EXECUTIVE SUMMARY

ES.1 Introduction

The North Bay Water Reuse Authority's (NBWRA) Member Agencies and the U.S. Department of Interior, Bureau of Reclamation (Reclamation) have prepared this Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) for the North San Pablo Bay Restoration and Reuse Project. 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, and passage of Senate Bill 1475. For the purposes of this EIR/EIS, this project or action will be referred to as the **North Bay Water Recycling Program (NBWRP)**.

This EIR/EIS has been 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. 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 recycled water in the North Bay region. Implementation of NBWRP would include upgrades of treatment processes and construction of pipelines, pump stations, and storage 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.

This EIR/EIS considers a No Project, No Action and three Action Alternatives. The Action Alternatives consist of treatment, transmission, and storage facilities necessary to meet a range of recycled water demand scenarios within the NBWRA service area through 2020. Each Action Alternative considers varying levels of recycled water use, and corresponding levels of regional facility integration. The Alternatives considered are as follows:

- No Project Alternative, assumes that the proposed project is not implemented, and reviews two scenarios: 1) consideration of existing conditions without the project, a "no build scenario"; and 2) consideration of "reasonably foreseeable" future conditions without the project. This second scenario is identical to the No Action Alternative, identified below.
- No Action Alternative, provides a "future without the project" scenario as a baseline to compare the impacts of the proposed Action Alternatives.
- Alternative 1, Basic System, includes use of recycled water near each of the individual wastewater treatment plants (WWTP);

- Alternative 2, Partially Connected System, adds additional pipelines, pump stations and storage to partially connect the existing WWTPs; and
- Alternative 3, Fully Connected System, provides a fully integrated recycled water distribution system connecting all four Member Agency WWTPs.

The Member Agencies have collectively prioritized the projects within their individual service areas to establish an Implementation Plan identifying the order in which projects would be constructed. Phase 1 of the Implementation Plan includes projects that are defined to a level of detail that allows for project-level environmental review. The Phase 1 Implementation Plan represents the set of projects, common to all of the NBWRP alternatives, and would likely be the first phase implemented under any alternative.

ES.1.1 Purpose and Need of the Proposed Action

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public. The Bureau of Reclamation's water reclamation and reuse program is authorized by the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI of Public Law 102-575). Also known as Title XVI, the act directs the Secretary of the Interior to undertake a program to investigate and identify opportunities for water reclamation and reuse of municipal, industrial, domestic and agricultural wastewater, and naturally impaired ground and surface waters, and for design and construction of demonstration and permanent facilities to reclaim and reuse wastewater.

The NBWRA is a cooperative program in the 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 releases to San Pablo Bay.

ES.1.2 Project Objectives

In addition to the purpose and need for the proposed Federal Action, the following project objectives have been developed by the NBWRA for the NBWRP. The project is proposed to promote the expanded beneficial use of recycled water in the North Bay region to achieve the following objectives:

- 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.

All of the Member Agencies already have existing recycled water programs. The NBWRA anticipates that provision of recycled water from the Proposed Action will be made available for use to new and existing water customers on reasonable terms and conditions. As appropriate, fee structures for recycled water have been or will be developed by Member Agencies within the context of each agency's rules, regulations and financial planning.

ES.1.3 Proposed Federal Action

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. The proposed Federal Action is the provision of federal funds by the Bureau of Reclamation under the Title XVI Program 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.

Reclamation intends to use this EIR/EIS to consider provision of federal funding under Title XVI for implementation of NBWRP. As lead Federal agency, Reclamation would use this EIR/EIS to support a Record of Decision, which would document Reclamation's decision to choose one of the alternatives including the proposed action and no action.

The NBWRA Member Agencies and cooperating agencies may use this EIR/EIS to approve the NBWRP, or components of the NBWRP, make Findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts. SCWA will act as CEQA Lead Agency. Individual NBWRA Member Agencies and cooperating agencies are Responsible Agencies as provided for under CEQA §15096 and may use this EIR/EIS for the approving the proposed components (i.e., Phase 1) in their respective service areas.

ES.2 Project Background

Five participating agencies organized themselves under a Memorandum of Understanding (MOU) in August 2005 as the NBWRA. Additional agencies supporting the NBWRA through contribution of funds and staff time include North Marin Water District (NMWD) and Napa County. The following Member Agencies form the NBWRA and would participate in the implementation of NBWRP:

- LGVSD LGVSD provides wastewater treatment and disposal service to approximately 30,000 people within the area of Marinwood, Lucas Valley, Terra Linda, Santa Venetia, Los Ranchitos, and Smith Ranch Road (LGVSD, 2005).
- Novato SD

 Novato SD provides wastewater treatment and disposal services to
 approximately 60,000 residents within the city of Novato, an area of 28 square miles, and
 surrounding areas (Novato SD, 2006).

- SVCSD The SVCSD WWTP began operations in 1954 and provides service to about 34,000 people in the city of Sonoma, within a 7-square-mile area (SVCSD, 2006).
- Napa SD The Napa SD's Soscol Water Recycling Facility (SCRF) treats wastewater from the city of Napa and surrounding unincorporated communities, an area of about 23 square miles, and serves a population of approximately 80,000 (Napa SD, 2007).
- SCWA SCWA, which began the Title XVI process for investigating a recycled water distribution system under a Cooperative Agreement with the Bureau of Reclamation, is a drinking water provider to over 600,000 residents and continues to be an actively participating partner.

ES.2.1 Supporting Agencies

- NMWD NMWD has partnered with Novato SD to implement recycled water projects in their collective service areas, including a 0.5 million gallons per day-tertiary treatment facility located at the Novato SD reclamation facility. NMWD is contributing funds and staff time to NBWRA.
- Napa County Napa County is cooperating with Napa SD in the development of recycled water options for the Milliken-Sarco-Tulucay (MST) Creeks areas, and is contributing funds and staff time to NBWRA.

