

Executive Summary

Executive Summary

The Sonoma County Water Agency (SCWA) is a special district created by California legislation in 1949. It supplies water to cities and public agencies throughout most of the populated areas of Sonoma County and northern Marin County, and is responsible for regulating the flow of the Russian River with releases of water from Lake Mendocino and Lake Sonoma. SCWA also provides wastewater management services to areas within Sonoma County, is responsible for flood control projects in cooperation with federal, state, and local agencies, and operates a hydroelectric facility to generate electrical energy. The mission of SCWA is to effectively manage the water resources in its care for the benefit of people and the environment through resource and environmental stewardship, technical innovation, and responsible fiscal management. SCWA is serving as the lead agency under the California Environmental Quality Act (CEQA) for this joint Environmental Impact Report/Environmental Impact Statement (EIR/EIS).

The U.S. Department of Interior, Bureau of Reclamation (Reclamation) provided grant funding for preparation of a feasibility study for the North Sonoma County Agricultural Reuse Project (NSCARP) pursuant to Title XVI of Public Law 102-575, as amended. There is the potential that Congress would authorize and appropriate partial funding for the design and construction of NSCARP under PL102-575, Title XVI. Based on this authorization and appropriation, Reclamation could provide up to 25 percent of project construction cost to a maximum Federal cost share contribution of \$20 million (October 1996 prices). Due to the potential for Federal funding, Reclamation is lead Federal agency under the National Environmental Policy Act (NEPA).

Because of the complex nature of the NSCARP, Reclamation, and SCWA have determined that preparation of a federal EIS is the most appropriate form of NEPA compliance. Other federal agencies, such as the U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (Service), and National Oceanic Atmospheric Administration (NOAA Fisheries), may rely on the EIR/EIS to satisfy NEPA for their individual approvals of project components.

ES-1. PROJECT PURPOSE/OBJECTIVES AND NEED

NSCARP is intended to contribute to meeting the objectives of SCWA and Reclamation. The primary needs, purposes, and objectives of the project are as follows:

Need

- Federal and state regulatory agencies have expressed concern regarding potential impacts to fisheries resources and habitat within the Russian River and its tributaries. Currently, agricultural lands in the NSCARP area are irrigated with water originating from the Russian River, its tributaries, and groundwater. There is a need to allow water to remain in the Russian River system and its tributaries to improve habitat for

listed fish species. There also is a need for adequate infrastructure to store and distribute recycled water produced by various entities for reuse throughout the region.

Purposes/Objectives

- Provide a reliable, long-term water supply for agricultural interests;
- Reduce discharges from local wastewater treatment plants to local waterways;
- Reduce the use of groundwater and surface water for agricultural purposes in north Sonoma County;
- Provide an environmentally responsible, long-term method of recycled water use; and,
- Increase reliability and long-term sustainability of the regional water supply.

ES-2. BACKGROUND

Federal and state regulatory agencies have expressed concerns regarding the potential impacts to fisheries resources and habitat within the Russian River and its tributaries. These concerns have and will continue to result in increased scrutiny of future diversion of water for all uses. In 1996, NOAA Fisheries listed the coho salmon as threatened in the Russian River watershed and adjacent watersheds pursuant to the Federal Endangered Species Act (FESA). Chinook salmon and steelhead were ~~similarly~~ listed as threatened species in 1997 and 1999, respectively. Through the proposed distribution, storage, and use of recycled water for agricultural purposes, the SCWA has identified a strategy to reduce reliance on diversions from the Russian River and other natural waterways.

The use of recycled water for irrigation for agricultural purposes has been occurring in California since 1890 (California Recycled Water Task Force, 2003). By the year 2000, there were 234 wastewater treatment plants providing recycled water for agricultural and landscape purposes in California (California Recycled Water Task Force, 2003). Today, recycled water in California is being used for a variety of purposes, such as irrigation for row crops, vineyard, pasture, stock feed, nursery products, turf in parks and schoolyards, and landscaping. In northern Sonoma County, about 8,638 acres of agricultural land are irrigated with recycled water provided by the City of Santa Rosa's Laguna Wastewater Treatment Facility (WWTF), the Town of Windsor's WWTF, and the Airport-Larkfield-Wikiup WWTF.

As stated herein, the SCWA regulates the flow of the Russian River for the benefit of agricultural, municipal, and instream beneficial uses. The use of recycled water and conjunctive use of surface and groundwater supplies within the SCWA service area are all important factors in evaluating the management of the regional water supply. SCWA believes the use of recycled water to offset surface and groundwater sources used by agricultural entities in the Russian River, Alexander, and Dry Creek valleys could ~~would~~ benefit fisheries in the Russian River

watershed. The recycled water would be used for agricultural purposes consistent with the California Code of Regulations, Title 22 pertaining to the use of tertiary-treated recycled water.

NSCARP would result in fewer agricultural diversions from the Russian River and its tributaries, which ~~could would~~ enable the SCWA to release less water from storage in Lake Mendocino and Sonoma to meet water demands and instream flow requirements. This ~~could would~~ result in more water being conserved in storage in these reservoirs, which ~~could would~~ provide more operational flexibility for the SCWA to benefit fisheries sources in the Russian River. The increased operational flexibility would not result in additional water being available for other uses because existing reservoir storage capacity, water rights, and flow requirements would not change.

ES-3. PUBLIC AND AGENCY INVOLVEMENT

During the project development process, a series of meetings was held to solicit community input concerning the project. In 1997, SCWA conducted a Recycled Water Workshop to evaluate the feasibility of a Sonoma County Recycled Water Distribution System. Conceptual layouts of pipeline routes and storage reservoir sites were presented as well as the benefits of expanded use of recycled water in Sonoma County. The workshop identified several north Sonoma County areas, including the Alexander Valley, Russian River Valley, and Dry Creek Valley, as potential recipients of recycled water for agricultural use.

The SCWA held three informational pre-scoping meetings for early public input and outreach outside the official CEQA/NEPA process. The meetings were held: (1) February 3, 2004 at Alexander Community Hall; (2) February 4, 2004 at Warm Springs Dam Visitor Center; and, (3) February 5, 2004 at Westside School.

A Notice of Preparation (NOP) was filed with the State Clearinghouse (SCH# 2006012130) on January 27, 2006 for NSCARP pursuant to ~~the California Environmental Quality Act (CEQA)~~. See Appendix A. In addition, the NOP was filed with the Sonoma County Clerk's Office, and sent to federal, state, and local agencies, and interested persons.

Reclamation filed a Notice of Intent (NOI) with the Federal Register on January 31, 2006 (see Appendix A) pursuant to NEPA requirements. Reclamation also published a notice of the Scoping Meeting on January 31, 2006 (see Appendix A)

SCWA held a CEQA Scoping Meeting at the Alexander Valley Community Hall on Thursday, February 16, 2006. The meeting was held to provide an overview of the proposed project and solicit input from interested individuals concerning the scope of the environmental analyses as outlined in the project NOP. The Scoping Meeting used an Open House format where SCWA staff were available to answer questions and provide information about NSCARP. Thirty-nine members of the public signed the sign-in sheet (see Appendix B). Following the open house, SCWA staff gave an overview presentation and summarized the environmental review process, including a discussion of the EIR/EIS being prepared for NSCARP, and the distribution of the NOP and NOI. Included in Appendix B is a copy of the transcripts for the two presentations, as well as questions and comments from the public.

The NOP review period concluded on March 15, 2006 (See Appendix C).

A Notice of Availability (NOA) of the DEIR/EIS was mailed to members of the project EIR/EIS mailing list on March 20, 2007 to announce the release of the document and its 60-day public comment period, and provide information on how to obtain or view the document. A public hearing on the DEIR/EIS was conducted before the SCWA Board of Directors on May 15, 2007 and the public review period ended on May 18, 2007. There was a total of 53 communications received regarding the DEIR/EIS in the form of letters, emails, faxes, and telephone messages. In compliance with 40 C.F.R. 1503.4(b) and Title 14 of the California Code of Regulations, Section 15132 relating to the contents of a FEIS and FEIR respectively, these communications, and responses to the comments on the DEIR/EIS contained within these communications, are presented in Volume 3 of this Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS).

ES-4. APPROACH TO ALTERNATIVES DEVELOPMENT

CEQA and NEPA require that EIRs and EISs describe and evaluate reasonable alternatives to a proposed action, and both must describe an alternative that assumes that the proposed action and alternatives would not be implemented. To comply with these regulations, SCWA evaluated a range of alternatives to identify the most promising alternatives for detailed study.

ES-5. ALTERNATIVES CONSIDERED IN DETAIL IN THE EIR/EIS

SCWA and Reclamation have formulated the alternatives evaluated in this EIR/EIS. Cost and engineering factors, water quality objectives, institutional considerations, and many environmental factors have had substantial influence in shaping the alternatives summarized below.

Alternative 1: No Action

The “No Action” Alternative means that a regional water conveyance and storage project to serve recycled water to the four subareas would not be implemented. Individual recycled water providers identified herein may serve recycled water to some portions of the lands within the four subareas, but there would be no overall regional project. The “No Action” Alternative means that the recycled water providers would have to identify individual projects where recycled water could be used for agricultural purposes.

