications are subject to the federal Endangered Species Act and U.S. Fish and Wildlife (USFWS) approval. SWRCB can consult with USFWS or National Marine Fisheries Service (NMFS) on behalf of NWBRA, and NBWRA should continue to be proactive in consulting with resource agencies.
			C-3	SWRCB responsible for ensuring compliance with Section 106 of National Historic Preservation Act. SWRCB Cultural Resources officer consults with the State Historic Preservation Officers and requires map, Area of Potential Effect (APE) information, and surveys.
			C-4	For each project funded by CWSRF, applicant must certify the EIR/EIS, make CEQA findings, adopt a Mitigation Monitoring and Reporting Program, and if necessary, a Statement of Overriding Considerations. A copy of the NEPA lead agency's Record of Decision is required to be submitted to SWRCB.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Local Agencies				
D	Los Carneros Water District (LCWD)	John W. Stewart	D-1	LCWD is pursuing an Engineering Feasibility Study for implementing recycled water in district; will likely tier off EIR; supports mitigation measures.
E	County of Sonoma Department of Health Services	James Tyler	E-1	Recognizes water reclamation and recycled water reuse is beneficial to development, reduction of demand on potable water supply, conservation of surface and groundwater which is necessary for good public health. Feels EIR/EIS adequately covers health concerns.
F	Sonoma County Department of Transportation and Public Works	Ken Giovannetti and Steve Urbanek	F-1	Asserts pipeline route shown in Figure 2-5 does not match the text description. Expresses questions regarding pipelines on Orange, Elm, Leveroni.
			F-2	Asserts 25 feet is an inappropriate width for a corridor.
			F-3	Asserts that slurry sealing is required for the full width of the area affected by open trenching in addition to trench paving.
			F-4	Advises of open trenching restrictions on roads with new surfacing.
			F-5	Advises of restrictions on trench plated on high volume roads.
			F-6	Asserts that lane closures subject to discretion of County.
			F-7	Advises of restrictions on trench plated on high volume roads.
			F-8	Asserts that slurry sealing is required for the full width of the area affected by open trenching in addition to trench paving.
			F-9	Advises that circulation and traffic detours are approved at discretion of County.
			F-10	Concerned that impacts from heavy construction vehicles may not be negligible.
			F-11	Advises that repaving and road restoration requirements would be conditions of permits.
			F-12	Design should consider potential future road improvement projects to avoid facility relocation.
			F-13	Advises that project must meet manhole cover requirements and safety.
			F-14	Lists applicable permits.
Other Agencies				
G	Assembly California Legislature	Jared Huffman	G-1	Endorses NBWRP and strongly supports the NBWRA priorities of using recycled water to offset local urban and agricultural demands for potable supplies.
Organizations				
H	Living Rivers Council (LRC)	John Stephens	H-1	EIR/EIS should include an alternatives analysis for Vacuum Retort Anaerobic Digester (VRAD) because it does not have a public stigma, would not require an independent pipeline network, and it is cheaper.
I	Valley of the Moon Alliance	Del Rydman	I-1	Groundwater supply is limited; treated wastewater used in a safe local way can help offset potable water usage.
			I-2	Concerned about water quality and treatment; concerned that contaminates like endocrine disrupters, personal care products, antibiotics, pharmaceuticals are not removed in tertiary treatment process.
			I-3	Concerned that NBWRP is growth inducing and would assist in build out of county and cities and contribute to secondary growth effects
			I-4	Concerned that offering farmers to buy recycled water is not economically sustainable; will be a challenge to convince those currently using groundwater to pay.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
I (cont.)			I-5	Treating water to drinking water standards was not evaluated as an alternative; using recycled water as potable water instead of only agricultural irrigation would be more valuable and useable.
			I-6	Concerned with SVCSD WWTP. Support SVRWP but want water to stay in same basin.
J	Sonoma County Water Coalition (SCWC)	Stephen Fuller-Rowell	J-1	Concerned that DEIR/EIS does not incorporate most of the substance of the comments submitted during scoping.
			J-2	Concerned that DEIR/EIS does not adequately address regional water supply constraints, watershed issues, and groundwater management in the Russian River watershed, Eel River watershed and Santa Rosa Groundwater Basin.
			J-3	No Action Alternative must be considered in depth in a revised EIR/EIS.
K	Friends of the Esteros (FOEst) and Salmon Protection and Watershed Network (SPAWN)	Tom Yarish	K-1	Descriptions of project components as “project” and “program” are incomplete and unclear and do not meet CEQA.
			K-2	Environmental analysis should acknowledge toxics in wastewater, fate of dispersed contaminants in a variety of habitats, and analysis of year-to-year variations in rainwater runoff.
			K-3	EIR/EIS should analyze the impacts of establishing new sources of demand for waters derived from Russian and Eel Rivers.
			K-4	EIR/EIS should describe and project future potable water constraints in Russian and Eel Rivers due to regulatory constraints, climate change, increased potable water demand.
			K-5	EIR/EIS should describe current and emerging sciences of toxicology and address toxicity to a variety of terrestrial and aquatic species.
			K-6	EIR/EIS should address impacts to increased discharges of tertiary recycled water to terrestrial and aquatic species in San Francisco Bay, tributaries, wetlands, and marshes.
			K-7	Asserts that the federal Clean Water Act and State water quality regulations do not address man-made contaminants and pollutants that may exist in municipal and industrial waste streams.
			K-8	Asserts that references to Title 22 should be read as incomplete.
			K-9	Concerned with affects from endocrine disrupters.
			K-10	EIR/ EIS should discuss disinfection-resistant pathogens that remain in wastewater post treatment and potential effects of livestock, humans, and other organisms.
			K-11	EIR/EIS uses Title 22 standards which do not address toxicity to wildlife. Mitigation and monitoring projects do not meet CEQA requirements for detail and commitment.
			K-12	Asserts NBWRA Member Agencies should attempt to remove contaminants via comprehensive source reduction.
			K-13	Title 22 standards are inadequate for a comprehensive understanding of all potential toxics; therefore EIR/EIS finding of “no impacts” in regard to Title 22 standards avoids accounting for the total and cumulative burdens from emerging contaminants.
			K-14	Concerned that SWCB “blue ribbon panel” is ineffective.
			K-15	Indicates there are challenges associated with discharge of potable water to surface waters.
			K-16	EIR/EIS does not include project description with clearly-defined objectives for salt ponds. There is no threshold for determining success or failure of the project as it relates to the salt ponds.
			K-17	EIR/EIS does not analyze reverse osmosis or membrane filtration technologies.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
K (cont.)			K-18	Asserts that EIR/EIS creates new demand for water that would originate outside the service area and is concerned about impacts to watersheds and wildlife.
			K-19	EIR/EIS does not address long-term water sustainability.
			K-20	EIR/EIS does not account for salts and contaminants accumulation in soil as a result of leaching.
			K-21	Questions net reduction of pollutants; EIR/EIS cites benefits but does not have enough analysis. EIR/EIS does not look at lifecycle of runoff constituents for each irrigation site.
			K-22	EIR/EIS with regard to salt marsh restoration does not appear to address the hard scientific questions regarding the management, recovery and end points of the specific project of applying tertiary wastewater to the bittern ponds.
			K-23	EIR/EIS should include analysis of greenhouse gases over the life of the salt marsh project.
			K-24	EIR/EIS should include mitigation to reduce long-term accumulation of mercury in order to meet CEQA and NEPA intent.
			K-25	Concerned that mitigation is inadequate for impacts to fisheries.
			K-26	EIR/EIS does not look at regional and global issues of greenhouse gas production, climate change, regional and state-wide water supply conflicts, this project's embedded lifetime electrical demand and future energy costs.
L	Open Space, Water Resources Protection, Land Use (OWL) Foundation	HR Downs	L-1	Concerned that pollutants known to exist in tertiary treated wastewater effluent are not addressed and that plans for recycled water use do not account for significant, scientific, peer-reviewed research.
			L-2	Concerned that distribution of recycled water constitutes a public health issue.
			L-3	Concerned that antibiotic resistance will continue as a result of the project.
			L-4	EIR/EIS must discuss possible methods of curtailing or eliminating the spread of antibiotic resistance.
			L-5	Concerned that none of the Member Agencies guarantee ARG, antibiotic resistant pathogens, removal from treated sewage.
			L-6	EIR/EIS does not discuss ARGs or the means by which the project intends to reduce their effects.
			L-7	Concerned that treated wastewater can systemically contaminate crops.
			L-8	EIR/EIS does not address quantities of contaminants would migrate into grapes as a result of agricultural use of recycled water. Discussions of health and economic risks are not included in EIR/EIS.
			L-9	EIR/EIS does not address potential threats to public health, or extent that project would contribute to endocrine disruption in humans and animals.
			L-10	EIR/EIS does not address chemical transformations that occur as a result of chlorine, and various contaminants known to remain in processed wastewater.
			L-11	Concerned about chlorinated triclosan derivative products and health risks associated with use on grapes. Concerned with economic risks of contaminating grapes. Concerned with death of animals associated with contaminated crops. Concerned with phthalate toxicity and dosage.
			L-12	Concerned that exposure to chlorine exacerbates virulence on Staphylococcus, and asserts that the organism would remain in recycled water and would be more virulent due to chlorine treatment.
			L-13	Concerned EIR/EIS does not discuss chlorine-resistant bacteria and effect on human health.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
L (cont.)			L-14	EIR/EIS does not account for reactions of chlorine with acetaminophen.
			L-15	EIR/EIS does not account for possible chemical reactions among pharmaceuticals, pathogens, drugs, chemicals, and endocrine disrupters, and other materials found in treated wastewater, or potential effects from discharge or reuse.
			L-16	Concerned with use of UV disinfection processes rather than chlorine at WWTPs.
			L-17	EIR/EIS does not discuss reactivated pathogens in effluent.
			L-18	Concerned with disposal of sewage sludge, by product of wastewater recycling, and potential environmental hazards.
			L-19	Concerned with regulatory compliance with California Health and Safety Code § 5410-5416 and CEQA.
			L-20	Concerned with feasibility of project and alternatives.
			L-21	Concerned with ability of project to comply with regulatory requirements.
			L-22	Wants project to remove all contaminants from recycled water.
M	Friends of the Eel River	David Keller	M-1	The project relies on potable water originating in the Russian and Eel Rivers.
			M-2	EIR/EIS does not include alternatives such as mandatory efficiency, conservation, and restoration.
			M-3	EIR/EIS does not meet the CEQA requirements for public disclosure in an EIR. A revised DEIR/EIS should be recirculated.
			M-4	The EIR/EIS does not substantiate its demand, conservation, and reuse assumptions.
			M-5	Concerned that NBWRP is not successful in reducing discharges of treated wastewater to San Pablo Bay.
			M-6	Concerned with volume of water to be delivered to Napa Salt Ponds. EIR/EIS does not address problems or objections raised by U.S. Army Corps of Engineers (USACE) related to piping wastewater to pond area.
			M-7	EIR/EIS does not provide data to show significant new urban reuse deliveries that are entirely dependent on the project.
			M-8	Concerned that project will supply over 90 percent of recycled water to new vineyard customers who are not now reliant on Eel River, Russian River, or Santa Rosa Groundwater supplies.
			M-9	EIR/EIS does not substantiate assumptions that influent will increase over the next ten years.
			M-10	The Project Description in vague, incomplete, and misleading.
			M-11	The Project Description lacks clarity on project development, funding sources, scheduling, other necessary agency approval, Phase 1 operations and construction.
			M-12	EIR/EIS does not include possibility for components in Solano County, as allowed for in the Omnibus Public Land Management Act legislation.
			M-13	EIR/EIS does not describe where additional treated wastewater influent would come from.
			M-14	Disagrees with statements prior to issuance of NOP that issues related to source water were beyond the purview of the project.
			M-15	EIR/EIS does not disclose existing arrangements for sale or transfer of recycled water from contractors or purveyors to water districts or beneficiaries. The contractual agreements make a difference in potential impacts. There is no governance or oversight to ensure accountability to the public, ratepayers, or environment. EIR/EIS does not comply with NEPA 40 CFR 1508.8.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
M (cont.)			M-16	EIR/EIS does not disclose funding sources.
			M-17	EIR/EIS does not disclose funding sources or user fees. EIR/EIS does not include comparison of costs fro Alternative 1, 2, 3.
			M-18	EIR/EIS does not discuss the availability, willingness, and ability of purchasers for recycled water.
			M-19	EIR/EIS minimizes effects of using recycled water on wine grapes as several countries prohibit this practice.
			M-20	EIR/EIS does not list or map parcels that would likely accept recycled water.
			M-21	EIR/EIS does not include length of recycled water contracts, cost sharing structure among participating agencies, or costs to ratepayers to subsidize revenue shortfalls.
			M-22	EIR/EIS does not discuss future legal requirements of water contractors to reduce reliance on Russian River supplies and subsequent unreliable and unpredictable operation of the NBWRA plants.
			M-23	EIR/EIS does not discuss contracts as they relate to future reduced wastewater supplies.
			M-24	There is no sinking fund or financing mechanism for dismantling the project's utility, practicality, or lifespan end.
			M-25	Concerned about sizing of 18-inch pipeline to Napa Salt Marsh.
			M-26	EIR/EIS does not include fee structures for recycled water by Member Agencies.
			M-27	EIR/EIS division of the project into project-level and program-level components is inconsistent, confusing, and misleading.
			M-28	EIR/EIS does not explain which portions of recycled water provision would be accomplished by existing facilities or new facilities. Concerned about sizing of 24-inch pipeline to Napa Salt Marsh to serve future uses.
			M-29	EIR/EIS does not meet CEQA requirements for project- versus program-level analyses.
			M-30	EIR/EIS does not accurately describe the project baseline environmental setting.
			M-31	EIR/EIS does not acknowledge the relationship of recycled water used in the project with source waters in the Russian and Eel Rivers and Santa Rosa Plain Groundwater.
			M-32	EIR/EIR mischaracterizes and minimizes the relationship between source waters and recycled water.
			M-33	EIR/EIS incorrectly asserts the recycled water will be used to offset Russian River water supplies.
			M-34	Concerned that Phase 1 is responsible for most of the project potable water offset and would most likely occur without the project itself.
			M-35	EIR/EIS does not address changes to flow, diversion, storage, and watershed conditions of source waters.
			M-36	EIR/EIS does not consider reasonably foreseeable future changes in flows resulting from implementation of the Russian River Biological Opinion.
			M-37	EIR/EIS does not consider reasonably foreseeable future changes in flows resulting from modification of Decision 1610.
			M-38	NBWRP must be analyzed in the context of changes to Decision 1610.
			M-39	EIR/EIS fails to evaluate NBWRP in the context of a court order invalidating SCWA's Urban Water management Plan 2005.
			M-40	Concerned that EIR/EIS states that there is no relationship between NBWRP and the Urban Water Management Plan.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
M (cont.)			M-41	EIR/EIS does not consider minimum flow changes and cumulative impacts as a result of implementation of AB 2121.
			M-42	EIR/EIS does not evaluate the possibility that Eel River diversions will be reduced or curtailed legally or structurally.
			M-43	EIR/EIS does not discuss existing, pending, or unexercised water rights on the East Branch Russian River, tributaries to Lake Mendocino, or Eel River which could reduce total flow. EIR/EIS does not address frost and heat protection proposals from grape growers being considered by SWRCB and Federal Energy Regulatory Commission (FERC).
			M-44	Concerned that there is no prioritization for recycled water use in response to impaired wastewater deliveries.
			M-45	Concerned with the long-term reliability of Eel River diversion.
			M-46	EIR/EIS does not discuss whether obligations can be met without reliance on continued diversions from Eel River through the Potter Valley Project.
			M-47	EIR/EIS does not evaluate changes in water supply resulting from severe drought conditions.
			M-48	EIR/EIS does not adequately disclose, analyze, and propose mitigation for NBWRP's significant environmental impacts.
			M-49	EIR/EIS does not consider the cumulative impacts of increasing SCWA's reliance on the Eel River Diversion.
			M-50	A revised and recirculated EIR/EIS must include continuing impact on fisheries resulting from increased reliance on Eel River supplies.
			M-51	EIR/EIS does not analyze cumulative impacts related to recycled water and local supply projects implemented by SCWA's contractors.
			M-52	EIR/EIS does not specifically analyze the potential availability of recycled water to offset additional demands for potable water that are currently met by SCWA potable water supplies, as was the case with the City of Petaluma.
			M-53	A revised and recirculated EIR/EIS must include cumulatively considerable impacts related to local supply and recycling projects that rely on surface impoundment or groundwater extraction in conjunction with NBWRP.
			M-54	EIR/EIS does not adequately disclose, analyze, and propose mitigation for the NBWRP growth-inducing impacts.
			M-55	Concerned with use and conclusions related to Urban water Management Plan 2005 in Table 5-7.
			M-56	Analysis of alternatives is inadequate because the project is defined such that it precludes meaningful analysis of alternatives.
			M-57	There is no reasonable range of alternatives, and the EIR/EIS does not analyze an alternative related to serious demand reduction and efficiency.
			M-58	Asserts that an efficiency alternative would require offset of potable demands on water that originates locally and therefore shift capital expenditures to a broader area and reduce greenhouse gas emissions.
			M-59	An efficiency alternative would shift away from voluntary conservation to efficient technology.
			M-60	An efficiency alternative would be mandatory, save money, and exceed water savings generated by voluntary measures considered in EIR/EIS.
			M-61	EIR/EIS should analyze efficiency measures that could be purchased for a capital investment of $100 million to $600 million (or over the lifespan of the project).