ES.2.2 Feasibility Study Preparation

The NBWRA members undertook cooperative planning efforts over a 5-year period, including 19 bi-monthly technical workshops as well as monthly institutional workshops with extensive outreach to potential NBWRP stakeholders to define shared objectives and develop feasible alternatives toward definition of region-wide water reclamation and reuse project that would enable them to meet those objectives. Under the MOU, Camp Dresser McKee, Inc. (CDM) prepared a Phase 1 Engineering Feasibility Report (2005) and a Phase 2 Engineering Feasibility Study Report (2006) in coordination with NBWRA. The Phase 3 Engineering and Economic/Financial Analysis Report (or Phase 3 Report) completed in June 2008 updated the Phase 2 Feasibility Report to be consistent with project planning conducted by the individual Member Agencies, included an economic and financial analysis, and discussed potential environmental effects.

ES.2.3 Water Supply Setting and Future Conditions

The action area encompasses approximately 318 square miles of land within Marin, Sonoma, and Napa Counties. This region extends roughly 10 to 15 miles inland of the tidal San Pablo Bay, with a total population of over 270,000 in the major urban centers of San Rafael, Novato, Sonoma, and Napa. The region supports agriculture, including some of the premier wine-grape growing land in North America, as well as light industry, commercial and institutional uses, parklands, and residential areas.

Local and regional planning projections indicate that approximately 10 to -12 percent of growth would occur in most of the existing urban centers in the action area by the year 2020 (as compared to 2005 populations). Existing policies in principal cities will tend to favor concentrated rather than dispersed growth.

Agricultural land use is expected to remain relatively constant over a 20-year planning period. The local governing policies in the Marin, Sonoma, and Napa Counties in the action area protect agricultural lands. Given the high value of wine-grape culture, it is unlikely that there would be much change in the 75 percent of agricultural acreage committed to vineyards.

Total urban water use – including both residential and non-residential uses – in the project area is projected to increase from the 2005 level of 63,700 acre-feet per year (AFY) to about 72,800 AFY in 2020. Total water use for irrigation of agricultural lands is estimated at approximately 23,300 AFY at present. The sources that serve these water demands include surface water supplies (both within and outside of the action area), groundwater, and recycled water. SCWA supplies much of the Sonoma and Marin County area with *surface water* conveyed from the Russian River and its tributaries in central Sonoma County, adjacent to the project area watershed. SCWA's reliable supplies to customers in the action area consist of 87,970 AF of water during a dry year.

Groundwater serves agricultural users (and some residential users) as a primary source of supply, particularly in the MST area of Napa County. Groundwater also serves as a secondary source of supply for some urban users as well, including the City of Sonoma, Valley of the Moon Water District, and SCWA contractors. Although the total quantity of groundwater in the action area is unknown, groundwater pumping has been measured. The vast increase (i.e., 80 percent) in pumping of groundwater in the past 30 years to support agricultural irrigation has resulted locally in groundwater outflow exceeding inflow, some impacts on groundwater quality, and a lowering of groundwater levels in some parts of the action area that are dependent on groundwater supplies.

Existing treatment and distribution infrastructure in the action area currently allows for about 7,300 AFY of *recycled water* for irrigation and wetlands restoration purposes, which could increase to 11,250 AFY by 2020.

The average year and wet season conditions appear to yield sufficient surface water and groundwater to meet total annual demand in the action area. However, the seasonal availability of some water sources (against the strong seasonality of agricultural demand), the potential for overdraft of groundwater with impacts on quality and quantity, and the growth pressures on the area's urban centers suggest a need for an effective, coordinated, and regional approach to the increased use of recycled water.

ES.3 Description of Project Alternatives

ES.3.1 Project Location

The action area, illustrated in **Figure ES-1**, extends approximately 10 to 15 miles inland from the San Pablo Bay within Marin, Sonoma, and Napa Counties. The action area extends as far south as Point San Pedro in Marin County, and as far north as Milliken Canyon located 28 miles to the northeast in eastern Napa County, and encompasses about 318 square miles of land. Urban centers in the action area are San Rafael (county seat) and Novato in Marin County, Sonoma in Sonoma County, and Napa (county seat) in Napa County.

In order to form candidate recycled water projects, land use information and Member Agency recycled water planning documents were reviewed. Water and wastewater agencies in the action area have developed several existing recycled water projects and identified recycled water projects for future implementation. Additional potential recycled water project areas were identified by grouping land uses either in major agricultural or landscaping areas or in areas between existing and proposed projects. These potential recycled water use areas are summarized in **Table ES-1** and are described below.

TABLE ES-1 RECYCLED WATER SERVICE AREAS

LGVSD

Peacock Gap Golf Course

Novato SD

- North Marin Water District Urban Reuse Project
- Sears Point

SVCSD

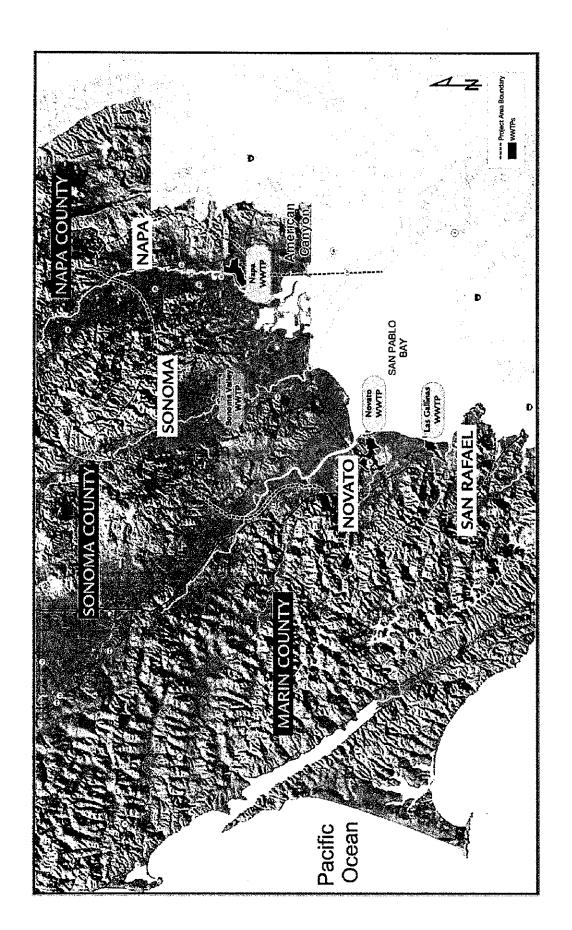
- Sonoma Valley Recycled Water Project
- Napa Salt Marsh Restoration
- Southern Sonoma Valley
- Central Sonoma Valley

Napa SD

- Milliken-Sarco-Tulocay Creeks Area
- Carneros East

ES.3.2 Overview of Alternatives

This EIR/EIS considers a No Project Alternative, No Action Alternative, and three Action Alternatives. The Action Alternatives consist of treatment, transmission, and storage facilities necessary to meet a range of recycled water demand scenarios within the NBWRA service area through 2020. Each Action Alternative considers varying levels of recycled water use, and



NBWRA North Bay Water Recycling Program 206088.01
 Figure ES-1
 Action Area

corresponding levels of regional facility integration. **Table ES-2** summarizes the key distinctions among the action alternatives. The project alternatives could be constructed and in operation by 2020 if required approvals, authorizations, appropriations, and permits are obtained.