Alternative 2: Entire North Sonoma Agricultural Reuse Project

Alternative 2 represents a recycled water supply project for the entire NSCARP area. Approximately 21,500 acres of presently developed agricultural lands (vineyards, dairies, and orchards) within the Russian River, Alexander, and Dry Creek valleys would be served by recycled water. The water supply for NSCARP would be tertiary-treated wastewater generated by the City of Santa Rosa (City), Town of Windsor (Town), and Airport/Larkfield/Wikiup Sanitation Zone (ALWSZ) facilities, and conveyed to the project primarily through the City’s Geysers Pipeline. It would involve the design and construction of 197 recycled water storage

reservoirs totaling about ~~8,700~~^{11,200} acre-feet (af) in storage capacity. In addition, NSCARP would involve the design and construction of approximately 11~~2~~¹ miles of transmission pipeline, and numerous booster and distribution pump stations for conveying water from the Geysers Pipeline to the storage reservoirs, and for distribution of the storage recycled water from the reservoirs to the agricultural lands.

Alternative 3: Alexander Valley - Jordan Reservoir Subset

This alternative represents a scaled-down version of the Alexander Valley subarea by limiting storage reservoir development to only the Jordan A and Jordan C reservoirs. This alternative would serve a smaller service area commensurate with the amount of potential storage capacity at the two proposed reservoir sites and potential summer recycled water supplies available from the ALWSZ treatment plant.

Alternative 4: Russian River Valley-Westside Subset

This alternative represents a scaled-down version of the Russian River Valley subarea. It limits storage reservoir development to the Russel-Bucher, Bucher, and Becnel #2 reservoir sites and utilizes the existing Gallo Twin Valley Reservoir. This alternative involves serving a smaller service area than the Russian River Valley subarea commensurate with the potential storage capacity that has been identified in the hills west of Westside Road, and potential summer recycled water supplies available from the ALWSZ. This scaled-down project is referred to as the Russian River Valley-Westside subset.

Preferred Alternative

SCWA and Reclamation have identified Alternative 2 as the preferred alternative. The selection was made based on Alternative 2's ability to fully meet the project purpose and objectives, engineering feasibility, minimization of environmental impacts, and input received during the public scoping process. Additionally, the selection of Alternative 2 as the preferred alternative is based on the conclusions of the impact analysis presented in Chapter 3.

Environmentally Superior Alternative

Alternative 2 is environmentally superior. There are many similarities between the environmental impacts associated with Alternatives 2 through 4. Alternatives 3 and 4 would have less construction impacts than Alternative 2 because of the reduced project area and the fewer number of proposed facilities. However, Alternative 2 is preferred because it provides the greatest potential for meeting the project's purposes and objectives to improve habitat for listed fish species.

With Alternative 2, there would be the greatest offset of surface water use; therefore, the largest increase in summer flows in the tributaries of the Russian River. In addition, because the reduction in agricultural diversions from the Russian River would help maintain storage levels in Lake Mendocino, Alternative 2 could ~~would~~ result in the most water being available that can be released in the fall to assist with Chinook salmon upstream migration.

Although the No Action Alternative would cause fewer direct environmental impacts, it would not meet the purpose and need or objectives of the proposed project.

ES-6. SUMMARY OF ENVIRONMENTAL IMPACTS AND AVAILABLE MITIGATION MEASURES

Table ES-1 summarizes the impacts of the NSCARP alternatives. The table is organized to present the impacts by environmental issue area and to indicate the significance of each impact, available mitigation measures, and the significance of each impact if mitigation is implemented.

SCWA and Reclamation have incorporated certain mitigation measures into the project description as environmental commitments. These commitments include preparation and implementation of the following:

- General Construction Measures
- Frac-Out Contingency Plan
- Erosion and Sediment Control Plan
- Storm Water Pollution Prevention Plan
- Traffic Control Plan
- Dust Suppression Plan
- Fire Control Plan
- Phase I and Phase II Hazardous Materials Studies
- Hazardous Materials Management Plan
- Agricultural Land Restoration
- Spoils Disposal Plan
- Environmental Training
- Access Point/Staging Area Plan
- Trench Safety Plan
- Private Property Acquisition and Access
- Noise Compliance
- Project Planning, Coordination, and Communication Plan
- Project Maintenance Program
- Revegetation/Site Restoration Plan

Table ES-1. Summary of Impacts and Mitigation Measures

Impact	Impact Category	Applicable Alternative	Mitigation Measures
3.1 Aesthetics			
AES-1	NSCARP potentially could have a substantial adverse effect on the visual character and scenic resources on the project area based on evaluation criteria 1 and 2.	Significant but Mitigable	2, 3, 4 <ul style="list-style-type: none"> • The SCWA shall minimize construction zones/staging areas to the extent feasible; • Following construction activities, the SCWA shall restore disturbed areas by reestablishing existing topography, including repaving roadways, replanting trees, and/or reseeding with a native seed mix typical of the immediate surrounding areas; • The SCWA shall revegetate the berms around the reservoirs with native seed mixes to soften the visual effect of the reservoirs from adjacent roadways; and, • SCWA shall use design elements to enhance visual integration of the booster and distribution pump stations with their surroundings. These proposed facilities shall be painted low-glare earth-tone colors that blend with their surrounding terrain; highly reflective building materials and/or finishes shall not be used in the designs for proposed facilities. Pumping stations shall be screened with vegetation as much as feasible. Where applicable, pump-station placement shall adhere to the 20-foot County setback requirement for those stations located along designated Scenic Corridors.
AES-2	NSCARP would introduce new sources of light to the project area.	Significant but Mitigable	2, 3, 4 <ul style="list-style-type: none"> A. Light sources that are utilized during nighttime construction activities shall be shielded and directional so as to minimize light-spill. Thus, significant impacts from nighttime light and glare would be avoided; and, B. The exterior lighting installed around the storage reservoirs and distribution and booster pump stations shall be a minimum standard required to ensure safe visibility. Lighting also shall be shielded and directed downward to minimize impacts of light and glare.

Table ES-1. (Continued)

Impact	Impact Category	Applicable Alternative	Mitigation Measures
3.2 Agricultural Resources			
AG-1	The NSCARP could result in loss of Farmland.	Significant and Unavoidable	<p>2, 3, 4</p> <p>The SCWA shall site project components to avoid status Farmland and lands subject to Williamson Act Contracts, to the extent feasible.</p> <p>If project components cannot feasibly be located outside of lands designated as status Farmland or lands subject to Williamson Act Contracts, landowners would be compensated for the fair market value of lands acquired and for any applicable Williamson Act contract cancellation fees. Table 3.2-5 shows lands within the project area that are under Williamson Act Contracts and would require modifications to existing lands (i.e., development or expansion of reservoirs, placement of underground pipeline, or pump station development).</p> <p>No additional mitigation has been identified that would serve to reduce the loss of status Farmland to a less than significant level and, therefore, the NSCARP would result in a significant and unavoidable impact associated with the permanent loss of status Farmland and lands subject to Williamson Act Contracts.</p>
AG-2	The NSCARP would have the potential to conflict with existing Williamson Act Contracts.	Significant and Unavoidable	<p>2, 3, 4</p> <p>Implement Mitigation Measure AG-1.</p>
AG-3	The NSCARP would have the potential to reduce soil productivity resulting from topsoil erosion due to application of recycled water.	Less than Significant	<p>2, 3, 4</p> <p>None required</p>
AG-4	The NSCARP would have the potential to reduce soil productivity due to build-up of trace elements or increased salinity.	Less than Significant	<p>2, 3, 4</p> <p>None required</p>
AG-5	The NSCARP would have the potential to introduce glassy-winged sharpshooters (Homalodisca coagulata) to the project area.	Significant but Mitigable	<p>2, 3, 4</p> <p>Plants acquired for landscaping and revegetation purposes shall be purchased from locally grown stock or from a nursery that has an approved monitoring program for the GWSS.</p>

Table ES-1. (Continued)

Impact	Impact Category	Applicable Alternative	Mitigation Measures
3.3 Air Quality (AQ-1 – AQ6: Construction; AQ-7 – AQ-12: Operation)			
AQ-1	Emissions of criteria pollutants based on mass emissions thresholds established by the BAAQMD and NSCAPCD.	Significant but Mitigable	2, 3, 4 <p>A. The following measures have been incorporated into the project design to reduce construction related air quality impacts from fugitive dust emissions resulting from construction of Alternatives 2, 3, and 4 to a less than significant level:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily; • All trucks transporting soil, sand, or other loose materials will be covered or will maintain at least two feet of freeboard; • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites; • Sweep daily all paved access roads, parking areas, and staging areas at construction sites; • Sweep streets daily if visible soil material is carried on adjacent public streets; • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more); • Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed sediment stockpiles; • Limit traffic speeds on unpaved roads to 15 mph; • Install sandbags or other erosion control measures to prevent silt runoff to public roadways; • Replant vegetation in disturbed areas as quickly as possible. • Install wheel washers for all existing trucks, or wash off the tires or tracks of all trucks and equipment leaving the site; and,

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph. B. The SCWA shall apply the following mitigation measures to help reduce emissions from construction equipment exhaust (e.g. NOx, ROG, CO): <ul style="list-style-type: none"> • Use alternatively fueled construction equipment where feasible; • Minimize idling time (e.g. 5-minute maximum); • Maintain properly tuned equipment; and, • Limit the house of operations of heavy duty equipment and/or the amount of equipment in use, to the extent feasible.
AQ-2	Conflicts with Clean Air Plan.	Less than Significant	2, 3, 4	None required.
AQ-3	Violates ambient air quality standards.	Less than Significant	2, 3, 4	None required.
AQ-4	Cumulatively considerable net increase of any criteria pollutant for which the region is considered non-attainment.	Less than Significant	2, 3, 4	None required.
AQ-5	Expose sensitive receptors to toxic air contaminant pollutant concentrations.	Less than Significant	2, 3, 4	None required.
AQ-6	Create objectionable odors affecting a substantial number of people.	Less than Significant	2, 3, 4	None required.
<u>AQ-7</u>	<u>Construction Emissions Contributing to Global Warming</u>	<u>Less than Significant</u>	<u>2,3,4</u>	<u>None required</u>
<u>AQ-7</u>	Emissions of criteria pollutants based on mass emissions thresholds established by the BAAQMD and NSCAPCD.	Less than Significant	2, 3, 4	None required.