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
M (cont.)			M-62	EIR/EIS should include SCWA authority under the Restructured Agreement for Water Supply, as it allows SCWA to require contractors to implement conservation measures.
			M-63	An efficiency alternative would meet project objectives. EIR/EIS should be revised and recirculated to include analysis of feasibility of this alternative.
			M-64	EIR/EIS does not analyze alternative methods of increasing local water supply, reducing demands within the project service areas, and reducing project size or eliminating need for NBWRP.
			M-65	Adoption of best management practices for existing vineyards in proposed service area could substantially reduce groundwater overdraft and saline intrusion, and reduce demand and size for NBWRP.
			M-66	EIR/EIS does not show what service area lands are currently under vineyard use, their existing water use, agricultural yields by parcels, pumping capabilities and history, and local storage capacity.
			M-67	EIR/EIS does no disclose current service area lands planted with grapes, and those that use a common practice of draining fields during the rainy season, which reduces groundwater percolation and infiltration.
			M-68	EIR/EIS does not provide a water balance model or map for service areas to show naturally occurring water, changes over time, and changes resulting from agricultural cultivation of specific crops.
			M-69	Asserts that eliminating vineyards in areas of groundwater overdraft and saline intrusion would reduce the need for NBWRP and the size of the project.
			M-70	EIR/EIS does not include analysis why vineyards currently planted in areas of groundwater overdraft or areas with saline intrusion should not be removed and planted with other crops. EIR/EIS does not include crop/water demands.
			M-71	Asserts that prohibition on new vineyard customers within the project service area will reduce water demands and project size.
			M-72	Asserts local storage ponds and infiltration ponds can increase availability of water for project participants.
			M-73	EIR/EIS does not acknowledge seasonality and variability of water needs for vineyards and other agricultural crops; frost and/or heat protection is not discussed.
			M-74	EIR/EIS does not discuss how recycled water would or should be used for agricultural activities. EIR/EIS should provide information and context of other alternatives that could increase efficiency.
			M-75	EIR/EIS does not respond to suggested alternatives accurately, fully, and in good faith.
			M-76	Concerned that alternatives are driven by pre-judged decision-making.
			M-77	EIR/EIS does no consider comments submitted during the scoping process; improper interference with commenter and public hearing.
			M-78	EIR/EIS must be revised and recirculated based on new significant information that must be added to the document related to alternatives and project description.
N	North Coast Rivers Alliance	Frank Egger	N-1	DEIR/EIS does not address the fact that the proposed 18” pipeline from Marin and Sonoma Counties to Napa County and to Solano County can transport treated wastewater and potable water
			N-2	DEIR/EIS must address impacts of transport of water out of Russian and Eel Rivers in Humboldt, Mendocino, Sonoma, and Marin Counties to the Napa Solano area which could connect to California Water Project

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Organizations (cont.)				
N (cont.)			N-3	Impacts to listed species under Endangered Species Act in Russian and Eel Rivers have not been properly addressed.
			N-4	Concerned the EIR/EIS does not address the amount of Russian River/Eel River water that could be reused locally to reduce diversions.
O	San Francisco Bay Trail	Maureen Gaffney	O-1	Concerned about impacts and associated mitigation for Bay Trail within NBRWP area.
			O-2	Errata to Draft EIR/EIS. Asserts that Marin Countywide Bicycle Plan has been recently updated. Indentifies additional Class I bikeways within the NBWRP area
			O-3	Errata to Draft EIR/EIS. Identifies additional proposed bikeways within the NBWRP area.
Individuals				
P	Anonymous		P-1	Concerned with potential conflict of NBWRP with future development of bike path along railroad tracks along 8th Street.
			P-2	Concerned with noise effects of increase pumping at SVCSD; pump stations should be noise attenuated; Recommends use of Sonoma County 2020 General Plan as guideline for unincorporated areas.
			P-3	Disagrees with characterization of noise impacts as temporary.
Q	John Dunlap		Q-1	Supports successful implementation of project; EIR does not reflect a lack of intent.
R	Karen and Vagn Nielsen		Q-1	Concerned that noise from booster pump station between Napa Road and Welzel Lane is classified as a "less than significant impact"; feel noise could contribute to property devaluation. Concerned with noise from generator during power outages and/or open door during equipment maintenance. Concerned that EIR did not adequately analyze alternative locations for booster pump. Concerned with winter flooding and increase in impermeable surface. Think the water could be pumped directly from sanitary plant without the need for booster pump.
S	Barry Buckley		S-1	Would like project to install infrastructure beneath Sonoma Marin Area Rail Transit System (SMART). Concerned with allocation of recycled water to Hamilton residents, homeowners associations, public spaces, parks, school, and ranch properties. Implementing the pipelines within the SMART right-of-way represents costs savings and reduced impacts to traffic. Concerned with allocation of recycled water to SMART for landscaping.
T	Kathy Pons		T-1	No Action Alternative is the same for the Sonoma Valley area as Alternative 1 since the Final EIR for the Sonoma Valley Recycled Water Project has already been circulated. The same amount of recycled water is available under either alternative.
			T-2	Draft EIR/EIS should consider treating wastewater to drinking water standards to create more potable water as an alternative to the project.
			T-3	The project would be growth inducing and could assist in build out of the counties' and cities' general plans and contribute to secondary growth.
			T-4	Supporting new agricultural growth is not sustainable if recycled water is suspended; not economically fair.
			T-5	Recycled water should be used within the same basin because pumping would generate greenhouse gas emissions and could contribute to climate change. This contradicts the initiatives SCWA has set forth to reduce greenhouse gas emissions even within Sonoma County and the State.
			T-6	EIR does not consider effects of conservation, expanded use of grey water, capture of infiltration/ stormwater on wastewater supply and ability to produce recycled water.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Individuals (cont.)				
T (cont.)			T-7	Recognizes benefit of offsetting potable water use, but that only works if groundwater users can be convinced to pay for recycled water.
			T-8	Concerned about water quality and treatment; concerned that contaminates like endocrine disrupters, personal care products, antibiotics, pharmaceuticals are not removed in tertiary treatment process.
			T-9	Concerned about SVRWP; would like to see more utilization of SVCSD's recycled water locally by extending implementation of this project within NBWRP.
			T-10	Recognize Napa Salt Marsh is good use of recycled water; Concerned there is no quantitative amount of recycled water that would be needed.
			T-11	Questions why 4 miles of 24-inch pipeline is needed; seems project would be better served by Napa.
			T-12	Acknowledges Alternative 2 involves connection of Sonoma Valley and Napa.
			T-13	Expresses support for No Action Alternative.
U	Tom Yarish		U-1	Concerned with CEQA process and governance of SCWA.
			U-2	Concerned with public trust issues related to acquisition of Cargill/ Napa Salt Ponds.
			U-3	Concerned with Novato SD approval to privatize operations.
			U-4	Concerned with relationship of NBWRP to source water from Russian and Eel Rivers.
			U-5	Concerned with public hearing facilitation as it relates to CEQA process.
			U-6	Concerned with public participation process.
Public Hearings				
V				Public Hearing, Margaret Todd Senior Center, Marin County
V1	Barry Buckley		V1-1	EIR/EIS should include an analysis of LGVSD Phase 1 pipeline options.
			V1-2	Concerned that rate payers will not get the water.
			V1-3	Would like some recycled water to be used for bike path landscaping, condo, Hamilton Landing center.
V2	Drew McIntyre		V2-1	Recycled water is allocated for use in Hamilton Landing, Spanish housing, ball fields, large homeowner's associations, the amphitheater, and Lannan Village.
V3	Megan Clark		V3-1	Concerned about sea level rise.
W	Public Hearing, Sonoma Community Center, Sonoma County			
W1	Tom Yarish		W1-1	Concerned with water quality and the disinfection byproducts in wastewater that survive tertiary treatment and remain active and produce toxic byproducts that would conflict with discharger's ability to meet state standards
			W1-2	Concerned with O&M costs. Would like to see hard analysis of cost advantages of infrastructure project versus reverse osmosis.
			W1-3	Notes challenges associated with discharge of potable water.
			W1-4	Would like to see more analysis of trace constituents.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Public Hearings (cont.)				
W1 (cont)			W1-5	Concerned about impact to Russian River.
			W1-6	Concerned with impacts to fish resulting from providing additional water to support new vineyards that use traditional farming methods.
			W1-7	Would like reverse osmosis, microfiltration, conservation, localized distribution to be considered as alternatives.
W2	Kathy Pons		W2-1	Concerned with water quality and the disinfection byproducts in wastewater that survive tertiary treatment and remain active and produce toxic byproducts that would conflict with discharger's ability to meet state standards.
			W2-2	Would like EIR to look at economic basis; compare cost of doing NBWRP versus filtering and treating to a potable level.
			W2-3	Concerned that future conservation, expanded use of greywater, climate change impacts to meteorology would reduce supply of wastewater such that the project would be infeasible
W3	Mitchell Mulas		W3-1	Concerned agricultural users will not want to pay for water.
			W3-2	Asserts that CDFG is buying the property the project proposes as candidates for recycled water use.
			W3-3	Concerned about funding.
			W3-4	Concerned about growth in cities.
W4	Bill Montini		W4-1	Concerned about impacts to agriculture; EIR does not address pipeline routes that cut through vineyards; economic costs.
X	Public Hearing, Napa Elks Lodge, Napa County			
X1	David Keller		X1-1	Concerned that comments previously submitted during scoping were not incorporated in DEIR/EIS.
			X1-2	Comment asserts that Draft EIR/EIS project objectives are incomplete and that the document does not address impacts to source waters and other watershed.
			X1-3	The commenter is concerned with funding mechanism and the relationship between the size of the project and the potential funding.
			X1-4	The comment asserts that recycled water for vineyards will be subsidized by local taxpayers. Concerned with financial burden placed on taxpayers by grape growers.
			X1-5	Asserts that City of Vallejo is a better location and use of funding for recycled water program and Napa Salt Marsh because it generates large amounts of polluting discharge and would not impact the Russian River. Asserts that a recycled water project in the City of Vallejo would meet project objectives and questions why this potential alternative was scoped out.
X2	Tom Yarish		X2-1	Would like EIR to include a hard analysis about who will pay for use of this water.
			X2-2	Provided comments about conservation and need for SCWA to comply with DWR sanctions. Concerned that the predicted uses for the recycled water (lawns, landscaping) are not subject to scrutiny in terms of conservation.
			X2-3	EIR needs to include hard math that shows the constraints on source water.
			X2-4	EIR should include cost benefit analysis of recycled water as it relates to the consumer.
X3	John Stewart		X3-1	Concerned about leveraging local dollars effectively.
			X3-2	Asserts that Regional Board has strict conditions for discharging to the Bay.