TABLE ES-2
ALTERNATIVES SUMMARY –
RECYCLED WATER SUPPLY, DEMAND, AND RESULTING DISCHARGE (AFY)

Alternatives	WWTP Service Area	WWTP Inflow (2020)	Existing Recycled Water Demand	New Recycled Water Demand (Beneficial Reuse)	Total Recycled Water Demand	Discharge to San Pablo Bay*
Alternative 1: Basic System	LGVSD and Novato WWTPs	12,347	1,172	744	1,916	8,643
	SVCSD and Napa WWTPs	15,308	3,772	5,911	9,683	5,043
	Total	27,655	4,944	6,655	11,599	13,686
Alternative 2; Partially Connected System	LGVSD and Novato WWTPs	12,347	1,172	2,477	3,619	8,032
	SVCSD and Napa WWTPs	15,308	3,772	8,802	12,574	2,657
	Total	27,655	4,944	11,279	16,193	10,689
Alternative 3: Fully Connected System	LGVSD, Novato, SVCSD, and Napa WWTPs	27,655	4,944	12,761	17,705	9,543
	Total	27,655	4,944	12,761	17,705	9,543

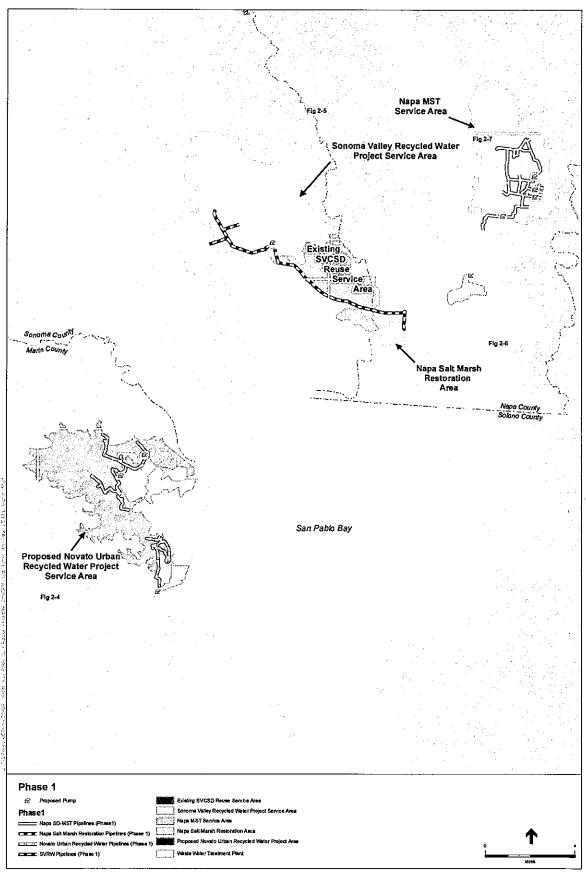
The number does not equal supply and demand due to evaporative and other losses (e.g. spreading).
 SOURCES: CDM, 2009; ESA, 2009.

The Member Agencies have collectively prioritized the projects within their individual service areas to establish an Implementation Plan identifying the order in which projects would be constructed. Phase 1 of the Implementation Plan includes projects that are defined to a level of detail that allows for project-level environmental review. These projects are collectively referred to as Phase 1 Projects. The Phase 1 Projects are common to Alternatives 1, 2, and 3. This EIR/EIS may be relied upon by individual member agencies for approval of these individual Phase 1 Projects (see **Figure ES-2**). The Member Agencies would implement the Phase 1 projects described below.

Phase 1 Implementation Plan

Las Gallinas Valley Sanitary District/North Marin Water District

LGVSD would provide recycled water service to the Novato South area. This system would not be connected to the remainder of the NMWD recycled water system.



Novato South Service Area – Hamilton Field

Service to the Hamilton Field area would be established through implementation of a of 0.7 million gallons per day (mgd) tertiary treatment upgrade at the existing LGVSD WWTP, construction of a new booster pump station onsite, and construction by NMWD of a pipeline distribution system from LGVSD north to serve the Hamilton Field area. NMWD would construct a pipeline from the LGVSD WWTP to the Hamilton Field area along three route options:

- Option A: This option would consist of approximately 2.75 miles of pipeline that would originate at the Recycled Water Treatment Facility at LGVSD WWTP, extend west adjacent to the WWTP ponds and northwest through grazing land.
- Option B: This option would consist of approximately 2.1 miles of pipeline that would
 originate at LGVSD WWTP, extend west adjacent to the WWTP ponds and north along
 agricultural access roads through grazing land.
- Option C: This option would consist of approximately 2.15 miles of pipeline that would extend north from LGVSD WWTP through grazing land. The alignment would turn west along St. Vincent's Drive then north, adjacent to the Northwest Pacific Railroad (NWPRR) right-of-way.

Novato Sanitary District/ North Marin Water District

Novato North Service Area

Novato SD and NMWD would implement service in the Novato North Service Area by incrementally expanding tertiary capacity at the existing Novato Recycled Water Treatment Facility from 0.5 mgd to 1.2 mgd. The recycled water pipeline would be routed from Atherton Avenue to Olive Avenue under Highway 101, and north on Redwood Boulevard to San Marin Drive. A separate pipeline would be routed on H Lane to serve the Valley Memorial Park Cemetery. A booster pump would be installed at Atherton Avenue and the distribution system would be connected to the existing 0.5-MG Plum Street Tank, which would be rehabilitated to provide recycled water storage.