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
AQ-9	Conflicts with Clean Air Plan.	Less than Significant	2, 3, 4	None required.
AQ-10	Violation of ambient air quality standards.	Less than Significant	2, 3, 4	None required.
AQ-11	Cumulatively considerable net increase of any criteria pollutant for which the region is considered non-attainment.	Less than Significant	2, 3, 4	None required.
AQ-1112	Expose sensitive receptors to toxic air contaminant pollutant concentrations.	Less than Significant	2, 3, 4	None required.
AQ-132	Create objectionable odors affecting a substantial number of people.	Less than Significant	2, 3, 4	None required.
AQ-14	<u>Operational Emissions Contributing to Global Warming</u>	<u>Less than Significant</u>	<u>2,3,4</u>	<u>None required.</u>
3.4 Biological Resources				
BIO-1	Construction of the NSCARP Alternatives would result in the temporary disturbance to vegetation and wildlife.	Less than Significant	2, 3, 4	None required. However, following construction, SCWA shall revegetate all disturbed areas with an appropriate mix of grasses and other herbaceous plant species. This will provide replacement vegetative cover and will promote the reoccupation or periodic use of these areas for nesting, cover, and foraging for wildlife. All installed vegetation will be certified free of noxious weeds.
BIO-2	Construction of the NSCARP Alternatives would result in the permanent loss of native upland woodland (non-riparian) habitat.	Significant but Mitigable	2, 3, 4	To minimize impacts to native trees as a result of project construction, the following measures will be implemented by the SCWA and its contractors: A. To the extent feasible, the SCWA shall, prior to final design, adjust alignment of pipelines, pump plants, and reservoirs to avoid and minimize the removal of native oak trees. Within proposed pipeline corridors, the construction zone is approximately 100 feet wide to accommodate alignment adjustments. Trees that are not within the construction zone, or for which removal is not necessary due to safety issues, shall be avoided;

Table ES-1. (Continued)

	Impact	Impact Category	Applicable Alternative	Mitigation Measures
				<p>B. Prior to project construction, SCWA shall conduct a survey to identify trees within the construction area that will be removed for pipeline installation. All native trees greater than six inches in diameter at breast height (dbh), as measured 4.5 feet above grade, will be tallied, tagged, measured, and health and vigor evaluated. Mitigation will not be required for non-native trees, nor native trees less than six inches at dbh;</p> <p>C. All native trees to remain in place and located within 25 feet of ground disturbances shall be temporarily fenced by SCWA with orange plastic construction (exclusion) fencing prior to and throughout all construction activities. The exclusion fencing shall be installed six feet outside the canopy dripline of each protected tree or stand. The fencing is intended to prevent equipment operations in the proximity of protected trees that may compact soil, crush roots, or collide with the tree trunk and/or overhanging branches;</p> <p>D. No construction equipment shall be parked, stored, or operated within six feet of the dripline of any protected tree;</p> <p>E. SCWA or its contractor shall prepare, prior to construction, and subsequently implement following construction, a Restoration and Revegetation Plan for the project. The Plan will detail site preparation, planting techniques, watering schedules, maintenance procedures, and success criteria for installed plantings. The Plan shall include a monitoring program and will require weekly inspection of the plantings for the first month, followed by monthly monitoring for the next three months; and then quarterly monitoring for the next 12 months unless success criteria are met earlier.</p> <p>After the first year, plantings will be monitored on an annual basis for a period of four years. Monitoring will continue until performance standards are met;</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				At locations where on-site mitigation may be precluded due to restricted rights-of-way and other factors, some of the mitigation may be conducted off-site at a publicly owned park or facility, or as part of a regional habitat restoration/enhancement program.
BIO-3	Construction of the NSCARP alternatives will result in the loss of protected oak trees	Significant but Mitigable	2, 3, 4	To minimize impacts to native oaks trees as a result of project construction, the following measures will be implemented by the SCWA and its contractors: A. Implement Mitigation Measure BIO-2 ; and, B. Following construction, SCWA shall replace each valley oak tree removed and/or substantially damaged as a result of project construction in accordance with Section 26-67-0303 of the Sonoma County Zoning Code.
BIO-4	Construction of the NSCARP alternatives could impact protected raptors and other bird species during nesting.	Significant but Mitigable	2, 3, 4	SCWA shall schedule tree removal and ground-clearing activities prior to the initiation of nesting activity (March) or after fledging (August). If this is infeasible, SCWA shall conduct pre-construction surveys between February 15 and August 15 in potential nesting habitat to identify nest sites. If an active raptor nest is observed within 350 feet of the project site, SCWA shall contact CDFG and establish an appropriate protective buffer around the nest tree and prohibit construction activities in the buffer zone until the young have fledged.
BIO-5	Construction of the NSCARP alternatives would result in the loss or degradation of wetlands and other waters.	Significant but Mitigable	2, 3, 4	SCWA shall implement the following measures to avoid, minimize, reduce and/or compensate for impacts to waters and wetlands: A. For pipeline crossings of channels, wetlands, and other regulatory waters, the SCWA shall use trenchless construction methods (e.g. jack-and-bore, horizontal direction drilling [HDD], or suspension on an existing bridge;

Table ES-1. (Continued)

	Impact	Impact Category	Applicable Alternative	Mitigation Measures
				<p>B. Silty or turbid water produced from pipeline construction activities shall not be discharged directly into streams. Instead, any water impounded between the dams and/or underflow seepage into the work site will be pumped into an upland containment area where the water will be allowed to percolate into the soil and not mix with channel flows;</p> <p>C. SCWA shall conduct a jurisdictional delineation of all waters and wetlands affected by the NSCARP project to determine the precise acreage of impacts subject to regulation under Section 404 of the Federal Clean Water Act and Section 1600 of the California Fish and Game Code. SCWA shall secure applicable permits from CDFG (Section 1600 Streambed Alteration Agreement), the U.S. Army Corps of Engineers (Section 404 Clean Water Act permit), and RWQCB (Section 401 Water Quality Certification) before initiating construction in area requiring permits from these agencies;</p> <p>D. A compensatory mitigation ratio (replacement-to-loss) for the temporary and permanent impacts shall be a minimum of 1:1 to assure no net loss. Potential mitigation strategies include: 1) the purchase of mitigation credits at an approved Wetland Mitigation Bank; 2) contribution of in-lieu fees for a regionally approved riparian and/or wetland creation or restoration project; and, 3) development of compensatory mitigation wetlands and riparian areas at project sites. Compensatory mitigation shall be subject to the approval of the Corps, CDFG, and RWQCB, and consistent with standards pertaining to mitigation type, location, and replacement-to-loss ratios.</p> <p>E. Diversion channels shall be constructed prior to the placement of fill material into natural channels for reservoir construction to prevent unexpected flows from entering the reservoir; and,</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				F. The diversion channels shall be constructed in upland areas and in a manner to allow the establishment of vegetation similar to that of the natural channel being replaced. This will partially offset a portion of the loss of natural channel vegetation from reservoir construction, and provide a site for compensatory mitigation.
BIO-6	Construction of the NSCARP alternatives could impact special-status species and/or adversely effect designated critical habitat.	Significant but Mitigable	2, 3, 4	<p>SCWA shall implement the following impact minimization and avoidance measures to reduce or compensate for impacts to special-status species:</p> <p>A. Prior to construction, there will be consultation with USFWS, NOAA Fisheries, and CDFG under FESA and CESA to secure proper authorization in the event of an “ incidental take” of a listed species is anticipated;</p> <p>B. A minimum of one year prior to construction activities, field surveys will be conducted at each project site to determine the presence of special-status species and/or suitable habitat. All surveys will be conducted in accordance with approved survey protocols;</p> <p>C. If surveys identify the presence of special-status species at a project site, the following will be implemented:</p> <p>a. If feasible, the construction area will be adjusted to avoid impacts to special-status species and habitat. The adjusted alignment will be within the project area, and will include appropriate buffers between the species’ occurrence or habitat and the construction area;</p> <p>b. If adjustment of the construction area is not feasible, there will be consultation with USFWS, NOAA Fisheries, and CDFG to develop species-specific measures to minimize the effects of construction and operation of the NSCARP project. This may include: seasonal construction restrictions, such as during the active nesting or rearing season of protected birds and bats, respectively; erection of protective barriers; collection and relocation of individuals; site</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>monitoring during construction; site restoration; and, implementation of construction practices that would avoid specific areas, such as horizontal directional drilling, suspension of pipelines on existing bridges, etc.</p> <p>c. If there is no feasible alternative to the disturbance to special-status species or habitat, SCWA will compensate for any loss of special-status species habitat through a combination of the following:</p> <ul style="list-style-type: none"> • <i>creation of replacement habitat</i> • <i>habitat preservation through Conservation Easement</i> • <i>acquisition of credits at an approved mitigation bank</i> • <i>in-lieu contribution to a regional habitat restoration fund, and/or</i> • <i>other compensatory measures that are deemed acceptable by the USFWS, NOAA Fisheries, and CDFG.</i> <p>D. Any project component that would jeopardize the continued existence of a listed species will be eliminated from consideration.</p> <p>E. The SCWA will prepare and implement Frac-out Plan as detailed in Section 2.4 in the event horizontal directional drilling is proposed for any river crossing.</p>
BIO-7	Construction of the recycled water reservoirs can increase ecological risk to animals and plants exposed to organic and inorganic compounds potentially occurring in treated wastewater (e.g., chronic toxicity and bioaccumulation).	Less than Significant	2, 3, 4	None required
BIO-8	Construction of the recycled water reservoirs can potentially increase ecological risk to animal and plant populations exposed to endocrine disrupting compounds.	N/A	2, 3, 4	<p>Because of the evolving research on the issue of EDCs and xenobiotics, SCWA will perform the following:</p> <ul style="list-style-type: none"> • Monitor on-going research to stay abreast of the state-of-the-science concerning EDCs and xenobiotics;