TABLE 1-3 (Continued)
COMMENT ISSUES SUMMARY

Designator	Public Agency	Signatory	Comment Designation	Comment/Topic
Public Hearings (cont.)				
X3 (cont.)			X3-3	Agrees with concept of recycling water for additional uses.
			X3-4	Would like to see a well developed, legally defensible document to tier from.
			X3-5	For the record City of Vallejo does not operate wastewater facility as a sanitation district, they are on independent funds.
Board of Supervisors Certification Hearing				
Y	David Keller		Y-1	Concerned about implications of State and Federal mandates regarding water supply.
			Y-2	Concerned about scale of project; potential water transfers, and demand for recycled water.
			Y-3	Concerned about project costs, and intended use of the recycled water.
			Y-4	Project is not consistent with SCWA's "carbon neutral" goal.
			Y-5	EIR/EIS does not include analysis of alternatives to offset potable water demand.
			Y-6	Concerned about overdrafted groundwater supplies and potential for provision of recycled water to support agricultural/ vineyard uses.
			Y-7	Concerned about relationship of project to Russian and Eel Rivers.
			Y-8	Member Agencies and other water contractors should do a better job of customer water use and reuse.
			Y-9	Implementation of the project would reduce incentive to implement water demand reduction within each of the Member Agency service areas and would result in financial income.
			Y-10	Project is large scale and expands water use and will result in new agricultural customers.
Z	Tom Yarish		Z-1	Phase 1 projects will establish a baseline demand that cannot be achieved if water conservation and efficiency measures are required.
			Z-2	EIR/EIS did not include an alternatives analysis of reverse osmosis/ micro filtration purification processes, or demand reduction techniques. Cites City of Petaluma as North Bay example for water demand reduction technologies.
			Z-3	Concerned with water quality impacts, specifically endocrine disrupters, potentially associated with recycled water, applicability and adequacy of the California Toxics Rule and Title 22 standards.
			Z-4	EIR/EIS does not have adequate level of analysis of groundwater quality impacts.

CHAPTER 2
Master Responses

Some topics in the Draft EIR/EIS received multiple comments each. In order to provide a thorough response on these topics, master responses have been prepared that present a comprehensive discussion of the key items of interest to the commenters. Response to each individual comment is provided in Chapter 3, Response to Comments. In the event that one of these major topics is raised in an individual comment, where appropriate, a brief response is provided and the commenter is referred to one of these master responses for a complete discussion.

2.1 Proposed Action and Relationship to Water Supply

Introduction

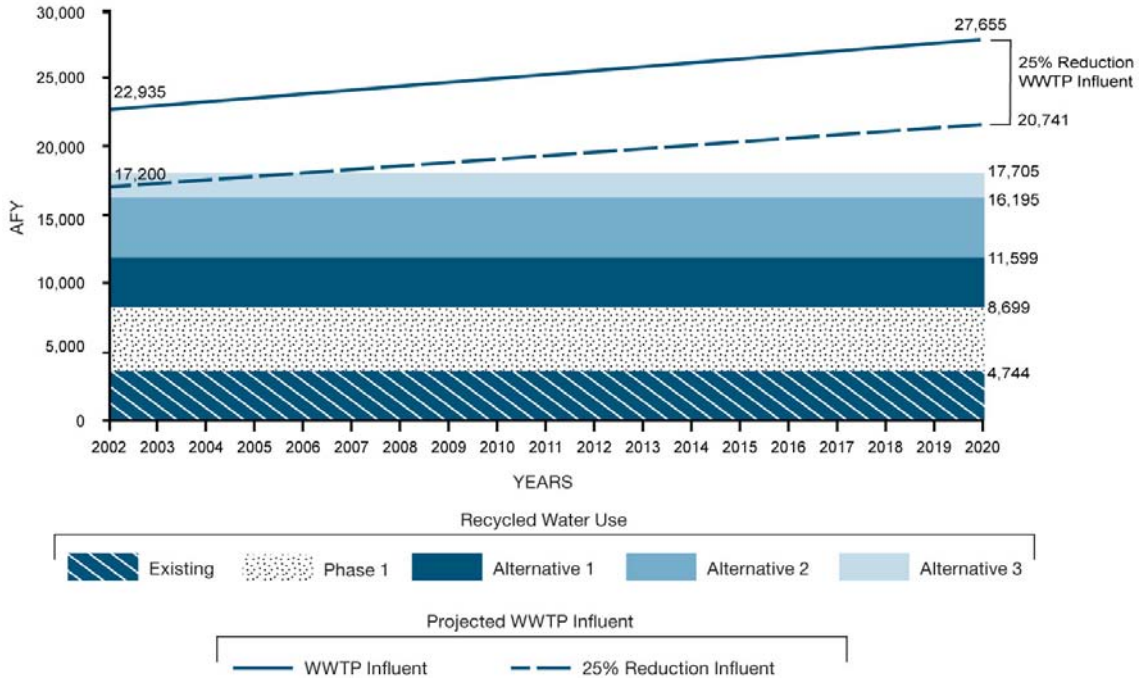
Comments regarding the North Bay Water Recycling Program's (NBWRP) relationship to water supply are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Commenters expressed concern that the Proposed Action would increase demands on Russian River and Eel River surface water supplies, and that surface water supplies within the region are subject to various legal, regulatory and environmental uncertainties.

Relevant comments on this topic include: **J-2, K-3, K-4, K-18, K-19, M-1, M-4, M-8, M-9, M-13, M-14, M-22, M-23, M-24, M-30, M-31, M-32, M-33, M-35, M-36, M-37, M-38, M-39, M-40, M-42, M-43, M-44, M-45, M-46, M-49, M-50, M-51, M-55, M-56, M-57, M-63, N-2, N-3, N-4, U-4, W1-5, W1-6, W1-7, W2-3, X1-2, X1-5, X2-2, X2-3, Y-1, Y-7, Y-9,** and **Z-2**.

Proposed Action and Effect on Wastewater Influent

The proposed action is the approval of funding by Reclamation of the NBWRP through the Title XVI Program. Reclamation and the NBWRA Member Agencies are considering approval of Alternative 1, including projects identified under the Phase 1 Implementation Plan. Alternative 1 has been identified as the environmentally preferred alternative in Draft EIR/EIS Section 6.0.

As noted in Draft EIR/EIS Section 2, Project Description, approximately 22,935 acre-feet per year (AFY) of wastewater is currently treated by the four wastewater treatment plants (WWTPs) with the NBWRP service area, with approximately 4,774 AFY recycled for irrigation uses and the remaining 18,161 AFY discharged to tributaries of North San Pablo Bay. **Figure 2-1** shows the relationship between the amount of recycled water to be recovered under



North San Pablo Bay Restoration and Reuse Project ▪ 206088

Figure 2-1
NBWRP Annual Provision of Recycled Water Supplies versus Projected WWTP Influent

each alternative, and the projected level of WWTP influent through 2020. Alternative 1 would recover and reuse an additional 6,655 AFY, which is approximately 29 percent of the total influent to the WWTPs, or 36 percent of the treated effluent currently discharged. The remaining treated effluent (approximately 13,686 AFY) would continue to be discharged to tributaries of North San Pablo Bay, in compliance with National Pollutant Discharge Elimination System (NPDES) permit requirements established under the federal Clean Water Act and the State Porter-Cologne Act.

As Figure 2-1 indicates, there is enough wastewater influent coming into the Member Agency WWTPs under current conditions to support implementation of any of the Action Alternatives, including the largest recycled water use of 12,761 AFY. Although SCWA's Board of Directors decided in September 2009 to cease work on the Water Project EIR and instead redirect efforts towards pursuit of new water supply strategies, and even if several conditions occurred in the future (such as increased conservation) and reduced the current level of wastewater influent by up to 25 percent, there would still be enough wastewater influent to support the proposed level of water recycling under any of the three Action Alternatives. Under no circumstances do the proposed NBWRP alternatives require an increase in water use or wastewater generation to support the proposed recycled water program. Therefore, implementation of Alternative 1, or any of the alternatives considered under the NBWRP, does not rely on increased influent to WWTPs for its implementation, and can be implemented under current conditions without projected increases in influent to the WWTPs.

Figure 2-1 shows the relationship between the amount of recycled water in AFY provided under each of the alternatives and existing and projected WWTP influent through 2020. As shown in this figure, all of the Action Alternatives can be implemented under current discharge conditions. Implementation of the proposed action would not affect the amount, rate, or timing of potable water supply development. The proposed project would only recover, treat and distribute treated effluent that is currently discharged to North San Pablo Bay. As the proposed action would have no effect on the amount, rate or timing of potable water supply development, no further analysis of water supply availability or reliability is required.

WWTP Influent

Influent to the WWTPs in the region results from domestic, commercial and industrial wastewater generation, as well as infiltration and inflow to collection systems from stormwater and groundwater. From a water cycle standpoint, potable supplies within the region that contribute influent to WWTPs are derived from a number of sources, including local and imported surface water and groundwater supplies (see **Table 2-1**). The sanitation districts that comprise the NBWRA have a legal obligation under the Clean Water Act to collect, treat and discharge wastewater influent that is generated within their service areas, in compliance with NPDES permit requirements, including effluent limits. California Water Code Section 1210 explicitly defines wastewater rights as belonging exclusively to the wastewater treatment plant operator.

> *Section 1210. The owner of a wastewater treatment plant operated for the purpose of treating wastes from a sanitary sewer system shall hold the exclusive right to the treated waste water as against anyone who has supplied the water discharged into the waste water collection and treatment system, including a person using water under a water service contract, unless otherwise provided by agreement. Nothing in this article shall affect the treatment plant owner's obligations to any legal user of the discharged treated waste water.*

TABLE 2-1
SUMMARY OF WATER SUPPLIES BY MEMBER AGENCY

NBWRA WWTP Operators	Water Retailers	Water Supplies
LGVSD	Marin Municipal Water District (MMWD)	• Mt. Talmapias Watershed • Sonoma County Water Agency (SCWA) (25%)
Novato SD	North Marin Water District (NMWD)	• Stafford Lake Watershed • SCWA Supplies: – Russian River Watershed
SVCSD	City of Sonoma/ Valley of the Moon Water District	• Sonoma County Water Agency Supplies: – Russian River Watersheds – Santa Rosa Plain Groundwater • City of Sonoma Groundwater Wells • Valley of the Moon Water District Groundwater Wells
Napa SD	City of Napa	• State Water Project: – Delta Supplies via Barker Slough • Napa Valley Groundwater Supplies

SOURCE: ESA

Wastewater Influent Variability and Effects on Recycled Water

Several comments raised concern regarding the potential for wastewater treatment plant influent flows to be reduced over time due to a variety of factors, including increased conservation, reduced water supply reliability or availability, and climate change, and that this might, in turn, create a requirement or pressure to otherwise increase potable water use in order to generate enough wastewater to support NBWRP recycled water use. As shown in Figure 2-1, all of the alternatives considered can be accommodated by existing WWTP influent. The influent to the WWTPs within the service area is anticipated to increase by approximately 4,720 AFY, or approximately 20 percent through 2020. This estimate is based on available Master Plan documents from each of the Member Agencies. Additionally, Figure 2-1 depicts a 25 percent reduction scenario that illustrates what could happen should the factors noted above, including increased conservation, reduced water supply reliability, and climate change actually occur over time and reduce the amount of water use and associated wastewater generation. As shown, this level of wastewater influent reduction would not affect the amount of recycled water available for distribution.