Novato Central Service Area

Novato SD and NMWD would implement service in the Novato Central Service Area through construction of a recycled water distribution system from the Novato SD WWTP south to Rowland Boulevard and the Vintage Oaks shopping center, and across Highway 101 to serve urban users west of Highway 101. The treatment facilities at the Recycled Water Treatment Facility would be decommissioned and relocated to the Novato SD WWTP. From the WWTP, an 18-inch pipeline would be installed along Novato SD's existing easement, with a jack and bore crossing of US 101 from Rowland Boulevard to Redwood Boulevard. An 18-inch recycled trunk line would then extend north through Novato to deliver recycled water to Novato High School and other irrigated playing fields, with a 10-inch line extending south along Redwood Boulevard.

A new pipeline would connect the WWTP with the North Service Area pipeline in Olive Drive via Lea Drive or McClelland Drive. This would allow continuation of recycled water service to the Stone Tree Golf Course and the other customers in the North Service Area during the course of the relocation of the recycled water facility to the WWTP. This intertie would also incorporate the Plum Street Tank into the distribution system serving both the Novato North and Central Service Areas (Nute Engineering, 2006).

SVCSD

Sonoma Valley Recycled Water Project (SVRWP)

The Phase 1 Implementation Plan includes specific elements of the SVRWP, including construction of 5.2 miles of pipeline, additional storage at the SVCSD WWTP and construction of additional pumping capacity for distribution. The Phase 1 Implementation Plan includes SVRWP Alignment 1A, which would consist of approximately 5.2 miles of pipeline in western Sonoma Valley. The main pipeline would originate from the SVCSD WWTP, extend southwest and then northwest through a vineyard to Arnold Drive. The pipeline would continue north along Arnold Drive to Orange Avenue, and extend north on Orange Avenue to Elm Avenue. The pipeline would then continue east on Elm Avenue, cross a field to Arnold Drive, extend north on Arnold Drive, and end just north of Leveroni Road. Secondary pipelines or segments would extend from the main pipeline on the following roadways: Highway 116, Watmaugh Road, and Leveroni Road.

SVCSD Napa Salt Pond Pipeline

Under Phase 1 of the NBWRP, SVCSD would construct a pipeline to provide recycled water to Pond 7 and 7A for habitat enhancement. Proposed facilities in the Napa Salt Marsh area include construction of a new pipeline from the existing SVCSD WWTP to the existing SVCSD storage reservoirs located near the intersection of the Northwestern Pacific Railroad Authority (NWPRA) and Ramal Road. SCWA has identified three potential route options, which are described below.

- Option A: This option consists of installation of approximately 4.0 miles of 24-inch pipeline that would be installed from the reservoirs to Pond 7 and 7A. Approximately 1.0 mile of pipeline would extend from the reservoirs along the south side of NWPRA railroad tracks to Skaggs Island Road, at which point the pipeline would cross to the south side of the railroad tracks and continue east along the south side of the railroad tracks for approximately 0.4 miles. At this point, the pipeline would cross to the north side of the railroad tracks and continue east along the north side of the railroad for approximately 0.9 miles, then cross to the south side of the railroad tracks. The pipeline would extend 1.7 miles until it reaches the access road for Ponds 7 and 7A, which includes pipeline installation south along the access road for approximately 4,200 feet, terminating at the mixing chamber. This option is consistent with the pipeline route reviewed in the Napa River Salt Marsh Restoration Project EIR/EIS (JSA, 2004).
- Option B: This option consists of installation of 4.5 miles of a 24-inch pipeline from the reservoirs to the salt ponds. Approximately 0.25 miles of pipeline would be installed north along an access road to Ramal Road. The alignment would then extend 1.75 miles east along Ramal Road. At this point, the pipeline would transverse east along an agricultural access road for approximately 1.25 miles until it reaches Buchli Station Road. The pipeline

would then run south on Buchli Station Road for approximately 1.25 miles, until it reaches the Huichica Creek entrance of the Napa-Sonoma Marshes Wildlife Area (NSMWA) and the access road for Ponds 7 and 7A.

• Option C: This option would consist of 4.7 miles, and would follow the above Option B route for approximately 3.0 miles (from the reservoir, east along the access road to Ramal Road, and along Ramal Road). However, the pipeline would then extend south approximately 0.3 miles to access an existing reservoir. At this point it would transverse 0.4 miles east to Buchli Station Road (Figure 2-6). The pipeline would run south on Buchli Station Road for approximately 1.0 mile, until it reaches the Huichica Creek entrance of the Napa-Sonoma Marshes Wildlife Area (NSMWA) and the access road for Ponds 7 and 7A.

Napa SD

The Phase 1 project in the Napa SD service area would provide a recycled water distribution system to address groundwater overdraft in the Miliken-Sarco-Tulucay (MST) area of Napa County.

MST Area Project

The MST Area Project would consist of 17.5 miles of new pipeline, four booster pump stations along the pipeline routes, and a new booster pump at the WWTP. The new pipeline would be installed from the end of the Streblow Drive pipeline through the Napa State Hospital grounds and north to the MST area. A looped system using existing roadways would be constructed, with one segment extending west along First Avenue and the second segment extending east along Third Avenue; both segments would then merge along Hagen Road north of the Napa Valley Country Club. Four booster pump stations would be installed to maintain pressure throughout the distribution system, and an additional pump would be installed at the WWTP. Pump stations would be located on Imola, Wild Horse Valley Road, East 3rd Avenue, and 3rd Avenue. Potential recycled water users include the Napa State Hospital, the Napa Valley Country Club, and agricultural and residential parcels along the proposed pipeline route.

Under the MST Local Project (Options 1 and 2), a more direct pipeline system extending north from Imola Avenue along 4th Avenue, Coombsville Road, 2nd Avenue and terminating at the Napa Valley Country Club would be implemented.

Table ES-3 identifies projects that would be implemented as Phase 1 Projects under any of the Action Alternatives considered.

Alternative 1: Basic System

Alternative 1 – Basic System would expand recycled water programs currently in operation within each of the Member Agency service areas. It puts greatest emphasis on the service of local demands by the individual WWTPs. Alternative 1 would provide 6,655 AFY of new recycled water for irrigation use and 5,825 AFY for habitat restoration, and would include installation of 83 miles of new pipeline, construction of facilities onsite at the existing WWTPs to provide an additional 7.8 mgd of tertiary treatment capacity, and development of approximately 1,020 acrefeet of new storage, primarily at existing or planned storage ponds at the WWTPs.