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • Consult and coordinate with the Regional Water Quality Control Board, USEPA, and other regulatory agencies on developing standards and promulgating regulations; • Implement appropriate treatment technologies as required by regulatory agencies; and, • Formulate and implement adaptive management procedures to respond to changes in regulations. • Encourage public awareness of recent federal guidelines concerning the proper disposal of prescription drugs, such as take-back programs, disposing down toilet or sink only if so labeled, etc. (Office of National Drug Control Policy, 2007).
BIO-9	The NSCARP alternatives could potentially block or disturb major migration corridors between resource areas for native animals.	Significant but Mitigable	2, 3, 4	See Mitigation Measure BIO-5F.
BIO-10	The NSCARP alternatives could potentially cause a decrease in stream flows, affecting aquatic habitat and its inhabitants downstream from a dam.	Less than Significant	2, 3, 4	None required
3.5 Cultural Resources				
CUL-1	Implementation of Alternative 2 of the NSCARP could result in the potential disturbance of known prehistoric and historic sites.	Significant but Mitigable	3	<p>A. Where feasible, the SCWA shall avoid prehistoric and historic sites. If the SCWA cannot avoid the site and impacts may occur, then SCWA shall implement Mitigation Measures CUL-1(B);</p> <p>B. Update the records for prehistoric sites CA-Son-622 and CA-Son-1929, including determining the boundaries of the sites. If site boundaries are found to extend into the project APE, the eligibility</p> <p>The sites for inclusion in the NRHP and the CRHR shall be determined by an archaeologist meeting the Secretary of Interior's Professional Qualifications Standards in prehistoric archaeology. If a site is determined eligible for inclusion in the NRHP or CRHR, a program for data recovery shall be implemented for the area of the site within the project APE.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>The eligibility of historic sites CA-2317H, P-49-2283, the J Wine Trash Dump, and bridges, 20C-0006, 20C-0106, and 20-0038 for inclusion in the NRHP and the CRHR shall be determined by an archaeologist and/or historian meeting the Secretary of Interior's Professional Qualifications Standards in historical archaeology and/or architectural history. If a site is determined eligible for inclusion in the NRHP or CRHR, a program for data recovery and/or other appropriate documentation (e.g., Historic American Building Survey reports and/or photographs) shall be implemented for a site or the area of a site within the project APE. In addition, project plans shall include design features, as feasible, for pipeline installation on any bridges that are determined eligible for inclusion in the NRHP or CRHR.</p> <p>Bridge 20C-0155, Wohler Bridge, is eligible for inclusion in the NRHP and the CRHR. If project plans require that pipeline be attached to the bridge, an architectural historian that meets the Secretary of Interior's Professional Qualifications Standards in architectural history shall prepare appropriate documentation (e.g., Historic American Building Survey reports and/or photographs) for the bridge. In addition, project plans shall include design features, as feasible, for pipeline installation on the bridge.</p>
CUL-2	Implementation of Alternative 2 of the NSCARP could result in the potential disturbance of undiscovered prehistoric sites, historical sites, and isolated prehistoric and/or historic features or artifacts, and human remains.	Significant but Mitigable	2	A. Project contractors and their staff shall be informed of the potential to encounter cultural resources during project implementation and protocols to follow if cultural resources are uncovered. This information may be presented to contractors and their staff through the use of "tail-gate" meetings or other mechanisms (e.g., handouts). Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, or architectural remains be encountered during installation of pipelines and construction of reservoirs, work shall be suspended in the area of the discovery and the SCWA shall be immediately notified. At that time, SCWA will

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>coordinate any necessary investigation of the discovery with an appropriate specialist (e.g., archaeologist or architectural historian).</p> <p>SCWA shall consider mitigation recommendations presented by a qualified archeologist for any unanticipated discoveries. SCWA shall implement a measure(s) that it deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.</p> <p>B. Project contractors and their staff shall be informed of the potential to encounter human remains during project implementation and protocols to follow if human remains are uncovered. This information may be presented to contractors and their staff through the use of “tail-gate” meetings or other mechanism (e.g., handouts). If human remains are discovered, all work shall be suspended in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.</p>
CUL-3	Implementation of Alternative 2 of the NSCARP could result in the potential disturbance or destruction of undiscovered paleontological resources.	Significant but Mitigable	2	<p>Project contractors and their staff shall be informed of the potential to encounter paleontological resources during project implementation and protocols to follow if paleontological resources are uncovered. This information may be presented to contractors and their staff through the use of “tail-gate” meetings or other mechanism (e.g., handouts). Should any potentially unique paleontological resources (fossils) be encountered during project activities, work shall be suspended in the area of the discovery and the SCWA shall be immediately notified. At that time, the SCWA will coordinate any necessary investigation of the discovery with a qualified paleontologist.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				SCWA shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries. The SCWA shall implement a measure(s) that it deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.
CUL-4	Implementation of Alternative 3 of the NSCARP could result in the potential disturbance of known historic sites.	Significant but Mitigable	3	The eligibility of historic site CA-2317H and the Jimtown Bridge, 20C-0006 for inclusion in the NRHP and the CRHR shall be determined by an archaeologist and/or historian meeting the Secretary of Interior's Professional Qualifications Standards in historical archaeology and/or architectural history. If a site is determined eligible for inclusion in the NRHP or CRHR, a program for data recovery and/or other appropriate documentation (e.g., Historic American Building Survey reports and/or photographs) shall be implemented for a site or the area of a site within the project APE. In addition, project plans shall include design features, as feasible, for pipeline installation on any bridges that are determined eligible for inclusion in the NRHP or CRHR.
CUL-5	Implementation of Alternative 3 of the NSCARP could result in the potential disturbance of undiscovered prehistoric sites, historical sites, and isolated prehistoric and/or historic features or artifacts, and human remains.	Significant but Mitigable	3	A. Project contractors and their staff shall be informed of the potential to encounter cultural resources during project implementation and protocols to follow if cultural resources are uncovered. This information may be presented to contractors and their staff through the use of "tail-gate" meetings or other mechanisms (e.g., handouts). Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, or architectural remains be encountered during installation of pipelines and construction of reservoirs, work shall be suspended in the area of the discovery and the SCWA shall be immediately notified. At that time, the SCWA will coordinate any necessary investigation of the discovery with an appropriate specialist (e.g., archaeologist or architectural historian). SCWA shall implement any mitigation necessary for the protection of cultural resources.

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>SCWA shall consider mitigation recommendations presented by a qualified archeologist for any unanticipated discoveries. SCWA shall implement a measure(s) that it deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.</p> <p>B. Project contractors and their staff shall be informed of the potential to encounter human remains during project implementation and protocols to follow if human remains are uncovered. This information may be presented to contractors and their staff through the use of “tail-gate” meetings or other mechanism (e.g., handouts). If human remains are discovered, all work shall be suspended in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.</p>
CUL-6	Implementation of Alternative 3 of the NSCARP could result in the potential disturbance or destruction of undiscovered paleontological resources.	Significant but Mitigable	3	<p>Project contractors and their staff shall be informed of the potential to encounter paleontological resources during project implementation and protocols to follow if paleontological resources are uncovered. This information may be presented to contractors and their staff through the use of “tail-gate” meetings or other mechanism (e.g., handouts). Should any potentially unique paleontological resources (fossils) be encountered during project activities, work shall be suspended in the area of the discovery and the SCWA shall be immediately notified. At that time, SCWA will coordinate any necessary investigation of the discovery with a qualified paleontologist. SCWA shall implement any mitigation necessary for the protection of paleontological resources.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				SCWA shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries. SCWA shall implement a measure(s) that it deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.
CUL-7	Implementation of Alternative 4 of the NSCARP could result in the potential disturbance of a known prehistoric site.	Significant but Mitigable	4	Update the record for prehistoric site CA-Son-1929, including determining the boundaries of the sites. If site boundaries are found to extend into the project APE the eligibility of the sites for inclusion in the NRHP and the CRHR shall be determined by an archaeologist meeting the Secretary of Interior's Professional Qualifications Standards in prehistoric archaeology. If the site is determined eligible for inclusion in the NRHP or CRHR, a program for data recovery shall be implemented for the area of the site within the project APE.
CUL-8	Implementation of Alternative 4 of the NSCARP could result in the potential disturbance of undiscovered prehistoric sites, historical sites, and isolated prehistoric and/or historic features or artifacts, and human remains	Significant but Mitigable	4	A. Project contractors and their staff shall be informed of the potential to encounter cultural resources during project implementation and protocols to follow if cultural resources are uncovered. This information may be presented to contractors and their staff through the use of "tail-gate" meetings or other mechanisms (e.g. handouts)
				Should any cultural resources, such as structural features, unusual amounts of bone or shell, artifacts, or architectural remains be encountered during installation of pipelines and construction of reservoirs, work shall be suspended in the area of the discovery and the SCWA shall be immediately notified. At that time, SCWA will coordinate any necessary investigation of the discovery with an appropriate specialist (e.g., archaeologist or architectural historian). SCWA shall implement any mitigation necessary for the protection of cultural resources.