Commenters expressed the concern that distribution of recycled water would create a new or more permanent demand for surface water supplies within the region in order to meet recycled water demands. It should be noted that the recovery and reuse of recycled water does not represent a potable demand in and of itself. As shown in Figure 2-1, treated effluent is currently discharged at levels that can support the offset of potable irrigation supplies identified within the service areas of the NBWRA. Although water supplies that are consumed by residential and industrial processes are subsequently collected, and contribute to WWTP influent, the collection and treatment of influent is by its nature a passive process. The WWTPs of the NBWRA do not have the ability to encourage or increase the rate of potable water use such that increased wastewater is generated to meet recycled water demands.

Recycled Water Reliability Requirements

Existing recycled water user agreements are structured to identify and provide a minimum recycled water amount, such that varying reliability conditions are anticipated and accommodated within the contracting agreement. There is no requirement, contractual or otherwise, for the proposed action to provide 100 percent reliability, as implied by the commenters, such that entering into recycled water contracts would incentivize increased water supply use in order to generate additional WWTP influent, with subsequent treatment and distribution of recycled water to meet contract requirements. In the event that recycled water supplies are not available, supplies are simply not served, and irrigators would revert to another water supply or alter their water use.

Contract durations are anticipated to be 5 to 10-year agreements to accommodate market-based pricing, and would provide flexibility with respect to renewal, such that end user service can be modified by either party. As such, the recycled water distributers will retain the right to repurpose recycled water end use to respond to market conditions.

2.2 Alternatives Analysis

Introduction

Several comments question the range of alternatives examined in the Draft EIR/EIS, or suggest additional alternatives that should be examined. Commenters request that the use of conservation programs be implemented as an alternative to provision of recycled water for potable offset. Additionally, commenters note that examination of these alternatives would represent "significant new information", and would require recirculation of the Draft EIR/EIS.

Comments regarding the range of alternatives examined in the Draft EIR/EIS are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Relevant comments on this topic include: **H-1, I-5M J-3M K-17, L-20, M-2, M-3, M-12, M-56, M-57, M-60, M-61, M-78, S-1, T-2, W1-7, W2-2, X1-5, Y-9,** and **Z-2**.

Alternatives Analysis

Under NEPA, the evaluation of alternatives is governed by the "Rule of Reason", which requires a Draft EIS to consider a range of alternatives that could accomplish the proposed action's purpose and need (40 CFR 1502.14). Pursuant to NEPA regulations 40 CFR 1502.14, Chapter 6.0, Alternatives of the Draft EIR/EIS:

- Rigorously explores and objectively evaluates all reasonable alternatives;
- Includes reasonable alternatives not within the lead agency's jurisdiction or congressional mandate, if applicable;
- Includes the no action alternative;
- Devotes substantial treatment to each alternative, including the proposed action, so that the reviewers may evaluate their comparative merits;
- Identifies the lead agency's preferred alternative;
- Includes appropriate mitigation measures; and
- Presents alternatives that were eliminated from detailed study and briefly discuss the reasons for elimination.

A reasonable range of alternatives includes alternatives that may be feasibly carried out based on technical, economic, environmental factors. The lead agency is not required to evaluate alternatives beyond the reasonable range. The screening process used during alternative selection is consistent with the approach recommended under NEPA, which states that the lead agency should develop a list of feasibility factors to develop a broad list of alternatives, and then progressively narrow the list to meet the proposed action's need and feasibility factors. As stated in the Draft EIR/EIS in Chapter 6.0, Alternatives, according to NEPA, alternatives considered, but not found to be technically feasible or reasonable, should be presented briefly, along with the reasons they were

eliminated from further analysis. Examples of reasons for elimination are: (1) failure of the alternative to meet the requirements of the purpose of and need for the action, (2) the alternative cannot be technically implemented, (3) the alternative is prohibitively greater in cost or in environmental impacts than the other alternatives, or (4) the alternative cannot be reasonably implemented. A complete listing of all alternatives seriously considered or publicly discussed in the scoping process should be included.

The following case law establishes precedent for defining the range of alternatives required in a Draft EIS under NEPA.

- *Natural Resources Defense Council v. Callaway*: The findings related to the interpretation of NEPA alternatives analysis from *Natural Resources Defense Council v. Callaway*, 524F2d.79 (2d Cir. 1975) determined that the content and scope of the alternatives are dependent on the nature of the proposed action and that there is no need to consider alternatives of speculative feasibility or alternatives that could be implemented only after significant changes in governmental policy occur.

- *Natural Resources Defense Council v. Morton:* In another relevant case, *Natural Resources Defense Council v. Morton*, 458 F.2d 827 (D.C. Cir. 1972), the court determined that The EIS's discussion of alternatives need not be exhaustive. What is required is information sufficient to enable the lead agency to make a reasoned and informed decision as far as environmental impacts are concerned.

- *Vermont Yankee Nuclear Power Corp v. Natural Resources Defense Council, Inc.: Vermont Yankee Nuclear Power Corp v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978), challenged the EIS on licensing of a nuclear power plant because the alternatives analysis did not evaluate energy conservation as an alternative. The court determined that the duty of federal agencies is to consider primary alternatives and the lead agency was not required to discuss energy conservation as a primary alternative because such an alternative did not meet the proposed action's purpose and need.

CEQA provides similar guidance for review of alternatives. As defined by CEQA Guidelines §15126.6(a), an EIR need not consider every conceivable alternative to a project. Rather, an EIR must describe a range of reasonable alternatives which would feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project. Additionally, an EIR must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. The range of alternatives examined in the Draft EIR/EIS is consistent with the "rule of reason" established by CEQA, and is focused on those alternatives capable of meeting the project objectives. Further, as provided for in 15126.6(b), the EIR identifies potential alternatives that were considered by the lead agency, but were rejected by the agency. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: 1) failure to meet most of the basic project objectives, 2) infeasibility based upon technical, economic, and/or institutional issues, or 3) inability to avoid significant environmental impacts.

CEQA Guidelines Section 15126.6(d) provides that impacts of an alternative need not be discussed in as great detail as significant effects of the proposed project. In discussing alternatives, an EIR must include sufficient information to compare the impacts of the alternatives to those of the project.

According to the CEQA Guidelines, a matrix displaying the major characteristics and significant effects of each alternative may be used to summarize the comparison, such as is provided in the Draft EIR/EIS for the alternatives evaluated.

Alternatives Analysis and Project Objectives

The purpose of the NBWRP is to provide recycled water for agricultural, urban, and environmental uses thereby reducing reliance on local and imported surface and groundwater and reducing the amount of treated effluent releases to San Pablo Bay. Specific project objectives identified for the project include:

- 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.

Alternatives Development

Project Alternatives

As noted in Draft EIR/EIS Section 6.0, the development of alternatives for the NBWRP was completed as part of the Feasibility Study process required under Reclamation's Title XVI Program, and is consistent with the NEPA and CEQA approaches identified above. Alternatives development included three phases, as described below.

- In 2005, NBWRA prepared the *Phase 1 Engineering and Economic/ Financial Analysis Report* that represented the initial results of a recycled water demand study in the project area, possible scenarios using different areas and facilities, and preliminary cost estimates.

- In 2006-2007, NBWRA prepared the *Phase 2 Engineering and Economic/ Financial Analysis Report*, which presented a detailed engineering development and evaluation of best agreed alternatives.

- In 2008, as part of Phase 3, NBWRA completed the engineering and financial evaluation and the final feasibility report. The *Phase 3 Engineering and Economic/ Financial Analysis Report* or Phase 3 Feasibility Study refined the engineering evaluation and includes the economic analysis of alternatives and documentation of the financial capability of the Member Agencies. The Phase 3 Feasibility Study describes the action area and the key management issues and needs within the action area, identifies recycled water opportunities in the action area, develops and analyzes alternative measures that could address the identified water management needs, presents an economic and financial analysis of the project, and presents an overview of associated legal and institutional requirements.

Phase 3 Feasibility Study

NBWRA undertook a comprehensive planning process that first identified a wide range of preliminary alternatives for the Proposed Action and then screened this array for selection of alternatives that would be developed for detailed analysis. Criteria such as the ability to achieve Member Agency water management goals, to meet projected future water supply needs, and to maintain environmental and water quality directed the initial development of the alternatives (CDM, 2008).

The first step in the alternatives development process was to identify the broad characteristics that could be used to formulate alternatives. The initial alternatives were formed as combinations of options under the following characteristics: the 15 recycled water projects (see Draft EIR/EIS **Table 6-1**) and six recycled water distribution systems (see Draft EIR/EIS **Table 6-2**) were evaluated with the six storage options (discussed above) to develop a total of 18 initial alternatives.

DRAFT EIR/EIS TABLE 6-1
RECYCLED WATER PROJECTS CONSIDERED

Existing Projects	Agency-Identified Projects	New Potential Water Reuse Areas
Sonoma Valley County Sanitation District Reuse Area	Peacock Gap Golf Course	Petaluma South
Marin Municipal Water District Reuse Area	North Marin Water District Urban Reuse Project	Southern Sonoma Valley
Stone Tree Golf Course Reuse Area	Sonoma Valley Recycled Water Project	Sears Point
	Carneros East	Central Sonoma Valley
	Milliken-Sarco-Tulocay Creeks Area	North Central Sonoma
	Napa Salt Marsh Restoration	Napa Valley

SOURCE: CDM, 2008

DRAFT EIR/EIS TABLE 6-2
RECYCLED WATER PROJECTS CONSIDERED

Service Area Approaches	Features
Basic Regional System	Emphasis on local area near each WWTP
Regional Systems	Linkage of local systems to allow multiple treatment plants primarily in Petaluma/Novato and Napa/Sonoma.
Regional Systems with Ponds	Connect several WWTPs and add ponds for storage.
Expanded Regional System without Petaluma	Provide larger agricultural area, emphasis on environmental benefits to Napa Salt Marsh (Petaluma would not be served).
Expanded Regional System with Petaluma	See above. The area will include Petaluma.
Interconnected Regional System	Connect all five WWTPs and maximize reuse.

SOURCE: CDM, 2008

The next step in the alternatives development process was to screen the initial alternatives. The characteristics of the alternatives were examined to verify that they were technically, environmentally, politically, and legally feasible. The screening was based on the quantity of recycled water served, quantity of the discharge from the WWTPs reduced, amount of storage required, and planning-level cost estimates.

Alternatives Identified but Not Considered Further

The alternatives not considered further in the Phase 3 analysis include the "Regional System," "Expanded Regional System without Petaluma," and "Expanded Regional System with Petaluma" (CDM, 2008). The "Regional System" was rejected due to prohibitive costs and insufficient use of recycled water. The "Expanded Regional System without Petaluma" was similar to the Partially Connected System, but did not include Petaluma because Petaluma declined participation in the later phases of detailed analyses. The third alternative, the "Expanded Regional System with Petaluma", included connection to Petaluma, but the design did not provide adequate storage for the anticipated recycled water demand.

The NBWRA screened the 18 alternatives based upon storage options, cost, regional partnership opportunities, and system logistics to select three alternatives that would be carried forward to further analysis. Thus, the alternatives that are analyzed in this EIR/EIS in addition to the required No Project and No Action Alternatives (under CEQA and NEPA) are: the Basic System, the Partially Connected System, and the Fully Connected System.

Alternatives to the Project

In addition to the development of project alternatives, the Draft EIR/EIS included review of alternatives to the project. These included: additional importation of water supply to meet irrigation demands, the development of regional desalination, and variations of the action alternatives, including a "landscape only" alternative. These alternatives were then reviewed relative to their ability to meet the project objectives, their environmental impacts relative to those identified for the Action Alternatives, and their economic feasibility. As summarized in Table 6-13, these alternatives were not identified as environmentally superior.

Conservation as an Alternative to the Proposed Action

As noted in Chapter 1, Introduction, of the Draft EIR/EIS, water wholesalers, including SCWA and Napa County, and retailers within the NBWRA service areas (e.g., NMWD, Valley of the Moon, City of Sonoma, and City of Napa) have and will continue to implement conservation programs within their individual service areas. SCWA and Napa County are wholesale water suppliers in the Sonoma, Marin and Napa Counties. Water is supplied to retailers such as MMWD, NMWD in northern Marin County and Valley of the Moon Water District in Sonoma County. SCWA, for example, assists its retail agencies in implementing the California Urban Water Conservation Council Best Management Practices[1] in their service areas. The retail

[1] All SCWA water contractors are signatory to California Urban Water Conservation Council (CUWCC) Memorandum of Understanding (MOU), as discussed in Section 1.7.8 of the Draft EIR/EIS.

agencies implement SCWA-supported measures and their own individual conservation programs. Please see Table 1-4 on page 1-19 of Chapter 1, Introduction, of the Draft EIR/EIS for a comprehensive list of the current water conservation measures being implemented by SCWA and its water contractors. Similarly, Section 1.7.9, Sustainability, provides an overview of water and energy efficiency projects and programs that are currently being implemented by the NBWRA member agencies.