TABLE ES-3	
IMPLEMENTATION PLAN - PHASE 1	

		New Pipeline (miles)	New Demand (AFY)	Capacity Increase (mgd)	New Pumps (HP)	New Storage (AF)
LGVSD	Peacock Gap	-	<u> </u>	-	-	
	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	_	-		1	_
	Sonoma Valley (1A) ¹	5.2	874	0	662	65
	Napa Salt Marsh	7.9	(2)	0	0	0
Napa SD	Cameros 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

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. The alignment is described on page 2-18 of this document.

Additional 3,460 AFY release of recycled water to Napa Salt Ponds 7 and 7A, depending upon year type. Because this is a beneficial

Existing 0.5 mg reservoir would be rehabilitated to provide recycled water system storage.

SOURCE: CDM, 2009, Napa SD, 2009.

Alternative 2: Partially Connected System

Alternative 2 - Partially Connected System involves development of a subregional recycled water system, taking advantage of increased storage capacity and additional pipelines under Alternative 1 to distribute recycled water more extensively throughout the project area. Alternative 2 would provide 11,250 acre feet of new recycled water for irrigation uses and potentially 2,933 AFY for habitat restoration, and would include: installation of 140 miles of new pipelines, construction of facilities onsite at the existing WWTPs to provide an additional 15.9 mgd of tertiary treatment capacity, and development of approximately 2,220 acre-feet of storage, primarily at existing or planned storage ponds at the WWTPs.

Alternative 3: Fully Connected System

Alternative 3 - Fully Connected System creates a regional system that connects all four WWTPs in the project area. This alternative maximizes water reuse by allowing recycled water from any WWTP to be delivered to any area that needs recycled water. Since the majority of the demand for recycled water lies in the area near Sonoma and Napa, the regional interconnection achieved

use that is not related to recycled water supply, this number is tracked separately in each of the alternatives.

under Alternative 3 would allow the other WWTPs to help satisfy the demand in this area. Alternative 3 would provide 12,761 acre feet of new recycled water for irrigation use and 3,085 AFY for habitat restoration, and would include: installation of 153 miles of new pipelines, construction of facilities onsite at the existing WWTPs to provide an additional 20.8 mgd of tertiary treatment capacity, and development of approximately 2,220 acre-feet of storage, primarily at existing or planned storage ponds at the WWTPs.

No Project Alternative

No project elements would be implemented under this alternative. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

The "No Action Alternative" assumes that there would be no joint project among the member agencies. It represents the "current status" in which additional wastewater treatment capacity and water recycling occurs strictly from the implementation of local plans for expansion, and the potential need to develop additional potable water supplies continues to be a regional challenge. In general, each Member Agency would continue to implement individual recycling projects, subject to the availability of funding and completion of the CEQA process. The No Action Alternative would likely result in a smaller increment of water recycling projects within the region. Specific projects that would have the greatest potential to be implemented under the No Action Alternative are below:

- LGVSD. LGVSD would prioritize expenditures on projects that meet its NPDES permit requirements. For the purpose of this EIR/EIS, it is assumed that this strategy would result in no additional recycled water projects being implemented in the LGVSD service area.
- Novato SD. Novato SD and NMWD would pursue implementation of recycled water distribution facilities solely within the Novato North Service Area. This includes 4.4 miles of pipeline, a 0.5 mgd upgrade at the Recycled Water Treatment Facility, and one pump station at the intersection of Atherton and Olive.
- SVCSD. Sonoma Valley Recycled Water Project Alignment 1A: This would include
 construction of approximately 5.2 miles of pipeline in the Sonoma Valley, with completion
 of a pump station at the SVCSD WWTP.
- SVCSD. Napa Salt Pond Pipeline: This would include construction of approximately 4.0 miles of pipeline from the SVCSD WWTP to the SVCSD storage ponds located near the intersection of Northwestern Pacific Railroad and Ramal Road. From the ponds an additional 4.5 miles of new pipeline would be constructed to convey water to the salt pond mixing chamber. The pipeline and the pump station were discussed and analyzed under the Napa River Salt Marsh Restoration Project EIR/EIS (JSA, 2004) under the Water Delivery Project Component (Sonoma Pipeline) (see Figure 2-6). Potential route options would extend east along Ramal Road and south along Duhlig Road toward the ponds.
- Napa SD. Napa SD would prioritize expenditures on projects that meet its NPDES permit requirements. For the purpose of this EIR/EIS, it is assumed that this strategy would result in no additional recycled water projects being implemented in the Napa SD service area.

Table ES-4 summarizes the components proposed under the action alternatives.

TABLE ES-4
SUMMARY OF PROJECT COMPONENTS UNDER THE ACTION ALTERNATIVES

Project Components	No Action Alternative	Basic System	Partially Connected System	Fully Connected System
Pipeline (in miles)	· · · · · · · · · · · · · · · · · · ·			
LGVSD	0.0	5.88	17.94	17.94
Novato SD	4.4	12.44	35.90	47.00
SVCSD	13.1	33.72	42.00	44.20
Napa SD	0.0	31.14	44.08	44.08
Total Pipeline	17.5	83.00	140.00	153.00
Pump Station (in horsepower)				
LGVSD	0	71	91	203
Novato SD	250	258	586	965
SVCSD	662	1,109	1,819	2,693
Napa SD	0	720	958	958
Total Pump Stations	912	2,158	3,454	4,819
Storage Capacity				
LGVSD	0.0	0.0	0.0	0
Novato SD	0.0	0.0	0	0
SVCSD	65.0	1,020	2,220	2,220
Napa SD	0.0	0.0		
Total New Storage ⁽¹⁾	65.0	1,020	2,220	2,220
Tertiary Treatment Capacity Increase (million gallons per day)				
LGVSD	0.0	0.7	1.2	1.2
Novato SD	0.5	1.2	5.1	10.0
SVCSD	0.0	0.0	0.0	0.0
Napa SD	0.0	5.9	9.6	9.6
Total Tertiary Treatment Capacity Increase	0.5	7.8	15.9	20.8
Potable Offset (acre-feet per year)				
LGVSD	0	202	409	409
Novato SD	193	542	2,038	3,701
SVCSD	874	2,719	4,381	4,230
Napa SD	0	3,192	4,221	4,421
Total Potable Offset	1,067	6,655	11,250	12,761

This total only represents new storage. The Proposed Action will rely on existing storage and retrofit existing facilities to accommodate storage needs. Please refer to Chapter 2, Project Description for a break down of new versus existing storage by alternative.