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>SCWA shall consider mitigation recommendations presented by a qualified archeologist for any unanticipated discoveries. The County shall implement a measure(s) that it deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.</p> <p>B. Project contractors and their staff shall be informed of the potential to encounter human remains during project implementation and protocols to follow if human remains are uncovered. This information may be presented to contractors and their staff through the use of “tail-gate” meetings or other mechanism (e.g., handouts). If human remains are discovered, all work shall be suspended in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California’s Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.</p>
CUL-9	Implementation of Alternative 4 of the NSCARP could result in the potential disturbance or destruction of undiscovered paleontological resources.	Significant but Mitigable	4	<p>Project contractors and their staff shall be informed of the potential to encounter paleontological resources during the project implementation and protocols to follow if paleontological resources are uncovered. This information may be presented to contractors and their staff through the use of “tail-gate” meetings or other mechanism (e.g., handouts). Should any potentially unique paleontological resources (fossils) be encountered during project activities, work shall be suspended in the area of the discovery and the SCWA shall be immediately notified. At that time, SCWA will coordinate any necessary investigation of the discovery with a qualified paleontologist. SCWA shall implement any mitigation necessary for the protection of paleontological resources.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				SCWA shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries. The County shall implement a measure(s) that it deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures.
3.6 Environmental Justice				
ENV-1	The NSCARP could result in significant adverse environmental impacts on a minority and/or low-income community.	Less than Significant	2, 3, 4	None required
ENV-2	NSCARP could result in disproportional significant adverse human health or environmental effects on a minority and/or low-income community.	Less than Significant	2, 3, 4	None required
3.7 Geology, Soils and Seismicity				
GEO-1	The NSCARP project potentially could be located within an area of unstable slope conditions.	Significant but Mitigable	2, 3, 4	<p>The following recommendation and mitigation measures shall be incorporated, under the direction of the SCWA, into the project design specifications to reduce unstable slope conditions per the geologic feasibility studies (The Geoservices Group, 2001, 2002.The following recommendation and mitigation measures shall be incorporated, under the direction of the SCWA, into the project design specifications to reduce unstable slope conditions per Geoservices' Geologic Feasibility Study.</p> <p>A. Where steep or unstable slopes are encountered, implementation of Best Management Practices (BMPs) and other standard engineering practices shall be used. These include the keying-in of engineered slopes, use of retaining walls, slope stability monitoring, and dewatering systems. Appropriate reservoir siting criteria would ensure that storage sites would avoid mapped landslide areas. Standard slope stabilization measures, as approved by the DSOD, shall be implemented to provide adequate dam and reservoir foundation;</p>

Table ES-1. (Continued)

	Impact	Impact Category	Applicable Alternative	Mitigation Measures
				<p>B. <u>Per geologic feasibility studies prepared by The Geoservices Group, options to mitigate the impact of debris slides may include removal of the weathered, debris-slide prone surficial soil zone during reservoir grading; construction of debris catchment measures such as debris fences, a bench/perimeter road to catch debris; or debris basins</u>Per Geoservices' Geologic Feasibility Study, options to mitigate the impact of debris slides may include removal of the weathered, debris-slide prone surficial soil zone during reservoir grading; construction of debris catchment measures such as debris fences, a bench/perimeter road to catch debris; or debris basins; and,</p> <p>C. <u>Consistent with General Plan Policy PS-1f, a geologic study report shall be prepared under direction of the SCWA for each reservoir site prior to construction. Each report shall describe the hazards and include mitigation measures to reduce risks to acceptable levels. The design specifications for each reservoir site shall provide an engineer's or geologist's certification that risks have been mitigated to an acceptable level. To assess whether large landslides are present in dam and reservoir areas beyond those already evaluated, The Geoservices Group recommended further evaluation by performing subsurface exploration to determine if in-place bedrock is present as part of each geologic study report.</u>Consistent with General Plan Policy PS-1f, a geologic study report shall be prepared under direction of the SCWA for each reservoir site prior to construction. Each report shall describe the hazards and include mitigation measures to reduce risks to acceptable levels. The design specifications for each reservoir site shall provide an engineer's or geologist's certification that risks have been mitigated to an acceptable level. To assess whether large landslides are present in dam and reservoir areas beyond those already evaluated, Geoservices recommends further evaluation by performing subsurface exploration to determine if in-place bedrock is present as part of each geologic study report.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
GEO-2	NSCARP components may be subject to ground rupture due to location near a surface trace of an active fault as measured by location of facilities within an Alquist-Priolo Earthquake Fault Zone.	Significant but Mitigable	2, 3, 4	<p>NSCARP facilities shall be sited to avoid Alquist-Priolo buffer zones, as determined by the CGS, as much as feasible. Per conclusions in geologic feasibility studies prepared by The Geoservices Group, the feasibility of construction of DSOD jurisdictional-size dams in reservoir locations will require additional evaluation of the surface fault rupture hazards, as proposed reservoirs located in the eastern portions of the Northern Alexander and Alexander Valley sub-areas would be located in close proximity to the Maacama Fault line. A major earthquake would subject the proposed recycled water pipeline alignments to ground motion and, under extreme conditions, could potentially cause material failure or piping connection failure leading to rupture and release of water. However, the pipeline and associated structures would be designed to accommodate site-specific ground motions greater than those anticipated for this region. Measures to be implemented would include:</p> <p>NSCARP facilities shall be sited as to avoid Alquist-Priolo buffer zones, as determined by the CGS, as much as feasible. Per Geoservices' conclusions, the feasibility of construction of DSOD jurisdictional-size dams in reservoir locations will require additional evaluation of surface fault rupture hazards, as proposed reservoirs located in the eastern portions of the Northern Alexander and Alexander Valley sub-areas would be located in close proximity to the Maacama Fault line. A major earthquake would subject the proposed recycled water pipeline alignments to ground motion and under extreme conditions, and could potentially cause material failure or piping connection failure leading to rupture and release of water; however, the pipeline and associated structures would be designed to accommodate site specific ground motions greater than those anticipated for this region. Measures to be implemented would include:</p> <ul style="list-style-type: none"> • Engineering designs, construction practices and materials such as flexible pipes, shall be implemented in a manner that would be resistant to damage from rupture; and,

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> Performing a limited number of backhoe test pits/trenches across the trace of faults, to observe the units offset by the fault rupture surface and to identify the youngest geologic units offset by the fault.
GEO-3	NSCARP components will be located in areas with soils and groundwater conditions that are susceptible to liquefaction during an earthquake, as measured by geotechnical assessments or detailed mapping.	Significant but Mitigable	2, 3, 4	Prior to the approval of construction plans for the proposed project components, design-level geotechnical investigations, including collection of site-specific subsurface data, shall be completed by a qualified geotechnical engineer. The geotechnical evaluations shall include identification of density profiles, estimation of approximate maximum shallow groundwater levels, and development of site-specific design criteria to mitigate potential risks.
GEO-4	NSCARP has a low potential to induce seismicity as measured by induced groundshaking intensity.	Less than Significant	2, 3, 4	None required.
GEO-5	NSCARP facilities could potentially be damaged by earthquake-induced groundshaking.	Less than Significant	2, 3, 4	None required.
GEO-6	NSCARP construction has a low probability to cause off-site water-related erosion.	Less than Significant	2, 3, 4	None required.
GEO-7	NSCARP components may be vulnerable to damage due to expansive or corrosive soils.	Significant but Mitigable	2, 3, 4	Under the direction of the SCWA, a qualified geotechnical engineer shall conduct site-specific geotechnical investigations in the areas where pipelines and pumping stations would be sited prior to construction. The investigations shall identify appropriate engineering considerations as recommended by a certified engineering geologist or registered geotechnical engineer for planned facilities, including engineering considerations to mitigate the effects of expansive and corrosive soils. Recommendations made as a result of these investigations to protect pipelines and pumping stations from expansive and corrosive soils shall be incorporated into project design specifications.