Within this context, the implementation of conservation as a means of reducing water use, and indirectly, wastewater generation, does not represent an alternative to the Proposed Action. Rather, it represents the environmental baseline within which the Proposed Action is being considered for implementation. Conservation is currently being implemented by water wholesale, retail agencies, and wastewater agencies (i.e., SVCSD) within the NBWRA service area, and increased conservation is a key water management tool within the region. Increased recycled water use is part of SCWA' conservation program and is integrated into water supply management in the area. A summary of water and energy conservation programs is provided below.

Water Conservation Measures

Estimated savings that have resulted from existing water conservation programs is over 6,600 AFY. Under the 1999 Water Conservation Plan, SCWA allocated $15 million to water conservation over a period of 10 years to achieve a goal of saving 6,600 AFY. In, reality, from 1996-2006 SCWA has invested an estimated $35 million in conservation programs. This includes the funding and distribution of 100,000 low-flow showerheads and faucet aerators, replacing 33,000 toilets with low flow models, and 1,200 rebates on water efficient washing machines.

Although SCWA's Board of Directors decided in September to cease work on the Water Project EIR, the water contractors will likely continue to implement new water conservation measures along with existing water conservation programs. The goal of the conservation programs identified in the Water Project Draft EIR was an additional conservation savings of 9,440 AFY, providing a total savings of 16,040 AFY by the year 2030. Of the additional conservation savings of 9,440 AFY identified, 2,330 AFY was identified as occurring within the NBWRA service area by 2030. As SCWA and the water contractors develop new water supply strategies for the future, they will continue the commitment to water conservation and encourage alternative and innovative methods of saving water to increase conservation and achieve higher savings in the future.

The City of Napa, also a signatory to the MOU Regarding Urban Water Conservation in California, under the California Urban Water Conservation Council, has integrated water conservation into its long-term water management strategy by developing a series of programs to educate residents and provide water-efficient devices to customers[2].

[2] City of Napa, Water Division, Water Conservation Homepage, 2009, http://www.cityofnapa.org/index.php?Itemid=314&id=228&option=com_content&task=view, Accessed: April 22, 2009.

Energy Efficiency and Conservation Programs

A discussion of energy efficiency and conservation programs that are currently being implemented by the NBWRA Member Agencies is provided in Draft EIR/EIS Section 1.7.9. Individual programs for each of the agencies are identified in **Table 2-2**.

In addition to these programs, the Sonoma County Board of Supervisors adopted the Sonoma County Energy Independence Program (SCEIP) in March 2009. Although referenced in the discussion provided in Draft EIR/EIS Section 1.7.9, the SCEIP is the first and only program of its kind, and is a hybrid of energy conservation and water conservation measures, and further discussion is provided. SCEIP is a voluntary program that is intended to assist residential, commercial, and industrial water users in reducing their water use and energy consumption. SCEIP provides opportunities to property owners to finance energy and water efficient property improvements through the property tax system. Sonoma County and SCWA have jointly pledged up to $100 million to fund energy efficiency and water conservation improvements for residential and commercial property owners. The money is from the county treasury and comes from a pool of funds normally used for investments; as well as county-sold bonds to help finance the program. Property owners apply for funding and repay the program through an assessment on their property taxes over a term of 5, 10, or 20 years. Assessments are a lien on the property itself, so when the property is sold, the assessment stays with the property. SCEIP funds a variety of equipment, systems, and other measures. Property improvements must be permanently affixed to the property, such as high efficiency windows, solar or tankless water heaters, solar panels, upgraded wall insulation, reflective roofing, and smart irrigation systems. The water conservation program includes both indoor and outdoor improvements for residences and commercial buildings. Residential water conservation measures include mainstream measures like high efficiency toilets and low flow showerheads, as well as newer technologies like hot water recirculation systems. Commercial water conservation measures include all applicable residential measures, in addition to custom measures such as waterless urinals, recycled water sources, or foundation drain water. As of July 2009, approximately 355 residents have submitted applications totaling $14 million to retrofit their homes.

A similar, tax payment based program is ClimateSmart by Pacific Gas and Electric Company (PG&E). The ClimateSmart Program enables PG&E customers to balance out the greenhouse gas emissions associated with their own natural gas and electricity use by enrolling to add a monthly, tax-deductible donation on their PG&E bill. The donation is proportional to their actual energy usage. Donations contribute directly to greenhouse gas reduction projects. To date, contributions through the ClimateSmart Program will balance out approximately 257,000 tons of greenhouse gas emissions.

TABLE 2-2
SUMMARY OF MEMBER AGENCY SUSTAINABILITY PROGRAMS

NBWRA Member Agency	Programs
LVGSD	• Solar generation from 2,490 solar panels that produce 850,000 kWhr/year • Community Outreach Programs for pollution prevention • Habitat Restoration • Strategic Plan goals to decrease vehicle emissions, reduce carbon footprint, address climate change
Novato SD	• Ongoing Sustainability Programs, participation on Marin County Sustainability Team • Certified Green Business • Microturbine for alternative energy source to reduce air pollution and energy demand • Energy efficient measures including low-pressure ultra-violet disinfection system, premium-efficiency motors, high-efficiency aeration blowers, advanced dissolved oxygen control, and variable-speed pump drives • Water recycling for landscape irrigation • Conversion of work fleet to hybrid vehicles • Community Outreach Programs for erosion control and fisheries habitat improvement • Sponsors household and electrical waste recycling programs
SVCSD	• Solar energy generation via 5,200 solar panels to provide one-third of the WWTP energy demand
Napa SD	• Sponsors incentive programs for energy and water use reduction • Implemented energy conservation measures at WWTP, including Aeration Blower Replacement Project (energy savings of 100,000,000 kWhr/year) • Uses cogeneration at WWTP site • Recycles wastewater for landscape and vineyard irrigation • Recycles biosolids to avoid contributions to landfill • Funds water and energy conservation programs administered by City of Napa • Contributes funds to Toilet Retrofit Program • Partnered with City of Napa and PG&E to offer rebates on high-efficiency clothes washers
SCWA	• Water conservation program • Recycled water projects • Fishery protection and restoration programs • Renewable energy projects • Public access on SCWA land • Bio-diesel use • Goal to supply water without increasing carbon footprint • Construction of 2.0 megawatts of solar energy generation capacity at three facilities; • Conversion of first plug-in hybrid vehicle by a government agency in Sonoma County; • Implementation of recognized guidelines from the International Organization for Standardization (ISO) 9001 and 14001 registrations; • Sponsorship of and participation in several conferences promoting sustainability; • Filing an application with the Federal Energy Regulatory Commission to perform wave energy studies; Feasibility studies of wave energy off the coast of Sonoma County; • Working with the City of Santa Rosa to build a bio-diesel production plant; • Achieving registration with the California Climate Action Registry; • Achieving certification from the Sustainable Business Institute; • Participating in the California Environmental Dialogue; • Participating in the United Nations Conference on Climate Change in Bali, Indonesia; and Poland • Achieving a Bay Area Green Business certification for SCWA's administration building. • Goals to improve sustainability: • Support program and funding to create "zero net energy" communities by implementing geothermal heat pump technology and other energy efficiencies; • Expand use of plug-in hybrid vehicles via incentive programs and volume purchases; • Collect and analyze electric load data to evaluate opportunities for development of renewable energy projects, and harnessing wave energy; • Build coalitions with other communities with similar goals; and • Host conferences related to emerging technologies

Relationship to Project Objectives

The implementation of water and energy conservation programs, while supported by NBWRA, would not meet the stated objectives of the Proposed Action. Therefore, they were not considered as a viable alternative to the Action Alternatives, due to the following:

- **Water and energy conservation programs are currently being implemented, and as such represent the environmental baseline of the project.** As noted above, the NBWRA Member Agencies are currently engaged in the implementation of water and energy conservation programs.

- **Increased water conservation would not offset urban and agricultural demands on potable water supplies to the level identified by the proposed action alternatives**. Although it does represent an important water demand management tool, it does not recover highly treated wastewater that is currently discharged to tributaries of North San Pablo Bay and make it available for irrigation end uses, thereby offset existing irrigation of urban and agricultural uses with potable surface water and groundwater supplies. As noted above, conservative estimates within the NBWRA service area indicate a potential savings of 2,300 AFY by 2030, if measures are fully implemented. The proposed action alternatives would provide between 6,655 AFY and 12,761 AFY of recycled water to offset the use of potable supplies for irrigation.

- **Increased water and energy conservation would not enhance local or regional habitats, including restoration efforts in the Napa River Salt Marsh.** Implementation of water and energy conservation would not provide a clean, reliable source of water to assist in the restoration of Napa Salt Marsh Ponds 7 and 7A.

- **Increased energy conservation would not improve regional or local water supply reliability**. Energy conservation would not provide a water supply to assist in managing seasonal and dry year reliability with the region.

As noted in **Master Response 2.1** above**,** the amount of recycled water currently generated within the service area greatly exceeds the level of potential irrigation identified under each of the alternatives. Therefore, the successful implementation of conservation measures would not affect the provision of recycled water at the levels identified for any of the Action Alternatives. As such, the Proposed Action would not adversely affect or dis-incentivize the implementation of conservation measures, which is encouraged and supported by the NBWRA Member Agencies.

2.3 Project Objectives

Introduction

Comments regarding the project objectives identified in the Draft EIR/EIS are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Relevant comments on this topic include: **M-5, M-23, M-76, X1-2, and Y-3**.

Master Response

The project objectives have been developed to guide the implementation of recycled water on a regional basis within the North San Pablo Bay Watershed. The multiple objectives of the NBWRP were identified in an effort to develop a recycled water program that offsets potable demand from both urban and agricultural uses, provides environmental enhancement, and provides reduction in discharge disposal. In developing the project objectives for the NBWRP, it should be noted that they were modified in response to comments received during the public scoping process.

The NBWRA is a cooperative program in the North San Pablo Bay region that supports sustainability and environmental enhancement by expanding the use of recycled water. The purpose of the NBWRP is to provide recycled water for agricultural, urban, and environmental uses thereby reducing reliance on local and imported surface and groundwater and reducing the amount of treated effluent discharged to tributaries of North San Pablo Bay. Specific project objectives identified for the project include:

- 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.

It should be noted that these objectives are not mutually exclusive or prioritized. The objectives seek to develop a program that can meet multiple end-use needs identified within the region in an economically viable manner. In addition to the project objectives, **Table 2-3** identifies state and local policies that encourage and mandate the implementation of recycled water projects, in conjunction with conservation, to address water supply shortfalls throughout the State. Most prevalent of these is the State Water Resources Control Board Water Recycling Policy, which mandates the following:

a. The State Water Board and Regional Water Boards will exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with state and federal water quality laws.

    1. The State Water Board hereby establishes a mandate to increase the use of recycled water in California by 200,000 AFY by 2020 and by an additional 300,000 AFY by 2030. These mandates shall be achieved through the cooperation and collaboration of the State Water Board, the Regional Water Boards, the environmental community, water purveyors and the operators of publicly owned treatment works. The State Water Board will evaluate progress toward these mandates biennially and review and revise as necessary the implementation provisions of this Policy in 2012 and 2016.

TABLE 2-3
SUMMARY OF STATE AND LOCAL POLICIES AND OBJECTIVES REGARDING RECYCLED WATER

Jurisdiction	Law or Policy Governing Recycled Water Use	Reference in the Draft EIR/EIS
State		
California Department of Public Health (CDPH)	The Health and Safety Code establishes authority to Sanitary Districts pertaining to water recycling and distribution (section 6512), and building standards pursuant to gray water and untreated wastewater systems.	3.4-12
	CDPH is responsible for developing criteria for regulating the use of recycled water in California. Title 22 establishes regulatory requirements for use of recycled water to protect its beneficial uses for land applications and/or industrial uses.	3.4-13 (Table 3.4-6 on page 3.4-15)
	Title 17 states "that the water supplier will protect the public water supply from contamination by implementation of cross connection control program". Sections 7601-7605 describe the measures required to prevent contamination of potable water from recycled water.	3.4-13
State Water Resources Control Board (SWRCB)	SWRCB supports the use of recycled water and has included increased water recycling in its strategic plan. In 1991, the California Water Recycling Act (California Water Code 13577) set recycling goals of 700,000 AFY of water by year 2000 and 1 million of water AFY by 2010.	3.4-12
	Recycled Water Policy California Water Code section 13140 authorizes the SWRCB to adopt state policy for water quality control. The purpose of the Policy is to focus on increasing the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n), in a manner that implements state and federal water quality laws.	3.4-16
	According to the Policy, regulatory requirements for recycled water including emerging contaminants shall be based on the best available peer-reviewed science. SWRCB, in consultation with CDPH, plans to convene a "blue-ribbon" advisory panel to guide future actions relating to constituents of emerging concern.	3.4-17
Department of Water Resources (DWR)	The 2005 California Water Plan Update recognizes the importance of water recycling to California's water supply system and recommends a variety of steps to take in order for the State to increase recycled water usage. Several recommendations included in the plan were incorporated from the Recycled Water Task Force Final Report. ***California Water Code:*** *Section 13511*: The Legislature finds and declares that a substantial portion of the future water requirements of this state may be economically met by beneficial use of recycled water. The Legislature further finds and declares that the utilization of recycled water by local communities for domestic, agricultural, industrial, recreational, and fish and wildlife purposes will contribute to the peace, health, safety and welfare of the people of the state. Use of recycled water constitutes the development of "new basic water supplies". *Section 13512*: It is the intention of the Legislature that the state undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water requirements of the state. *Section 13352.2*: The Legislature hereby finds and declares that many local agencies deliver recycled water for nonpotable uses and that the use of recycled water is an effective means of meeting the demands for new water caused by drought conditions or population increases in the state. *Section 13552.4(a)*: Any public agency, including a state agency, city, county, city and county, district, or any other political subdivision of the state, may require the use of recycled water for irrigation of residential landscaping, if all requirements are met.	3.4-13