NOTE: The No Project Alternative would be equivalent to existing conditions and no project elements would be implemented, therefore not included in the table.

SOURCE: CDM, 2009.

ES.4 Summary of Potential Environmental Impacts and Mitigation Measures

The impacts are analyzed for construction and operation of the NBRWP for the individual Member Agencies in compliance with both CEQA and NEPA. Phase 1 impacts are discussed at project level and impacts from the Action Alternatives are discussed at program level.

While the project alternatives are designed to provide recycled water to offset potable water supplies and achieve the project objectives discussed above, these alternatives also would result in some short-term and long-term impacts to the environment. **Table ES-6**, included at the end of this section, summarizes the environmental impacts associated with each of the project alternatives. For impacts determined to be significant, mitigation measures are presented and the impact significance after mitigation is shown. The environmental impacts associated with the project alternatives can be generally categorized as follows: project construction; project operation; climate change; and growth-inducement.

ES.4.1 Construction

Most environmental impacts identified for the project alternatives would be associated with project construction; these impacts would occur as individual projects are implemented by Member Agencies, and would cease once project construction is completed. Construction impacts include effects associated with transport of construction materials and equipment and carrying out construction activities such as excavation, grading, foundation development, paving, and building of structures. Construction activities generate impacts such as noise, dust, impacts to sensitive species or wetland habitats, temporary effects on agricultural activities, construction traffic and access disruption, increased erosion, or increased potential for spill of hazardous materials used in construction (such as fuel, or paint) and related water quality issues. In some cases, construction effects were found to be less than significant and in other cases they were determined to be significant. In all cases, feasible mitigation measures have been identified to reduce construction impacts to less than significant levels. There would be no significant and unavoidable construction impacts.

ES.4.2 Project Operations

Project operational effects relate primarily to the distribution and use of recycled water. These impacts are generally less than significant, or mitigable to a less than significant level, and include: exposure of facilities to geologic hazards; reduction of the amount of treated effluent discharged to tributaries of North San Pablo Bay; increased impervious surface areas; exposure of facilities to 100-year flood events; beneficial effects to groundwater, water supply, and habitat enhancement; conversion of farmland to non-agricultural uses; potential impacts to groundwater quality; increased use of electricity to pump recycled water to end users; increased greenhouse gas emissions; localized noise increases; localized use of treatment chemicals; beneficial potable water offset; alteration of designated scenic vistas or views; disproportionate effects to minority communities; and cumulative effects. All of these potential impacts were reduced to a less than significant level of incorporation of the mitigation measures identified in Table ES-6.

ES.4.3 Climate Change

This Draft EIR/EIS examines the potential for the project alternatives to increase greenhouse gas emissions, which in turn would contribute to global climate change effects. As a global concern, increases in greenhouse gases contribute to cumulative impacts, rather than constituting a direct impact associated with a single project. This Draft EIR/EIS also reviews sea level rise and the potential for increased flooding caused by climate change to assess how the project might affect or be affected by these environmental changes.

Project construction and operation would result in increased greenhouse gas emissions. Construction emissions would be short-term. Greenhouse gas emissions associated with project operation would result primarily from recycled water distribution. The project alternatives would not conflict with any measures adopted by the state or other agencies to implement the California Global Warming Solutions Act of 2006 (AB 32), the state law that requires the Air Resources Board to design and implement measures to reduce greenhouse gas emissions to 1990 levels by 2020.

With respect to the potential effects of climate change, the project increases the flexibility of local and regional water supply systems to adapt to changes in water supply availability. As described in Chapter 1, Introduction, the NBWRA Member Agencies have initiated programs to promote sustainability and implement energy efficiency and water conservation programs including local recycled water projects as means of adaptive strategies to the effects of climate change. As part of the proposed project, the NBWRA would expand the recycled water use in the North San Pablo Bay region. As discussed in Section 3.11, Public Services and Utilities, the proposed project would treat and reuse the wastewater that is otherwise discharged to the San Pablo Bay. The project would therefore offset the potable water supply, making an equivalent amount of potable water available for other uses. Given the increased variability in the precipitation and thus, the water supplies, the proposed project would have a beneficial effect on the water supplies in the region. The proposed project would provide several opportunities for management flexibility and implementation of adaptive management strategies to improve water supply reliability.

ES.4.4 Growth-Inducement

None of the project alternatives would be directly growth inducing. However, the provision of recycled water, like potable water supplies, would assist in meeting the water supply needs identified for buildout of approved General Plans within the region. As such, provision of recycled water supply would have the potential to contribute to secondary effects associated with development under the approved General Plans. The potential environmental effects of this future planned growth have been evaluated and fully disclosed previously in the CEQA environmental documents prepared the General Plans for Sonoma County, Marin County, and Napa County. Both the General Plans and the water supply planning documents for these areas include policies encouraging the use of recycled water.

ES.4.5 Significant and Unavoidable Impacts

There are no significant and unavoidable impacts identified for the NBWRP, with the exception of the NBWRP's contribution to potential secondary effects of growth associated with development under the approved General Plans with the region.

ES.5 Issues of Known of Controversy and Issues to be Resolved

ES.5.1 Issues of Known Controversy

Based on public and agency comments received throughout the project planning process, Reclamation and NBWRA have identified the following areas of controversy related to the proposed NBWRP. **Appendix 1**, Scoping Report, summarizes all of the issues raised by agencies and the public during the public scoping process in July 2008 through August 2008. Areas of potential public controversy include: the proposed end uses of recycled water, beneficial offset; integration of conservation measures; regional distribution of recycled water; cost and benefit; water quality; effects on agricultural uses; and growth inducement.