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
GEO-8	NSCARP components may be an incompatible land use type in the MRZ-2 classification or designated quarry area.	Significant but Mitigable	2, 3, 4	The SCWA shall ensure proposed pipelines be sited so as to avoid MRZ-2 zones and achieve compatible land use as much as feasible. Recommendations for siting pipelines shall be incorporated into design specifications prior to construction.
GEO-9	NSCARP components have a low probability to adversely affect hot springs, or other unique geological features.	No Impact	2, 3, 4	None required.
3.8 Hydrology and Water Quality				
HWQ-1	Construction of NSCARP could result in increased erosion and subsequent sedimentation, degradation of surface runoff quality, with impacts to water quality.	Significant but Mitigable	2, 3, 4	<p>The SCWA shall file a NOI prior to construction, direct the contractor to develop and implement a SWPPP, and file a Notice of Termination (NOT) at the end of construction. The SWPPP shall be maintained at the site for the entire duration of construction.</p> <p>The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater discharge and to implement BMPs to reduce pollutants in stormwater discharges. The SWPPP for this proposed action shall include the implementation, at a minimum, of the following elements:</p> <ul style="list-style-type: none"> • Source identification; • Preparation of a site map; • Description of construction materials, practices, and equipment storage and maintenance; • List of pollutants likely to contact stormwater; • Estimate of the construction site area and percent impervious area;

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • Erosion and sedimentation control practices, including soils stabilization, revegetation, and runoff control to limit increases in sediment in stormwater runoff, such as detention basins, straw bales, silt fences, check dams, geofabrics, drainage swales, and sandbag dikes; • Proposed construction dewatering plans; • List of provisions to eliminate or reduce discharge of materials to stormwater; • Description of waste management practices; • Spill prevention and control measures; • Maintenance and training practices; and • Sampling and analysis strategy and sampling schedule for discharges from construction activities
HWQ-2	Construction activities associated with excavation could result in the dewatering of shallow groundwater resources and contamination of surface water.	Significant but Mitigable	2, 3, 4	<p>The SCWA shall comply with the following NPDES permit requirements imposed by the RWQCB for dewatering activities:</p> <ul style="list-style-type: none"> • The NCRWQCB would require compliance with certain provisions in the permit, such as treatment of flows prior to discharge. As such, the SCWA shall discharge the groundwater generated during dewatering with authorization of and required permits from the NCRWQCB; and • The SCWA shall comply with applicable permit conditions associated with the treatment of groundwater prior to discharge.
HWQ-3	NSCARP would increase the amount of impervious surfaces that, in turn, would alter the drainage pattern or increase local storm runoff volumes that could exceed the capacity of onsite drainage systems. This could cause localized flooding or contribute to a cumulative flooding impact downstream.	Less than Significant	2, 3, 4	None required

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
HWQ-4	Operation of NSCARP has the potential to degrade groundwater quality and alter groundwater flows (discussion of potential public health and safety impacts are discussed in Section 3.12 “Public Health and Safety”).	Significant but Mitigable	2, 3, 4	<p>a) <u>The SCWA shall construct the reservoirs with clay liners or equivalent that meet the specifications of, and are approved by, NCRWQCB and the California Department of Water Resources, Division of Safety of Dams (DSOD) in order to be fully protective of groundwater. Site-specific geotechnical engineering studies and civil engineering plans will be prepared for each of the reservoir sites. The range of potential requirements that will be implemented to ensure that treated water does not percolate through the bottom of the reservoir may include the following: specific soil compaction requirements, use of soil admixtures to decrease permeability, use of imported low-permeability clay materials as a liner, or the use of impermeable manufactured liners. Following construction, the SCWA shall regularly monitor the reservoirs to determine whether there is any adverse effect to the reservoir liners.</u></p> <p>b) <u>Following construction, the SCWA shall implement a groundwater monitoring program. If groundwater monitoring indicates that levels have the potential to exceed established MCLs at storage reservoirs, the SCWA shall investigate the integrity of the liner(s) to determine whether any repairs area necessary, and to affect such repairs to protect groundwater.</u></p> <p>c) <u>To assure recycled water is compliant with applicable water quality standards, SCWA will develop a water monitoring program. The program will include the testing of groundwater quality identified under item b) above and, at a minimum, the following components:</u></p> <p>i. <u>Periodic review of effluent discharge records from participating wastewater treatment plants;</u></p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>ii. <u>Periodic random testing of surface water quality within reservoirs to determine levels are within MCLs specified by the NCRWQCB. The constituents tested will be based on NCRWQCB requirements, and will be adjusted as new compounds and or changes in MCLs occur.</u></p> <p>iii. <u>The results of the testing and monitoring will be reported to NCRWQCB on a periodic basis as required. If the results indicate that MCLs have been exceeded to a point that significant degradation of groundwater quality could occur, SCWA will coordinate with NCRWQCB to institute appropriate corrective actions, which could include alternating recycled water application with surface and groundwater application, dilution of reservoir water with pumped groundwater, repair and or upgrading of treatment facilities, etc.</u></p> <p>iv. <u>The monitoring reports will be available for public review on the SCWA website or by visiting the SCWA offices.</u></p> <p>Following construction, the SCWA shall implement a groundwater monitoring program. If groundwater monitoring finds that levels have exceeded established MCLs at storage reservoirs, the SCWA shall investigate the integrity of the clay liner(s) to determine whether any repairs area necessary.</p>
HWQ-5	During the winter months, high seasonal groundwater could intercept the bottom of the proposed reservoirs and possibly rise to a depth above the bottom of the reservoir. The pressure of groundwater could compromise the structural integrity of the reservoirs.	Significant but Mitigable	2, 3, 4	<u>Implement Mitigation Measure HWQ-4. If determined necessary, the SCWA shall construct the reservoirs with clay liners, which should not be affected by high groundwater levels. Following construction, the SCWA shall regularly monitor the reservoirs to determine whether there is any adverse effect to the reservoir liners. If necessary, the SCWA shall make necessary repairs.</u>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
HWQ-6	NSCARP could expose people or property to risks related to flooding.	Significant but Mitigable	2, 3, 4	<p>A. The SCWA shall adhere to the standards set by the DSOD California Department of Water Resources Division of Safety of Dams in the design and construction of the dams and berms for the reservoirs. The DSOD Division of Safety of Dams believes that adherence to these design and construction standards greatly reduces the probability of dam failure and is protective of public safety (Head, 1996).The SCWA shall adhere to the standards set by the California Department of Water Resources Division of Safety of Dams in the design and construction of the dams and berms for the reservoirs. The Division of Safety of Dams believes that adherence to these design and construction standards greatly reduces the probability of dam failure and is protective of public safety (Head 1996); and,</p> <p>B. During operation, the SCWA shall visually inspect the reservoirs on a regular basis to ensure that the embankments, control structures, access roads, and monitoring instrumentation are maintained. SCWA shall remove, if found, any impediments from the spillways and other control structures as soon as they are observed.</p>
HWQ-7	NSCARP could would increase summer flows in the tributaries of the Russian River and help maintain storage levels in Lake Mendocino, which would improve habitat for fish.	Beneficial	2, 3, 4	None required
HWQ-8	NSCARP could potentially cause groundwater mounding or increase groundwater levels that cause surface water discharge in a non-stream environment.	Less than Significant	2, 3, 4	None required

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
HWQ-9	Operation of NSCARP could result in indirect/direct discharge or dam seepage that result in potential water quality impacts	Significant but Mitigable	2, 3, 4	The SCWA shall incorporate the following standard engineering mitigation measures into the final design of the pipelines to minimize the effects of pipeline ruptures: <ul style="list-style-type: none"> • Flexible joints • Welded joints • Pressure sensors • Visual inspection
3.9 Land Use				
LU-1	NSCARP has the potential to physically divide a community.	Less than Significant	2, 3, 4	None required
LU-2	NSCARP has the potential to conflict with goals, objectives, and policies identified in the Sonoma County General Plan.	Significant and Unavoidable	2, 3, 4	Implement Mitigation Measure AG-1
LU-3	The Proposed Project has the potential to conflict with the USFWS Recovery Plan for California Freshwater Shrimp and the Recovery Plan for the California Red-Legged Frog.	Less than Significant	2, 3, 4	None required
LU-4	NSCARP has the potential to introduce inappropriate uses in a Community Separator.	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure AES-1
3.10 Noise				
NOI-1	Construction or operation of the NSCARP may generate noise levels in excess of standards established in the local general plan, noise ordinance, or applicable standards of other agencies.	Significant but Mitigable	2, 3, 4	A. The SCWA shall ensure that noise disturbances at sensitive receptors during construction activities are reduced, per the County of Sonoma's General Plan Noise Element standards and the State Office of Noise Control Construction Noise Limits, to the extent feasible. Measures may include:

Table ES-1. (Continued)