TABLE 2-3 (Continued)
SUMMARY OF STATE AND LOCAL POLICIES AND OBJECTIVES REGARDING RECYCLED WATER

Jurisdiction	Law or Policy Governing Recycled Water Use	Reference in the Draft EIR/EIS
State (cont.)		
Department of Water Resources (DWR) (cont.)	*Section 13556*: Any water supplier described in subdivision (b) of Section 1745 may acquire, store, provide, sell, and deliver recycled water for any beneficial use, including, but not limited to, municipal, industrial, domestic, and irrigation uses, if the water use is in accordance with statewide recycling criteria and regulations established pursuant to this chapter. *Section 13576 (e)*: Use of recycled water has proven to be safe from a health standpoint. f. Use of recycled water is a cost effective, reliable method to meet supply needs. g. Development of infrastructure to distribute recycled water will create jobs and enhance economy. h. Retail water suppliers and recycled water producers and wholesalers should promote the substitution of recycled water for potable water and imported water in order to maximize the appropriate cost-effective use of recycled water in California. *Section 13577* establishes a statewide goal to recycle a total of 700,000 acre-feet of water per year by the year 2000 and 1,000,000 acre-feet of water per year by the year 2010.	
Local		
City of San Rafael	***General Plan Policies:*** *Policy I-13*. Wastewater Treatment and Reuse. Encourage additional water recycling at Las Gallinas Valley Sanitary District and encourage the Central Marin Sanitation Agency to investigate recycling and reuse of its treated wastewater. *Policy CON-20b*. Water Recycling. Support the extension of recycled water distribution infrastructure. Require the use of recycled water where available.	Appendix 3.11
City of Novato	***General Plan Policies:*** *PF Policy 6 Water Conservation*. Develop and implement water conservation programs for Novato. PF Program 6.2: Use treated wastewater for irrigation of City facilities and encourage wastewater irrigation at other public and private facilities, where practicable. PF Program 6.4: Consider developing a plan in conjunction with the Sanitary District and Water Districts to promote and maximize to the extent feasible the reuse of treated wastewater and consider enacting an ordinance to have developments provide wastewater distribution facilities in conformance with the Plan. As part of the Public Facilities policy of water conservation, Novato General Plan (2003) states two programs for the City: Use of treated wastewater for irrigation of City facilities and encourage wastewater irrigation at other public and private facilities, where practicable, and support and encourage reclamation of wastewater for reuse wherever possible in accordance with the regulations and ordinances of the NMWD and MMWD. A third program states considering developing a plan in conjunction with the Novato SD and water districts to promote and maximize to the extent feasible the reuse of treated wastewater and consider enacting an ordinance to have developments provide wastewater distribution facilities in conformance with the General Plan.	Appendix 3.11 5-7

TABLE 2-3 (Continued)
SUMMARY OF STATE AND LOCAL POLICIES AND OBJECTIVES REGARDING RECYCLED WATER

Jurisdiction	Law or Policy Governing Recycled Water Use	Reference in the Draft EIR/EIS
Local (cont.)		
Marin County	One of the Marin County General Plan policies calls for offsetting new water demand. The policy states that in water districts that provide insufficient water to serve new construction or uses requiring an additional water meter or increased water supply as determined by the district or Marin County, the County shall require new construction or uses to offset demand so that there is no net increase in demand. The County lists use of reclaimed water as one of the measures that would be required to achieve no net increase in demand in addition to water catchments and reuse on site and retrofits of existing uses in the district to offset increased demand.	5-7
Sonoma County	***General Plan Policies:*** GOAL WR-4: Increase the role of conservation and safe, beneficial reuse in meeting water supply needs of both urban and rural users. *Objective WR-4.1*: Increase the use of recycled water where it meets all applicable regulatory standards and is the appropriate quality and quantity for the intended use. *Policy WR-4j*: Ensure that public wastewater disposal systems are designed to reclaim and reuse recycled water for agriculture, geothermal facilities, landscaping, parks, public facilities, wildlife enhancement and other uses to the extent practicable, provided that the water meets the applicable water quality standards and is supplied in appropriate quantities for the intended uses. *Policy WR-4k*: Where consistent with water quality regulations, encourage graywater systems, roof catchment of rainwater and other methods of re-using water and minimizing the need to use potable surface water or groundwater.	5-11
City of Napa	The 1998 Napa General Plan lists a policy to evaluate the feasibility of use of reclaimed wastewater in appropriate locations.	
Napa County	The Napa County General Plan (2008) lists conservation policies that include maintaining and improving slough and tidal mudflats habitat with appropriate measures such as utilizing reclaimed wastewater for salinity control and include promoting development of additional water resources to improve water supply reliability and sustainability in Napa County, including imported water supplies and recycled water projects.	5-15
	As stated in Policy AG/LU-74, the County supports the extension of recycled water use to the Coombsville area to reduce reliance on groundwater in the MST* groundwater basin and exploration of other alternatives. The County shall identify and support ways to utilize recycled water for irrigation and non-potable uses to offset dependency on groundwater and surface waters and ensure adequate wastewater treatment capacity through measures such as using wastewater treatment and reuse facilities where feasible to reclaim, reuse, and deliver treated wastewater for irrigation and possible potable use depending on wastewater treatment standards and encouraging the use of non-potable/recycled water wherever recycled water is available and require the use of recycled water for golf courses where feasible.	5-16

* MST refers to the Miliken-Sarco-Tulocay area in Napa County.

2. Agencies producing recycled water that is available for reuse and not being put to beneficial use shall make that recycled water available to water purveyors for reuse on reasonable terms and conditions. Such terms and conditions may include payment by the water purveyor of a fair and reasonable share of the cost of the recycled water supply and facilities.

3. The State Water Board hereby declares that, pursuant to Water Code sections 13550 *et seq*., it is a waste and unreasonable use of water for water agencies not to use recycled water when recycled water of adequate quality is available and is not being put to beneficial use, subject to the conditions established in sections 13550 *et seq*. The State Water Board shall exercise its authority pursuant to Water Code section 275 to the fullest extent possible to enforce the mandates of this subparagraph.

b. These mandates are contingent on the availability of sufficient capital funding for the construction of recycled water projects from private, local, state, and federal sources and assume that the Regional Water Boards will effectively implement regulatory streamlining in accordance with this Policy.

The water industry and the environmental community have agreed jointly to advocate for $1 billion in state and federal funds over the next five years to fund projects needed to meet the goals and mandates for the use of recycled water established in this Policy.

The NBWRP is consistent with these objectives and this policy, and will contribute towards the meeting of these mandates.

2.4 Project versus Program Elements

Introduction

Comments regarding the project-level and program-levels of analysis used in the Draft EIR/EIS are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Relevant comments on this topic include: **K-1, M-10, M-27,** and **M-29**.

Master Response

NBWRA has made a good faith effort to prepare a document that deals specifically and comprehensively with environmental impacts that could be caused by implementation of the NBWRP. The Phase 1 Implementation Plan is examined at a project-level of detail because these projects have been developed by Member Agencies as part of their individual Master Plan efforts. Therefore, these projects have been developed to an appropriate level of detail. The level of detail necessary for project-level analysis of facilities beyond the Phase 1 Implementation Plan is not available.

The Draft EIR/EIS includes detail sufficient to enable those who did not participate in its preparation to understand and to meaningfully consider the environmental issues raised. The level of analysis included in the Draft EIR/EIS informs public participation and provides Reclamation and the

NBWRA Member Agencies who will rely on it with the information necessary to make decisions that intelligently consider potential environmental consequences. Consistent with NEPA, the degree of specificity provided in the Draft EIR/EIS corresponds appropriately to the level of specificity available.

The Draft EIR/EIS serves as both a project-level and program-level EIR/EIS for elements of the NBWRP, which involves upgrades to recycled water treatment and transmission system encompassing different elements throughout a three-county area. As a *project* EIR/EIS, the Draft EIR/EIS evaluates at a greater level of detail the environmental impacts of those elements for which implementation is presently being considered and for which Reclamation and NBWRA anticipate that no further environmental documentation will be required under CEQA. These include the projects identified in the Phase 1 Implementation Plan, which have been developed by individual Member Agencies as part of their individual Master Plans.

As a *program* EIR/EIS, the analysis evaluates, to the extent feasible, the environmental impacts of certain improvements that will be carried out in pursuit of common objectives (See CEQA Guidelines §15168). Issues such as additional design, funding, and how NBWRA will proceed with the project elements, will need to be resolved before these program-level components can be analyzed at a project-level. This is the reason they are discussed programmatically. These elements will undergo additional environmental review when they are ready for implementation.

By including the program-level elements along with the project-level elements, Reclamation and the NBWRA have provided the public and decision-makers with an opportunity to review and consider the reasonably foreseeable environmental impacts of the NBWRP as a whole, prior to discretionary decisions on any portion of the program. In doing so, NBWRP is fulfilling two important goals of the CEQA and NEPA processes: 1) providing for environmental review and long-range planning disclosure at the earliest feasible time, and 2) avoiding "piecemeal" review that could underestimate the environmental impacts of a project as large, and complex as the NBWRP. Reclamation and the NBWRA are also identifying issues of concern to agencies and other interested persons early in the review process to help scope subsequent environmental documentation on program-level elements. This is consistent with CEQA Guidelines §15168 which allows for lead agency to prepare a program EIR on a series or group of actions that are carried out in this manner.

Reclamation and NBWRA's intent is to present to the public, as early in the planning process as possible, a comprehensive understanding of how the individual system improvements contribute to regional provision of recycled water. This is consistent with both the spirit and letter of CEQA and NEPA, which calls for EIRs to "be prepared as early as feasible in the planning process" to consider the "whole of the action," and to provide a "good faith effort at full disclosure." (See CEQA Guidelines §§15004(b), 15003(h)-(i).)

As noted above, the improvements discussed at a program level (i.e., beyond Phase 1) will not be implemented by Reclamation or NBWRA without further environmental review under NEPA and CEQA once a determination regarding implementation of these improvements is made and the resulting design is known. The Draft EIR/EIS is therefore properly a program EIR from which these

agencies will "tier" their later environmental review of specific activities that may be implemented as part of the NBWRP.

For all of the elements discussed at a programmatic level, the EIR/EIS is not the final environmental document. Additional environmental review by Reclamation, NBWRA Member Agencies, as well as approval by their individual boards, will take place prior to approval of these specific program elements. At the time of this subsequent environmental review, NBWRA or its Member Agencies will undertake a more specific and detailed analysis of impacts, in compliance with both CEQA and NEPA.

2.5 NBWRA Administration

Introduction

Commenters identified several questions regarding the administration of the NBWRA, and how funds would be managed and distributed. Additionally, commenters requested additional information on institutional arrangements, funding sources, and implementation schedule. Comments regarding NBWRA Administration are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Relevant comments on this topic include: **I-4, M-11, M-15, M-16, M-18, M-21, M-23, M-24, M-26, M-44, T-7, V1-2, W1-2, W3-3, W4-4, X2-1, X2-8,** and **X3-1**.

Master Response

NBWRA Administration

It is envisioned that the NBWRA will continue under the current or a revised Memorandum of Understanding (MOU) between the Member Agencies. SCWA will administer the Title XVI contract with Reclamation to provide funding for the NBWRP. Each Member Agency is required under State law to comply with public disclosure and financial reporting requirements, including submittal of audited annual financial records to the Secretary of State. Since the NBWRP will be funded in part by federal funds there are additional audit requirements, which are known as a Single Audit or the Office of Management and Budget A-133 audit. This is a rigorous, organization-wide audit or examination of an entity that expends $500,000 or more of federal assistance received for its projects under Title XVI. Usually performed annually, the Single Audit's objective is to provide assurance to the U.S. federal government as to the management and use of such funds by recipients such as the NBWRA Member Agencies The audit is performed by an independent certified public accounting firm and encompasses both financial and compliance components. The Single Audits must be submitted to the Federal Audit Clearinghouse along with a data collection form, Form SF-SAC.

Recycled Water Agreements and Rates

Recycled water user agreements will be administered by each Member Agency. Consistent with current practices, all agreements would include service interruptions to accommodate seasonal or operational reliability issues; no contractual obligation to serve recycled water with 100 percent reliability would be included. Agreement terms are anticipated to range from 5 to 10 years (depending on Member Agency) in order to provide for increased rate structure over time. Recycled water rates will be identified by each Member Agency based upon market factors within their individual service areas. Rates will be publicly disclosed, and reviewed for approval by Member Agency governing boards.