ES.5.2 Issues to be Resolved

Reclamation and NBWRA will need to identify a preferred alternative. The decision will be based on project benefits, potential environmental effects, and numerous factors including the type of financing available, permitting requirements, and implementation schedule. Other issues to be resolved include:

- Project design and operations will also be refined by Member Agencies through the
 environmental permitting process, in particular compliance with the federal and state
 Endangered Species Acts, which will also affect the overall project benefits. The selection
 of an alternative also determines the level and type of environmental impacts, as described
 in this Draft EIR/EIS.
- Regardless of which alternative is selected for implementation, detailed design of project
 features and planning of construction will need to be coordinated with mitigation
 requirements so that sensitive resources in the project areas are avoided where practicable.
 The methods for achieving required mitigation would be determined during detailed project
 design through consultation and coordination with the permitting agencies.
- Completion and conclusions of the Federal Feasibility Report, described below in Section ES.7, including related engineering design, economic (costs and benefits), and financial analyses as a basis for determining the type and extent of federal interest in project implementation.
- Completion and conclusions of public review of this Draft EIR/EIS and the subsequent Final EIR/EIS as a basis for determining mitigation commitments, the Environmentally Superior Alternative per CEQA.

ES.6 Relationship to Environmental Protection Statutes, Plans, and Other Requirements

This Draft EIR/EIS has been prepared in consideration of NEPA, CEQA, and other pertinent federal, state, and local environmental regulations. NEPA requires that environmental consequences of a Proposed Action and project alternatives be considered before the decision making for implementation of a federal project. CEQA requires that environmental consequences of a Proposed Project and project alternatives be considered before approval, financing, or participation by the lead agency pursuant to CEQA. Chapter 7 of this Draft EIR/EIS presents the applicable environmental laws, regulations, and alternative plans being considered and the intended uses and users of the document. This Draft EIR/EIS is not a decision document and is not serving as public notice for any permit actions.

Table ES-5 summarizes the status of consultation for the requirements that must be met by Reclamation and NBWRA before the NBWRP can be implemented.

ES.7 Public Involvement and Next Steps

In accordance with 40 CFR 1508.22, a Notice of Intent (NOI) was published in the Federal Register by Reclamation on July 28, 2008. In accordance with Sections 15063 and 15082 of CEQA Guidelines, the NBWRA circulated a Notice of Preparation (NOP) to local, state, and federal agencies, and to other interested parties on July 25, 2008. During the 30-day public review period, NBWRA held three local public scoping meetings on August 4, 5, and 6 of 2008 at the locations identified below.

August 4, 2008 6:30 p.m. – 7:30 p.m. Napa Elks Lodge 2804 Soscol Avenue, Napa August 5, 2008 6:30 p.m. – 7:30 p.m. Margaret Todd Senior Center 1560 Hill Road, Novato

August 6, 2008 6:30 p.m. – 7:30 p.m. Sonoma Community Center 276 East Napa Street, Sonoma

Public notices were placed in local newspapers informing the general public of the availability of the NOP and NOI and the time and place of scheduled scoping meetings. The purpose of the scoping meetings were to present the Proposed Action to the public through use of display maps, route alignments and handouts describing project components and potential environmental impacts. Attendees were provided an opportunity to voice comments or concerns regarding potential effects of the Proposed Action.

Additional scoping meetings with individual stakeholders were held on August 6th, 2008 with the Russian River and Eel River Interest Groups, and on July 27th, 2008 with California Department of Parks and Recreation (staff meeting).

In accordance with CEQA and NEPA review requirements, this Draft EIR/EIS will be circulated for public and agency review and comment for a 45-day period following the date when the U.S. Environmental Protection Agency publishes the Notice of Availability of Weekly Receipt of Environmental Impact Statements in the Federal Register, and the filing of the Notice of

TABLE ES-5 SUMMARY OF ENVIRONMENTAL COMPLIANCE FOR THE PROPOSED PROJECT

Requirements	Status of Compliance/Expected Completion			
National Environmental Policy Act	Ongoing until this EIR/EIS Record of Decision is published			
California Environmental Quality Act	Ongoing until this EIR/EIS document is certified and mitigation r			
Federal Endangered Species Act and California Endangered Species Act	Ongoing until project Biological Opinion issued (see Section 3.5, Biological Resources)			
Magnuson-Stevens Fishery Conservation and Management Act	Ongoing until project Biological Opinion or ASIP issued (see Section, 3.5 Biological Resources)			
Clean Water Act Section 401	Member Agencies will apply for Water Quality Certification after EIR/EIS is approved and project design underway (see Sections 3.5, Biological Resources, and Section 3.4, Water Quality)			
Clean Water Act Section 404	Member Agencies will apply for Wetland Permit after the EIR/EIS is approved and project design underway (see Section 3.5, Biological Resources)			
Clean Air Act	In compliance. Conformity analysis is not required. (see Section 3.8, Air Quality)			
National Historic Preservation Act and Native American Consultation	Ongoing. Once Section 106 review process is completed, the project will proceed in accordance with conditions stipulated in th agreement with the State Historic Preservation Officer and appropriate agencies (see Section 3.12, Cultural Resources)			
Executive Order 11988 - Floodplain Management	Ongoing. The project complies by using this EIR/EIS to identify and assess project effects (see Section 3.2, Surface Hydrology)			
Executive Order 11990 - Protection of Wetlands	Member Agencies will apply for Wetland Permit after the EIR/EIS is approved and project design underway (see Section 3.5, Biological Resources)			
Executive Order 12898 - Environmental Justice	In compliance based on EIR/EIS Section 3.16, Environmental Justice.			
Migratory Bird Treaty Act	Member Agencies will comply with provisions of the Migratory Bird Treaty Act (see Section 3.5, Biological Resources)			
California Fish and Game Code (Section 1600 Lake or Streambed Alteration Agreement Program)	Ongoing. The project complies with Section 1600 by using this EIR/EIS to identify and address expected project effects (Section 3.5, Biological Resources)			
Caltrans Encroachment Permit	Member Agencies will apply for a Caltrans Encroachment Permit construct within Caltrans right-of-way prior to construction (see Section 3.7, Transportation and Circulation)			
Disabilities Regulations - Americans with Disabilities Act, Rehabilitation Act, and Architectural Barriers Act	Project adheres to the construction guidelines of the Uniform Federal Accessibility Standards and complies with regulations proposed for incorporation into the Americans With Disabilities Accessibility Guidelines as a part of design for individual facilities.			
Farmland Protection Policy Act	Ongoing. (see Section 3.6, Land Use and Agricultural Resources)			
Section 10 of the Rivers and Harbors Act of 1899	Ongoing. This regulation is addressed in coordination with other wetlands regulations (see Clean Water Act, Section 404, above)			
NPDES Construction Stormwater Permit	Member Agencies will comply by preparing and using a Storm Water Pollution Prevention Plan at the time of construction (see Section 3.2, Surface Hydrology)			
General Order for Dewatering and Other Low Threat Discharge to Surface Waters	Member Agencies will comply by preparing and using a permit at the time of construction (see Section 3.2, Surface Hydrology)			