	Impact	Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • Equipment with improved noise muffling shall be used, and manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators, shall be intact and operational; • Construction equipment shall require weekly inspection to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.); • Wherever possible, hydraulic tools shall be used instead of pneumatic impact tools; • Construction activities shall be limited to the hours between 7:00 a.m. and 7:00 p.m.; • Where feasible, heavy truck trips shall be routed over streets or roads that will cause the least noise disturbance to residences or businesses in the vicinity of the construction activity; • Where feasible, –construction staging areas, maintenance yards, and other construction-oriented operations shall be located to limit potential impacts to sensitive receptors; and, • Significantly affected sensitive noise receptors shall be specifically identified and notified in advance to keep windows and doors closed during peak construction activity. <p><u>B. A qualified noise engineer shall assist in the final design of the pump stations. In general, the locations of the pump stations are not in close proximity to sensitive noise receptors; however, at least one station has a residence approximately 100 feet, with four others approximately 500 feet away. Standard noise-reducing measures as part of design specifications may include:</u></p> <ul style="list-style-type: none"> • <u>Noise barriers erected of concrete, masonry, noise control paneling, earth berm, or other noise-absorbing materials;</u>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • <u>Openings, such as for ventilation and doors, that face away from the sensitive receptors;</u> • <u>Exterior doors constructed of metal assemblies, which are weather-stripped to form an airtight seal when closed;</u> • <u>Acoustical louvers may be used for the pump station housing air ventilation openings. As an alternative to the acoustical louvers, the SCWA may utilize an air intake/exhaust plenum ("L" shaped structure) as part of the final engineering design of the pump stations;</u> • <u>Low-noise pumps;</u> • <u>Water-cooling of pumps; and,</u> • <u>Walls of pump stations made of sound insulating materials such as masonry.</u>
NOI-2	NSCARP construction activities may result in generation of excessive ground-borne vibration levels.	Significant but Mitigable	2, 3, 4	Construction contractors selected by the SCWA shall utilize techniques that minimize ground-borne vibration (e.g., locate equipment as far away from sensitive receptors as feasible and avoid operating multiple pieces of equipment simultaneously near sensitive receptors) to the greatest extent feasible. These measures shall be incorporated into project specifications prior to commencement of construction.
NOI-3	Operation of the NSCARP may cause a substantial permanent increase in ambient noise levels above existing noise levels in the project vicinity.	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure NOI-1
NOI-4	NSCARP potentially will expose people to noise in the vicinity of a public or private airport	Significant but Mitigable	2, 3, 4	SCWA shall assure all construction workers at the airport will comply with hearing protection measures. This would reduce the potential for permanent hearing loss and reduce the potential impact to less than significant levels.

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
3.11 Population and Housing				
POP-1	NSCARP would extend recycled water infrastructure within the project area.	Less than Significant	2, 3, 4	None required
POP-2	NSCARP would have the potential to displace existing housing.	Less than Significant	2, 3, 4	None required
POP-3	NSCARP would have the potential to displace substantial numbers of people.	Less than Significant	2, 3, 4	None required
3.12 Public Health and Safety				
PUB-1	NSCARP may potentially expose workers or the public to contaminated soils during excavation activities, causing an increase in the risk of exposure.	Significant but Mitigable	2, 3, 4	<p>Prior to construction, the SCWA shall develop, and subsequently implement during construction, a Construction Management Program (CMP). Potential hazardous waste release sites would be identified prior to construction by performing an Initial Site Assessment as part of the CMP to identify hazardous waste release sites within 500 feet of pipeline and pump stations construction, as well as reservoir facilities. Identification and proper management of any contaminated groundwater encountered during construction would mitigate impacts to a less than significant level.</p> <p>The following measures may be included as part of the CMP:</p> <ul style="list-style-type: none"> In the vicinity of hazardous materials/waste release sites, construction activities related to the project that require excavation or exposure of soil or groundwater shall be monitored by the contractor for subsurface contamination. The SCWA shall notify responsible agencies if any hazardous materials/wastes are encountered. Monitoring shall include, at minimum, visual observation by personnel with appropriate hazardous materials training, including 40 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) training;

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> In the vicinity of hazardous materials/waste release sites, groundwater brought to the surface as a result of construction dewatering shall be handled in a manner appropriate to the construction-related permits for dewatering. If contamination is suspected or noted during the construction phase, then the groundwater shall be containerized and analyzed for contamination by a laboratory, certified by the CalEPA Environmental Laboratory Accreditation Program (ELAP), using USEPA-approved analytical methods. Where contaminated groundwater is encountered, precautions shall be taken to assure that the installation of piping or other construction activities do not further disperse contamination; and, All potentially contaminated materials encountered during project construction activities shall be evaluated in the context of applicable local, state, and federal regulations and/or guidelines governing hazardous waste. All materials deemed to be hazardous shall be remediated and/or disposed of following applicable regulatory agency regulations and/or guidelines. Disposal sites for both remediated and non-remediated soils shall be identified prior to beginning construction. Management of these sites shall be documented in a Material Management Plan acceptable to applicable agencies. All evaluation, remediation, treatment and/or disposal of hazardous waste shall be supervised and documented by qualified hazardous waste personnel.
PUB-2	NSCARP could result in an accidental upset of hazardous materials used during construction that increases the risk of exposure to the environment, workers, and the public.	Significant but Mitigable	2, 3, 4	A. Consistent with the SWPPP requirements identified in Section 3.8 Hydrology and Water Quality, SCWA shall require the contractor to implement Best Management Practices (BMPs) for handling hazardous materials onsite. The use of construction BMPs will minimize adverse effects on groundwater and soils, and will include, without limitation, the following:

Table ES-1. (Continued)

Impact	Impact Category	Applicable Alternative	Mitigation Measures
			<ul style="list-style-type: none"> • Follow manufacturers' recommendations and regulatory requirements for use, storage, and disposal of chemical products and hazardous materials used in construction; • Avoid overtopping construction equipment fuel gas tanks; • During routine maintenance of construction equipment, properly contain and remove grease and oils; and • Properly dispose of discarded containers of fuels and other chemicals. <p>B. SCWA shall follow the provisions of California Code of Regulations, Title 8, Sections 5163 through 5167 for General Industry Safety Orders to protect the project area from being contaminated by the accidental release of any hazardous materials and/or wastes. Disposal of all hazardous materials will be in compliance with applicable California hazardous waste disposal laws. SCWA will contact the local fire agency and the County Department of Public Health, Environmental Health Division, for any site-specific requirements regarding hazardous materials or hazardous waste containment or handling;</p> <p>C. In the event of an accidental release of hazardous materials during construction, containment and clean up shall occur in accordance with applicable regulatory requirements;</p> <p>D. Oil and other solvents used during maintenance of construction equipment shall be recycled or disposed of in accordance with applicable regulatory requirements. All hazardous materials shall be transported, handled, and disposed of in accordance with applicable regulatory requirements.</p> <p>E. If hazardous materials are encountered during construction activities, the contractor will be required to halt construction immediately and notify the SCWA Construction Compliance Section. Disposal of all hazardous materials will be in compliance with all applicable California hazardous waste disposal laws.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				F. Prepare and implement a Safety Program to ensure the health and safety of construction workers and the public during project construction. The Safety Program will include an injury and illness prevention program, a site-specific Safety Plan, and information on the appropriate personal protective equipment to be used during construction.
PUB-3	Operation of NSCARP facilities would require the use of hazardous materials and may increase the risk of exposure to hazardous materials.	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure PUB-2(B)
PUB-4	NSCARP may expose the public to safety hazards associated with operation of heavy machinery, vehicles, or equipment; or creation of accessible excavations.	Less than Significant	2, 3, 4	None required
PUB-5	Construction activities in grassland areas would have the potential to expose people or equipment to risk or loss, injury, or death involving wildland fires.	Significant but Mitigable	2, 3, 4	A. Prior to construction, the SCWA shall work closely with local fire agencies to develop a fire safety plan that describes various potential scenarios and actions to be implemented in the event of a fire; B. During construction, all staging areas, welding areas, or areas slated for construction using spark-producing equipment shall be cleared of dried vegetation or other material that could ignite. Any construction equipment that includes a spark arrestor shall be equipped with a spark arrestor in good working condition. During the construction of the project, SCWA shall require all work vehicles and construction crews to have access to functional fire extinguishers at all times.
PUB-6	NSCARP could potentially cause an increase in the exposure of the public to disease vectors (i.e., mosquitoes).	Significant but Mitigable	2, 3, 4	The SCWA shall, where feasible, design NSCARP facilities in a manner that minimizes favorable conditions for the development of potential mosquito habitat as described in the DHS and the Marin/Sonoma Mosquito Abatement District's Criteria for Mosquito Prevention in Wastewater Reclamation or Disposal Projects. The criteria identify three

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<p>general principles of mosquito control: (1) the manipulation of the physical features of the impoundment, (2) biological control, and (3) chemical control. Specific measures could potentially include:</p> <ul style="list-style-type: none"> • Water bodies shall have an access ramp constructed on an inside slope for launching a small boat to conduct midge sampling and control; • A maintenance program for weeds and erosion control on the inner slopes of the water body; • Biological controls shall be used, such as stocking the reservoir with mosquito fish (<i>Gambusia affinis</i>); and, • Irrigation sites shall not have water ponding deeper than one inch for a period greater than four days during the breeding season.
PUB-7	NSCARP would result in the use of recycled water for agricultural irrigation. The recycled water applied to the irrigated lands could possibly affect public health.	Significant but Mitigable	2, 3, 4	<p>A. The SCWA shall require that a Recycled Water User Agreement (RWUA), an agreement between SCWA and each water user, be developed prior to the water user receiving recycled water. The RWUA shall include provisions that require recycled water to be applied compatible with good farming practices on land, consistent with runoff, ponding, and environmental restrictions (complying with Title 22 requirements) such as prohibit the over-application of recycled water (and subsequent ponding or surface runoff). Continued implementation of these measures would ensure that Title 22 requirements are met, that surface waters are protected, and that potential impacts to groundwater levels and water quality would be minimized, thus, ensuring no impact to public health. The SCWA shall be responsible for periodic monitoring of each NSCARP water user's practices to ensure that their ongoing use of the recycled water is consistent with Title 22 requirements and the RWUA.</p> <p>B. Implement Mitigation Measure HWQ-4.</p>