Recycled water rates for several recycled water purveyors within California are provided in **Table 2-4**, and represent a range of market rates that are currently being charged for the provision of recycled water, ranging from 0$ per acre-foot (AF) to over $1,000 per AF, depending upon recycled water quality, the anticipated end use, and recycled water demand. Recycled water rates charged by each Member Agency would be set during a public process based on review of other existing rates for recycled water and consideration of competitive potable water rates. In general, water rates and financial resources are not covered under CEQA. CEQA Section 15131(a) states "economic or social effects of a project shall not be treated as significant effects to the environment…the focus of analysis shall be on the physical changes." The setting of recycled water rates will not have a demonstrable physical effect on the environment. The financial aspects for the project addressed under NEPA are discussed as impacts to the economy in terms of employment and salaries, in Section 3.16, Socioeconomics, of the Draft EIR/EIS.

TABLE 2-4
SUMMARY OF RECYCLED WATER RATES WITHIN CALIFORNIA

Agency	Rates ($/AF)			Notes
	Agricultural	Irrigation	Unspecified	
City of Milpitas	$150	$1,475		
City of Redwood City		$1050		75% of potable irrigation rate
City of San Diego			$350	
City of San Jose - Municipal	$345	$505		
City of Santa Clara		$650		
City of Santa Rosa			$1,160	
Delta Diablo Sanitation District		$255		
Dublin San Ramon Services District			$1,200	
Eastern Municipal Water District			$264	
East Bay Municipal Utility District			$700-1060	80% of potable water rate
Marin Municipal Water District			$790-3070	
San Jose Water Company	$415	$565		
Santa Clara Valley Water District	$42		$275	
West Basin Municipal Water District			$398-438	

SOURCE: CDM, Recycled Water Rates, August 2009.

Implementation Schedule

As noted in Chapter 2, Project Description, of the Draft EIR/EIS, construction of the Phase 1 Implementation Plan is anticipated to occur over the course of the next 6 years, or through 2015 with design phase and construction phases of individual projects under the implementation control of the individual Member Agencies. A summary of the most recent implementation schedule is provided in **Table 2-5**.

TABLE 2-5
PRELIMINARY PHASE 1 IMPLEMENTATION PLAN SCHEDULE

		Design Phase			Construction Phase		
Agency	**Project**	**Start**	**Duration (Months)**	**End**	**Start**	**Duration (Months)**	**End**
LGVSD	Hamilton Field	04/01/11	12	03/31/12	09/01/12	18	02/28/14
Novato SD	NMWD North	01/01/10	15	03/31/11	09/01/11	18	02/28/13
	NMWD Central	04/01/12	12	03/31/13	09/01/13	18	02/28/15
SVCSD	SVRWP 1A	07/01/09	16	10/31/10	04/01/11	24	03/31/13
	Salt Ponds	05/01/09	24	04/30/11	10/01/11	24	09/30/13
Napa SD	MST	10/01/09	12	09/30/10	03/01/11	16	06/30/12

2.6 Recycled Water Quality

Introduction

Several commenters expressed concern regarding recycled water quality and protection of public health and the environment. Comments included concerns regarding pathogen exposure, microconstituents, increased resistance by pathogens to treatment processes, the phenomenon of microbiostasis, where the growth of microorganisms may be inhibited, but the microorganism is not killed, and the distribution of recycled water on a regional basis.

This Master Response has been drafted in response to comments that are associated with the scope of the Draft EIR/EIS related to water quality and concerns that some issues were not discussed in the Draft EIR/EIS. Comments regarding the level of analysis provided in the Draft EIR/EIS are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Relevant comments on this topic include: **H-I, I-2, i-5, K-2, K-5, K-7, K-8, K-9, K-10, K-12, K-13, K-14, K-21, K-22, K-23, K-24, K-25, L-1, L-2, L-3, L-4, L-5, L-6, L-7, L-8, L-9, L-11, L-12, L-13, L-14, L-15, L-16, L-17, L-18, L-19, L-21, L-22, T-8, V3-1, W1-1, W2-1, W1-4, X3-2,** and **Z-3**.

Master Response

Scope of the Document and Thresholds

According to Section 15003(b) of the CEQA Guidelines, an EIR serves not only to protect the environment but also to protect public health. The Draft EIR/EIS provides the impact analysis based on the regulatory standards that are established by the applicable regulatory agencies to protect the environment and public health. According to Section 15151 of the CEQA Guidelines, an evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. CEQA Guidelines Section 15145 states, if after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. Similarly, 40 CFR 1502.22 provides that reasonably foreseeable adverse impacts must be within the rule of reason and based upon credible scientific evidence, not just conjecture. The Draft EIR/EIS is based on best available information and the regulatory standards that form the significance threshold for the impact analyses. Please also refer to Comment Letter E received from the Sonoma County Department of Health Services. The Department has reviewed the Draft EIR/EIS and "…feels it adequately covers the health concerns, and supports the North San Pablo Restoration and Reuse Project that is currently being planned by the North Bay Water Reuse Authority."

Section 3.4, Water Quality, of the Draft EIR/EIS describes the water quality impacts of the project based on the impact significance thresholds under Appendix G of the CEQA Guidelines. The project would result in a significant water quality impact if it exceeds the water quality thresholds (i.e., if it exceeds the regulatory standards and/or it substantially degrades the water quality). The impact analysis is based on the existing water quality conditions discussed in Section 3.4.1 and the regulatory standards that are protective of the environment and human health and would apply to the project that are discussed in Section 3.4.1 of the Draft EIR/EIS.

Current Applicable Water Quality Standards and What Applies to the Draft EIR/EIS

Wastewater at the LGVSD, Novato SD, SVCSD, and Napa SD WWTPs undergo primary, secondary, and at some locations tertiary treatment prior to reuse or discharge in the receiving waterways. The discharges occur in compliance with the Clean Water Act and Porter-Cologne Act (discussed in detail below). Under the proposed project, the secondary-treated wastewater from the WWTPs would undergo tertiary treatment (i.e., additional filtration and disinfection) to generate recycled water in compliance with the Title 22 recycled water requirements and used for various purposes described in the Draft EIR/EIS.

Tertiary treatment is typically the advanced treatment of wastewater that occurs beyond the secondary or biological treatment phase. According to §60301.230 of Title 22, "disinfected tertiary recycled water" means filtered and subsequently disinfected wastewater that meets specific criteria on the contact time for chlorine disinfection process and concentration of total coliform as noted in the

section. As shown in Table 3.4-6 on page 3.4-15 of the Draft EIR/EIS, recycled water treated at different levels is regulated in terms of its allowable end uses.

As described on page 3.4-11 of the Draft EIR/EIS, the Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the U.S., and authorizes the U.S. Environmental Protection Agency (USEPA) to implement pollution control programs such as setting wastewater standards for industrial and municipal dischargers. The CWA establishes requirements to set water quality standards for all known contaminants in surface waters. This federal law and its accompanying regulations are applicable to WWTP discharges as discussed above. Section 301 of the CWA requires application of the best practicable control technology to comply with the effluent limitations established. The California *State Implementation Policy* (or the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)* establishes implementation provisions for priority pollutant criteria promulgated by the USEPA through the *National Toxics Rule* (NTR) and *California Toxics Rule* (CTR) and for priority pollutant objectives established by the Regional Water Quality Control Board (RWQCB) in its Basin Plan (described in Section 3.4, Water Quality). According to Section 307 of the CWA, the toxic pollutants or combination of pollutants are subject to effluent limitations, which are listed in the National Pollutant Discharge Elimination System (NPDES) permits for the WWTPs. The NBWRA Member Agencies discharge wastewater from the WWTPs in compliance with their respective NPDES permits to the receiving waters noted in the permit.

The *San Francisco Bay Basin Plan* specifies numeric water quality objectives (WQOs) for ten priority toxic pollutants and narrative WQOs for toxicity and bioaccumulation in order to protect beneficial uses. The ten priority pollutants are arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, zinc, and cyanide. The narrative toxicity objective states in part that "all waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce detrimental responses in aquatic organisms". The bioaccumulation objective states in part that "controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organisms, wildlife, and human health will be considered." Effluent limitations and provisions contained in the NPDES permits are designed to implement these objectives, based on available information.

The CTR specifies numeric aquatic life criteria for 23 priority toxic pollutants and numeric human health criteria for 57 priority toxic pollutants. The NTR establishes numeric aquatic life criteria for selenium, numeric aquatic life and human health criteria for cyanide, and numeric human health criteria for 34 toxic organic pollutants for waters of San Francisco Bay, which include the local receiving waters noted in the NPDES permits[3]. The WQOs and effluent limitations are also developed based on the salinity of the receiving waters. Based on the data analysis for each WWTP, a Reasonable Potential Analysis (RPA) is conducted to determine if priority pollutants cause or contribute to an excursion of the WQOs. If it is determined that there is reasonable potential, Water Quality Based Effluent Limits are included in the WWTP's NPDES permit. The WWTPs

[3] San Francisco Bay RWQCB, Order R2-2002-0111, NPDES Permit No. CA0037575, Amendment of Waste Discharge Requirements, Order No. 00-059 for Napa SD, 2000.

are required to report on the implementation of source control, pollution prevention, public education programs, as well as operational controls to help ensure that their discharge to the receiving water is in compliance with the effluent limitation specified in the NPDES permit. It should be noted that the WWTP NPDES permits separately regulate discharges to receiving waters so that the discharges do not impact the beneficial uses of the receiving waters. In addition, the WQOs that form the basis of the RPA also are intended to protect aquatic life and public health.

As described in Section 3.4, Water Quality, separate state laws and requirements by California Department of Public Health (CDPH), SWRCB, and San Francisco Bay RWQCB govern the delivery and application of recycled water in North San Pablo Bay. Currently, Title 22 requirements would apply to the recycled water quality for the proposed project and are discussed in Section 3.4, Water Quality, of the Draft EIR/EIS. The proposed action involves the recovery and reuse of treated effluent in lieu of its discharge to tributaries of North San Pablo Bay. The proposed action would not affect or alter the treatment of influent into the WWTPs, or any of the existing treatment processes, other than the addition or expansion of tertiary filtration at the end of existing treatment trains. As such, there would be no change from existing conditions, and analysis of concerns regarding the adequacy of existing treatment processes, or the existing regulatory framework, to protect human health and the environment is not required.

The impact analysis in the Draft EIR/EIS has been developed based on best available information and existing regulatory standards that form the significance thresholds for water quality impacts. In the event an impact is found to be potentially significant, the Draft EIR/EIS describes mitigation measures (summarized in Chapter 11 of the Draft EIR/EIS) that would be implemented to minimize the impacts to less-than-significant levels. Protecting human and environmental health is one of the main intentions of regulatory standards and of the compliance schedules through testing and controlling of the constituents of concern in the treated discharges. The regulatory standards and requirements such as the effluent limitations in an NPDES permit and Title 22 are established by regulatory agencies authorized under specific laws (e.g., the CWA authorizes USEPA to establish water quality standards) noted above and in Section 3.4, Water Quality of the Draft EIR/EIS.

Microconstituents

Microconstituents are defined by the Water Environment Federation as natural and manmade substances, including elements and inorganic and organic chemicals, detected within water and the environment, for which a prudent course of action is suggested for the continued assessment of the potential effect on human health and the environment. Most microconstituents are currently unregulated compounds that are being detected in the environment originating from household products including flame retardants, cleaning products, plastics, Bisphenol A and phthalates in food packaging, hormones, pharmaceuticals and personal care products, and steroids. Other sources include industrial chemicals and compounds such as nonylphenols, pesticides, air contaminants and contributions from animal and veterinary sources.

The natural environment contains hormones excreted by both human and animals and compounds produced by plants. Phytoestrogens produced by plants enable modern biotechnology to modify plants to create therapeutic antibodies used in the treatment of arthritis. Biopharmaceuticals

are one of the fastest growing classes of therapeutics with over 100 products in clinical trials. Based on a 1998 USEPA Endocrine Disruptor Screening and Testing Advisory Committee Final Report, over 87,000 compounds were identified for initial testing. In June 2007, USEPA published a Draft List of Chemicals for Initial Tier 1 Screening under the Endocrine Disruptor Screening Program (EDSP) (72 FR 33486). The U.S. Geological Survey has sampled and tested for these compounds in surface and groundwater. In the 2002 National Reconnaissance Study, 45 of 47 sites tested positive for at least one endocrine disrupting compound. A 2002 sampling upstream and downstream from ten WWTPs identified 78 of 110 compounds included in the study. In the 2004 (Surface) Source Characterization Study, results were similar to the groundwater study indicating widespread distribution of microconstituents at the analytical levels now available (USGS, 2008)[4].

Microconstituents have been observed in surface and groundwater sources, municipal drinking water supplies and in treated wastewater streams. The degree to which the presence of these compounds in treated wastewater is contributing to their accumulation in surface water and groundwater resources is unknown. The USEPA is currently completing a sampling study characterizing the occurrence of these microconstituents in the effluent of nine publicly owned WWTPs to expand understanding of the potential contribution to the environment of microconstituents in treated wastewater effluent (USEPA, 2008a). The USEPA has developed draft methods to measure select microconstituents in wastewater, but the methods have not been finalized and standardization has not been completed by state-certified water quality laboratories. The microconstituents being detected in the environment and under study by the USEPA are being measured at levels 100 to 1000 times lower than the levels set for priority pollutants in drinking water.