Completion with the California State Clearinghouse. Three public hearings have been scheduled in Novato, Sonoma, and Napa to receive public input on the Draft EIR/EIS. These hearings will be held during the public review and comment period so that any comments received at the hearings can be addressed in the Final EIR/EIS. In addition, written comments from the public, reviewing agencies, and stakeholders will be accepted during the public comment period.

A Final EIR/EIS that will include responses to all comments will be prepared and circulated in accordance with NEPA and CEQA requirements. The Final EIR/EIS will be circulated for 30 days prior to taking action on the project and issuance of a Record of Decision (ROD).

NBWRA Decision Making Process

The NBWRA Member Agencies and cooperating agencies may use this EIR/EIS to approve the NBWRP, or components of the NBWRP, make Findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts. SCWA will act as CEQA Lead Agency. Individual NBWRA Member Agencies and cooperating agencies are Responsible Agencies as provided for under CEQA §15096 and may use this EIR/EIS for the approving the proposed components (i.e., Phase 1) in their respective service areas.

Federal Decision Making Process

Reclamation intends to use this EIR/EIS to consider provision of federal funding under Title XVI for implementation of NBWRP. As lead Federal agency, Reclamation would use this EIR/EIS to support a Record of Decision, which would document Reclamation's decision to choose one of the alternatives including the proposed action and no action.

Integral to the federal decision process are other legally required processes and information, such as biological opinions from the Federal Endangered Species Act consultation process and permits required by federal, state and local laws. The federal decision process also includes consideration of input from other federal, state, and local agencies, concerned stakeholders, tribes, and the general public.

The final federal decision is documented in a ROD. The ROD will address the decision and the alternatives considered; the alternative(s) considered to be environmentally preferable; the factors that were considered; whether or not all practicable means to avoid or minimize environmental harm for the alternative selected have been adopted, and if not, why; any monitoring and enforcement program established to ensure identified mitigation measures are accomplished; and any significant comments received on the Final EIR/EIS.

Reclamation. Reclamation is the lead Federal agency, as delegated by the Secretary of the Interior, and therefore is responsible for the preparation and processing of the Federal Feasibility Report and EIS. For efficiency, the EIS has been combined with an EIR, prepared by NBWRA for compliance with the CEQA.

While the NEPA compliance process is a subset of the federal feasibility study process, there are important distinctions to make. The purpose of the NEPA process is to analyze and disclose the impacts of a range of alternatives, and to provide an opportunity for public review and comment prior to the final federal decision. The purpose of a Federal Feasibility Report is to address engineering, economic, environmental and financial aspects of alternatives, determine the potential benefits and costs, and determine if there is a federal interest in the implementation of a project.

Upon completion of the Final Federal Feasibility Report and the Final EIR/EIS, Reclamation's Mid-Pacific Regional Director will make a recommendation that will be submitted to the Commissioner of Reclamation for consideration. Then, the Commissioner will concur or modify the recommendation and forward the Final Federal Feasibility Report, Final EIR/EIS, and Draft ROD to the Secretary of the Interior.

Secretary of the Interior. The Secretary will review the Federal Feasibility Report and sign the ROD if he concurs with the recommendation and then send the Final Federal Feasibility Report, Final EIR/EIS, and signed ROD to Office of Management and Budget (OMB) for review.

OMB. In accordance with Executive Order 12322, OMB will review the Federal Feasibility Report for consistency with the policy and programs of the President, the federal P&Gs, and other applicable laws, regulations and requirements relevant to the federal planning process.

Congress. Congress will review the information provided by the Secretary and OMB, and then decide whether to authorize the recommended project. Congress is responsible for authorizing projects for construction and providing appropriations to construct projects.

Other Uses and Users of the EIR/EIS

The NBWRA Member Agencies and cooperating agencies may use this EIR/EIS to approve the NBWRP, or components of the NBWRP, make Findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts. As the CEQA Lead Agency, SCWA's Board of Directors will consider certification of the EIR/EIS as complete under CEQA (CEQA Guidelines §15090). Once the EIR/EIS has been certified as complete, the Board, or NBWRA Member Agencies, as Responsible Agencies, will consider the certified EIR/EIS (15096(a)). Any project approvals (see **Table 1-1**; also see Section 1.6.6 below) would require the Board or NBWRA Member Agencies to make written findings with respect to each significant environmental effect relevant to their aspect of the project identified in the EIR/EIS in accordance with Section 15091 of CEQA Guidelines.

The analyses contained within this EIR/EIS would be used to support the acquisition of the following regulatory permits or approvals if needed:

- Clean Water Act Section 404—Individual Permit (USACE);
- Endangered Species Act Section 7 Consultation (USFWS);

- 1603 Streambed Alteration Agreement (California Department of Fish and Game);
- Section 401 Water Quality Certification (San Francisco Bay Regional Water Quality Control Board);
- Roadway Encroachment Permit (California Department of Transportation);
- Roadway Encroachment Permits as applicable (Counties of Marin, Sonoma, and Napa, Cities of San Rafael, Novato, Sonoma, and Napa).

The majority of the proposed activities would lie within public rights-of-way. Acquisition of right-of-ways and temporary construction easements may be necessary for construction of some of the proposed facilities. Temporary construction easements would also be required for contractor staging areas and equipment and materials storage.

References – Executive Summary

Camp, Dresser & McKee, Inc. (CDM), Updated Data on Wastewater Discharge, Recycled Water Use, and Power Use, 2009.