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
PUB-8	NSCARP would result in the storage of recycled water, which could possibly affect public health.	No Impact	2, 3, 4	None required
PUB-9	NSCARP could potentially result in release of recycled water from pipelines that could possibly affect public health.	Less than Significant	2, 3, 4	None required
PUB-10	NSCARP recycled water may contain unregulated compounds, such as EDCs, which could affect public health.	N/A	2, 3, 4	<p>Because of the evolving research on the issue of EDCs and xenobiotics, SCWA will perform the following:</p> <ul style="list-style-type: none"> • Monitor on-going research to stay abreast of the state-of-the-science concerning EDCs and Xenobiotics; • Consult and coordinate with the RWQCB, USEPA, and other regulatory agencies on developing standards and promulgating regulations; • Implement appropriate treatment technologies, as required by regulatory agencies; and, • Formulate and implement adaptive management procedures to respond to changes in regulations.
3.13 Recreation				
REC-1	NSCARP could result in increased use, or deterioration of existing recreation facilities.	Less than Significant	2, 3, 4	None required
REC-2	NSCARP could result in temporary access restrictions at existing recreation facilities.	Less than Significant	2, 3, 4	None required

Table ES-1. (Continued)

Impact	Impact Category	Applicable Alternative	Mitigation Measures
3.14 Transportation/Traffic			
TRA-1	NSCARP potentially would cause an increase in local traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-volume-to- capacity ratio on roads, or congestion at intersections).	Significant but Mitigable	2, 3, 4 <p>A. The SCWA shall adopt and implement a Traffic Control Plan prior to commencing project construction, which will include measures for reducing construction-related impacts to traffic and accessibility within the project area. The Traffic Control Plan shall include, but not be limited to, the following measures:</p> <ul style="list-style-type: none"> • Coordinate with the affected residents, businesses and agencies regarding construction hours of operation and lane closures; • Follow guidelines of the local jurisdiction for road closures caused by construction activities; • Coordinate with the Sonoma County Transit System and the applicable school districts on construction hours of operation, lane closures, and temporary bus route delays; • Encourage construction contractors to carpool to and from work sites to reduce overall number of worker-vehicle trips; • Limit lane closures during peak commuting hours to the extent possible; • Install traffic control devices as specified in the Caltrans' Manual of Traffic Controls for Construction and Maintenance Works Zones; • Provide public notification of road closures and detour routing for all vehicle detours and lane shifts in the immediate vicinity of the open trenches in the construction zone; • Provide access to driveways and private roads outside the immediate construction zone; • Develop a business notification plan for access to local business in and adjacent to the construction zone;

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • Provide notification to the public of temporary closures of sidewalks, bicycle lanes, and recreation trails; and, • Consult with emergency service providers and develop an emergency access plan for emergency vehicles access in and adjacent to the construction zone. <p>B. The SCWA shall obtain and comply with local road encroachment permits for roads that are affected by construction activities prior to any construction activity within public roads and rights-of-way.</p>
TRA-2	The SCWA shall obtain and comply with local road encroachment permits for roads that are affected by construction activities prior to any construction activity within public roads and rights-of-way.	Less than Significant	2, 3, 4	None required
TRA-3	NSCARP construction potentially could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less than Significant	2, 3, 4	None required
TRA-4	NSCARP construction potentially could result in significant traffic delays resulting in inadequate emergency access.	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure TRA-1
TRA-5	NSCARP potentially could result in inadequate parking capacity (especially during construction activities) or inadequate business/residence access.	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure TRA-1
TRA-6	NSCARP potentially could conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure TRA-1

Table ES-1. (Continued)

Impact	Impact Category	Applicable Alternative	Mitigation Measures	
3.15 Utilities/Service Systems				
UTL-1	NSCARP could potentially exceed wastewater treatment requirements of the North Coast Regional Water Quality Control Board.	Less than Significant	2, 3, 4	None required
UTL-2	NSCARP potentially could require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects or result in inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.	Beneficial	2, 3, 4	None required
UTL-3	NSCARP potentially could require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than Significant	2, 3, 4	None required
UTL-4	NSCARP potentially may require a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs and comply with federal, state, and local statutes and regulations related to solid waste.	Less than Significant	2, 3, 4	None required
UTL-5	NSCARP potentially could result in un-repaired damage or an extended disruption in service provided by a utility.	Significant but Mitigable	2, 3, 4	<p>A. The SCWA shall identify utilities along the affected portions of the NSCARP prior to construction. For locations with adverse impacts, the following mitigations shall be implemented:</p> <ul style="list-style-type: none"> • Utility locations shall be verified through the use of the Underground Service Alert services and/or field survey (potholing);

Table ES-1. (Continued)

	Impact	Impact Category	Applicable Alternative	Mitigation Measures
				<ul style="list-style-type: none"> • As necessary, detailed specifications shall be prepared as part of the design plans to include procedures for the excavation, support, and fill of areas around utility cables and pipes. All affected utility services shall be notified of construction plans and schedule. Arrangements shall be made with these entities regarding protection, relocation, or temporary disconnection of services; • In areas where the pipeline would parallel underground utility lines within five feet, the SCWA shall employ special construction techniques. These special measures, which shall be included in the engineering specifications, shall include trench wall-support measures to guard against trench wall failure and possible resulting loss of structural support for the excavated areas; and, • Residents and businesses in the project corridor shall be notified of any planned utility service disruption two to four days in advance, in conformance with county and state standards. <p>B. In conjunction with Mitigation Measure UTL-1, the following measures shall be implemented:</p> <ul style="list-style-type: none"> • Disconnected cables and lines shall be reconnected promptly; • The SCWA shall observe DHS standards which require (1) a 4-foot horizontal separation between parallel disinfected tertiary recycled water lines and water mains (gravity or force mains); and (2) 1-foot vertical separation between perpendicular water and disinfected tertiary recycled water line crossings (water line above recycled water line). In the event that separation requirements can not be maintained, the SCWA shall obtain DHS variance; and, • The SCWA shall coordinate final construction plans and specifications with affected utilities.

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
UTL-6	NSCARP potentially could result in the need for new or expanded police protection, fire protection, and/or school facilities.	No Impact	2, 3, 4	None required
UTL-7	NSCARP potentially could exceed planned electrical supply capacity of the electrical service provider servicing the region.	Less than Significant	2, 3, 4	None required
4.0 Cumulative Impacts				
AES	The NSCARP could potentially contribute to cumulatively significant impacts to aesthetics and visual resources.	Less than Significant	2, 3, 4	None required
AG	The NSCARP could potentially contribute to cumulatively significant impacts to agricultural resources.	Significant and Unavoidable	2, 3, 4	None available
AQ	The NSCARP could potentially contribute to cumulatively significant impacts to air quality.	Less than Significant	2, 3, 4	None required
BIO	The NSCARP could potentially contribute to cumulatively significant impacts to biological resources.	Significant and Unavoidable	2, 3, 4	None available
CUL	The NSCARP could potentially contribute to cumulatively significant impacts to cultural resources.	Less than Significant	2, 3, 4	None required
ENV	The NSCARP could potentially contribute to cumulatively significant impacts to environmental justice.	Less than Significant	2, 3, 4	None required
GEO	The NSCARP could potentially contribute to cumulatively significant impacts to geology and soils.	Less than Significant	2, 3, 4	None required

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
HWQ	The NSCARP could potentially contribute to cumulatively significant impacts to hydrology/water quality.	Less than Significant	2, 3, 4	None required
LU	The NSCARP could potentially contribute to cumulatively significant impacts to land use.	Less than Significant	2, 3, 4	None required
NOI	The NSCARP could potentially contribute to cumulatively significant impacts from noise.	Less than Significant	2, 3, 4	None required
POP	The NSCARP could potentially contribute to cumulatively significant impacts to population and housing.	Less than Significant	2, 3, 4	None required
PUB	The NSCARP could potentially contribute to cumulatively significant impacts to public health and safety.	Less than Significant	2, 3, 4	None required
REC	The NSCARP could potentially contribute to cumulatively significant impacts to recreation.	Less than Significant	2, 3, 4	None required
TRA	The NSCARP could potentially contribute to cumulatively significant impacts to transportation/traffic.	Significant but Mitigable	2, 3, 4	Mitigation Measure CUM-1: Incorporate and implement the following measure from the Traffic Control Plan: The SCWA shall communicate and coordinate project construction activities with other agencies in the NSCARP area, possibly including PG&E, Sonoma County Department of Transportation and Public Works, and Caltrans. Phasing of project construction shall be coordinated when feasible to minimize cumulative impacts. Furthermore, the SCWA shall coordinate, with any appropriate agency, traffic mitigation measures to minimize the cumulative effect of simultaneous construction activity in overlapping areas, including utility disruptions.
UTL	The NSCARP could potentially contribute to cumulatively significant impacts to utilities and service systems.	Significant but Mitigable	2, 3, 4	Implement Mitigation Measure CUM-1

Table ES-1. (Continued)

Impact		Impact Category	Applicable Alternative	Mitigation Measures
5.0 Growth-Related Effects				
GRO-1	Growth Related to Direct and Indirect Employment	Less than Significant	2, 3, 4	None required
GRO-2	Growth Related to New Housing	Less than Significant	2, 3, 4	None required
GRO-3	Growth Related to Removing Obstacles to Growth (Provision of Additional Recycled Water)	Less than Significant	2, 3, 4	None required