The human toxicological significance of microconstituents in drinking water or in recycled water for landscaping is an ongoing area of research. Regulatory agencies have not yet developed standards due to insufficient availability of data to evaluate potential effects of exposure to humans. Potential health effects for humans from exposure to microconstituents at concentrations detected in reclaimed water is not scientifically known but is suspected to pose extremely low risk to unassignable risk.

In testimony to the U.S. Senate Subcommittee on Transportation, Safety, Infrastructure Security and Water Quality on April 15, 2008, Dr. Shane Snyder raised the question that was being asked by several scientists by pointing out that the highest microconstituents detected to date in drinking water in the U.S. was at a concentration approximately 5,000,000 times lower that the therapeutic dose. When applying the most conservative safety factors and the most susceptible population, the concentrations of microconstituents found in drinking water were several orders of magnitude lower than levels that might pose a public health hazard. The concentrations found would allow consumption of 50,000 eight-ounce glasses of water per day without any health effects. While concentrations found in wastewater might be higher for some microconstituents than those found in potable water, the same relative analogy holds.

[4] http://www.toxics.usgs.gov/regional/emc.html

The potential impact on human health relating to microconstituents that may be present in recycled water used for irrigation is illustrated by review of comparative risk. For example, while USEPA estimates the concentration of N-nitroso dimethylamine (NDMA) in drinking water should be 0.7 nanograms per liter for a one in one-million cancer risk, common food items contain much higher amounts of NDMA. NDMA is typically found in milk at 90 to 100 nanograms[5] per liter and in beer at up to 9,200 nanograms per liter. Similarly, perchlorate can be found in some bottled waters at 1 part per billion (1,000 nanograms per liter) and two liters of the bottled water would provide the same perchlorate exposure as consumption of 0.01 serving of broccoli. While potential human health effects continue to be monitored, there is currently no scientific basis to establish risk factors or set allowable discharge concentrations for microconstituents. Similarly, the availability of research data on the potential uptake of microconstituents by crops irrigated with recycled water, including the fate of the contaminants, does not support conclusive determination of the significance of any potential effect generated at this time.

As provided for in 40 CFR 1502.22, information regarding potential health effects for humans from exposure to microconstituents at concentrations detected in reclaimed water is not scientifically known, and is therefore incomplete or not available. As stated in Draft EIR/EIS Section 3.4, Water Quality, potential health effects for humans from exposure to microconstituents at concentrations detected in reclaimed water is suspected to pose extremely low risk to unassignable risk. As noted on page 3.4-17 of Section 3.4, Water Quality, SWRCB, in consultation with CDPH, convened a "blue-ribbon" advisory panel to guide future actions relating to constituents of emerging concern. NBWRA remains committed to the protection of public health, and will respond accordingly to findings or regulatory standards that are implemented as a result of the SWRCB efforts. Due to the lack of definitive data or thresholds regarding this issue, as reflected in the commenter's attachment and this response, further analysis of this issue is speculative, and is not required under CEQA or NEPA (Section 15064(f)(5); 40 CFR 1502.22).

Technical Processes including Antibiotic Resistance, Microbiostasis, and other Chemical Reactions

The phenomenon of antibiotic resistance noted in the comments by the OWL Foundation in Comment Letter L is a phenomenon that occurs due to repeated exposure of a microorganism to a chemical or a drug intended to destroy the microorganism. The repeated exposure sometimes leads to mutation of the organism (including altering of the genes) that could result in developing resistance to the chemical originally. Antibiotic resistance therefore can occur through multiple routes and is connected primarily with the source (i.e., the need and repeated use of drugs or chemicals by humans and eventually excretion of the chemical); the chemicals are absorbed by the body and/or excreted into wastewater. As noted in the press release (WHO/June 12, 2000) included in the letter from OWL, antimicrobial resistance is a naturally occurring phenomenon amplified due to human misuse and neglect of antimicrobial drugs.

5 1 nanogram = 10^{-9} gram, or 0.000000001 gram

As described on page 3.4-33 in Section 3.4, Water Quality, of Draft EIR/EIS, although there are currently no testing methods or monitoring requirements developed for microconstituents, many sanitation districts have started public outreach programs aimed at reducing the amount of pharmaceuticals that are sent to the wastewater system. For example, the California Association of Sanitation Agencies began a campaign in the fall of 2008 to coordinate special areas state-wide where the public could drop-off their old or excess medications. The campaign educated the public about the benefits of utilizing a drop-off location instead of flushing them down the toilet, which had been an accepted practice. The NBWRA Member Agencies participate in and coordinate these programs as part of their regular public outreach programs for pollution prevention. For example, LGVSD participates in drug take-back programs to ensure proper disposal of these substances. Novato SD operates a comprehensive pollution prevention program including source control efforts for copper and mercury. Napa SD participates in public outreach for pollution prevention to help residents avoid accidental ingestion and improper disposal of pharmaceutical waste. Napa SD partnered with City of Napa in the "No Drugs Down the Drain" campaign in 2008. In 2007, SCWA, SVCSD, and the City of Santa Rosa independently started pilot programs to evaluate the feasibility of a Safe Medicine Take back program. SCWA, SVCSD, and the City of Santa Rosa have partnered with other entities part of the Russian River Watershed Association, an association of nine cities, counties, and special districts that provide services in the Russian River watershed, to coordinate a more regional container pickup program and funding to offer the free service to citizens.[6]

The purpose of the proposed NBWRP as described on page 2-2 of the Draft EIR/EIS is to provide recycled water for agricultural, urban, and environmental uses thereby reducing reliance on local and imported surface and groundwater and reducing the amount of treated effluent releases to North San Pablo Bay. The project would involve upgrade to tertiary treatment at some WWTPs and use of the wastewater that is currently discharged to the environment. The project does not involve changing the current primary and secondary treatment processes at the WWTPs.

Studies are under way on monitoring antibiotic resistance such as the *California Antibiogram Project* by CDPH, that tracks and monitors resistance trends of bacteria of public health importance throughout California, raises awareness of resistance problems, and identifies opportunities to reduce inappropriate antibiotic usage.[7] According to the response to comments on the State Recycled Water Policy described in Section 3.4, Water Quality, of the Draft EIR/EIS, concerning addressing antibiotic-resistance genes and pathogens, CDPH reported that antibiotic resistant genes have been found in drinking water and recycled wastewater; their impact on public health is unknown, and that this potential impact may warrant further study. CDPH is considering taking actions to evaluate

6 Las Gallinas Sanitary District (LGVSD), "No Drugs Down the Drain", available online http://www.lgvsd.org/no-drugs-down-the-drain.html, last updated August 2009, Accessed August 18, 2009.
Novato SD, Letter to the RWQCB on 2008 Pollution Prevention Program Annual Report, February 2009.
Napa County, Department of Environmental Management "Medical Waste Disposal", 2008, available online http://www.co.napa.ca.us/GOV/Departments/DeptPage.asp?DID=40500&LID=970, accessed August 19, 2009.
Keach, Susan, SCWA, Personal Communication with Katie Blank, ESA, September 17, 2009.
Russian River Watershed Association, Safe Drug disposal Program, available online: http://www.rrwatershed.org/safemeds/index.html, accessed September 17, 2009.

7 CDPH, California Antibiogram Project, available online at http://ww2.cdph.ca.gov/programs/mdl/Pages/CaliforniaAntibiogramProject.aspx, 2007.

whether antibiotic resistant genes in recycled water present a risk to public health.[8] With advances in technology and detection techniques, the detection of antibiotic-resistant genes is anticipated to continue and will need further investigation (e.g., relevance to human pathogens) and tracking of regulations that govern the detection and control of toxic pollutants and pathogens. The project is required to comply with the regulatory standards that would govern wastewater discharge associated with the project and the recycled water use. Title 22 regulates the recycled water quality based on its end use as shown in Table 3.4-2 in Chapter 3.4, Water Quality, of the Draft EIR/EIS. The California Environmental Health Tracking Program within the CDPH is part of a larger initiative to establish Environmental Public Health Tracking systems at the national and state levels. The research topics include endocrine disruptors and monitoring of environmental and public health hazards and exposure routes.[9] NBWRA and its Member Agencies will support ongoing research on microconstituents and emerging contaminants that may be present in recycled water and will comply with any updated regulatory requirements that may apply to the project.

Further studies on the presence of antibiotic-resistant genes or multi-resistant drug pathogens in the treated wastewater and the levels that could pose human and environmental health risk will need to be conducted to corroborate the need for further treatment and for the discussion of the risk. Due to the lack of definitive data or thresholds regarding this issue, as reflected in the comments in Comment Letter L and associated attachment and this response, further analysis of this issue is speculative, and is not required under CEQA or NEPA (Section 15064(f)(5); 40 CFR 1502.22).

2.7 Adequacy of Analysis

Introduction

Several commenters requested that the Draft EIR/EIS be recirculated to correct inadequacies in the following areas: project versus program; range of alternatives; degree of specificity; and technical adequacy.

Comments regarding the level of analysis provided in the Draft EIR/EIS are addressed here and in the responses to individual comments presented in Chapter 3, Response to Comments, of this document. Relevant comments on this topic include: **K-1, M-3, M-40, M-43, M-45, M-47, M-50, M-53, M-55, M-64, M-77,** and **M-78**.

8 SWRCB, Draft Response to Comments on Proposed Recycled Water Policy, available online at http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/draft_responses2comments.pdf, 2008.

9 California Environmental Health Tracking Program, Environmental Health Investigations Branch, available online at http://www.ehib.org/project.jsp?project_key=EHSS01, http://www.ehib.org/topic.jsp?topic_key=30, 2009.

Master Response

The Draft EIR/EIS has been prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes into account environmental consequences. As stated in CEQA Guidelines Section 15151, *"an evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR/EIS is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR/EIS inadequate, but the EIREIS should summarize the main points of disagreement among experts. The courts have looked not for perfection, but for adequacy, completeness and a good faith effort at full disclosure."*

CEQA Guidelines Section 15151 imposes a standard of adequacy that is "reasonably feasible" and sufficient to allow decision-makers to make a decision that takes account of environmental consequences. Data gathering need not be "exhaustive." In cases where the Draft EIR/EIS is a precursor to project-level CEQA analysis, only reasonably expected project impacts and widely applicable mitigation measures are discussed. For all of the elements discussed at a programmatic level, the EIR/EIS is not the final environmental document. Additional environmental review by Reclamation and the NBWRA Member Agencies, as well as approval by their individual boards, will take place prior to approval of any additional program elements.

Draft EIR/EIS Recirculation

Under CEQA Guidelines §15088.5, recirculation of a Draft EIR is required when significant new information is added to the Draft EIR following the public review period, but before certification. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect that the project proponents have declined to implement. "Significant new information" requiring recirculation would include the following:

- A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
- A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
- A feasible project alternative or mitigation measure considerably different from those previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.

None of the above criteria established by 15088.5 are applicable to the Draft EIR/EIS and therefore, recirculation of the EIR/EIS is not warranted. The Master Responses provided in this section provide clarification regarding a number of technical items, and do not change the analysis or conclusions provided in the Draft EIR/EIS. As demonstrated by these Master Responses:

- The Proposed Action contemplates recovering highly treated effluent that is currently discharged to tributaries of North San Pablo Bay making that resource available to offset

existing urban and agricultural end uses that are using potable surface water and groundwater supplies for irrigation. This can be implemented under current influent flows to WWTPs within the NBWRA service area, and would not affect the amount, rate, timing, or use of potable water supplies within the NBWRA service area.

- Implementation of Alternative 1 would use approximately 36 percent of the treated effluent that is currently discharged. As such, ample treated effluent exists to support the proposed action, even in the event of future influent reductions to WWTPs associated with conservation, water supply availability or reliability, or climate change.

- The proposed action is consistent with water and conservation programs currently being carried out the NBWRA Member Agencies, and these programs, which are currently being implemented, do not represent an alternative to the Proposed Action.

- There are no contractual requirements that would require provision of recycled water to the detriment or adverse effect of potable supplies, and the proposed action is anticipated to provide beneficial offset to surface water and groundwater supplies, in addition to increasing local water reliability.

- The proposed action is consistent with state and local objectives regarding the implementation of recycled water, and is also consistent with the implementation of conservation measures within the NBWRA service area.

- With the exception of land uses within the Miliken-Sarco-Tulocay (MST) Area10 of Napa County, all recycled water is proposed to be used for existing irrigation, and would not affect land uses within the service areas.

- Recycled water treatment, distribution and use would comply with Title 22 requirements to be protective of human health and the environment. NBWRA Member Agencies will continue to respond to regulatory requirements regarding the treatment, distribution and use of recycled water.

[10] MST area in Napa County would receive a portion of the recycled water generated by NBWRP. This element of the project is a key component of Tables 2-2, 2-10, 2-15, and 2-20 in Chapter 2, Project Description, of the Draft EIR/EIS. This information is comprehensively included in Table 5-2 in Chapter 5, Growth, of the Draft EIR/EIS which demonstrates that the amount of recycled water that would be provided under the NBWRP would serve existing land use types and irrigation demands, with the exception of the MST area. The MST area relies primarily on groundwater, where Napa SD assumes that a portion of existing residential/ landscape irrigation would convert to vineyard.