3.13 Recreation

This section describes the existing recreational areas and facilities in the action area and the federal, state, and local regulations that would apply to the North Bay Water Recycling Program (NBWRP). This section evaluates the potential impacts to recreational areas that could result from implementation of NBWRP. The Impacts and Mitigation Measures section defines significance criteria used for the impact assessment and presents a discussion of potential project-related impacts. Determination of significance of impacts in this EIR/EIS apply only to CEQA, not to NEPA.

3.13.1 Affected Environment/Setting

LGVSD

California State Parks

The California State Parks Department owns and operates China Camp State Park, which serves as the eastern anchor of a series of outdoor recreational areas that extend through Marin County. The park features the natural watershed along the shores of San Francisco Bay, an extensive intertidal salt marsh, meadow and oak habitats. The LGVSD the Partially Connected System components are in the vicinity of China Camp State Park.

North Bay Regional Trails

The San Francisco Bay Trail

The Association of Bay Area Government (ABAG) manages and maintains the Bay Trail, which is a planned recreational corridor that, when complete, will encircle San Francisco and San Pablo Bays with a continuous 500-mile network of bicycling and hiking trails. The trail will connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major toll bridges in the region. The Bay Trail Plan, adopted by ABAG in July 1989, includes a proposed alignment; a set of policies to guide the future selection, design and implementation of routes; and strategies for implementation and financing. The proposed Phase 1 pipeline alignment that would extend from Hamilton Field to the LGVSD WWTP would be adjacent to the trail.

Bay Area Ridge Trail

Bay Area Ridge Trail Council (Council), consisting of representatives of the Golden Gate National Recreation Area and the Greenbelt Alliance, manages and maintains the Bay Area Ridge Trail. The trail was established to preserve open space by creating managed public access to a trail along the ridge tops. With over 310 miles completed of the 550 miles dedicated, there are sections of the trail in all nine counties around the Bay. The trail is in the vicinity of the proposed LVGSD Phase 1 project.

City of San Rafael Recreational Facilities

Within San Rafael there are 19 City-owned parks plus the joint Mont Marin Homeowners Association/ City-owned-park for a total of 141 acres of parkland. There are two local parks in the vicinity of the NBWRP. Peacock Park is located in the vicinity of the proposed pipeline to Peacock Gap under the LVGSD Partially Connected System. The pipeline would lie north of the Peacock Gap County Club at Peacock Drive and San Pedro Road. This seven acre park includes tennis courts, 2 play structures, and an open grass area. Victor Jones Park is located in the project vicinity west of the Peacock Gap Country Club at Robinhood Drive and Lockwood Drive. **Table 3.13-1** lists the proximate recreational facilities in the LGVSD service area.

TABLE 3.13-1
EXISTING PARKS ADJACENT TO THE NBWRP FOR LGVSD

Park Facility	Location	Project Component	Ownership
China Camp State Park	North San Pedro Road	Alternative 2	State of California
Peacock Park	Peacock Drive and San Pedro Road	Alternative 2	City of San Rafael
John F. Mcinnis Park	Smith Ranch Road	Phase 1	Marin County

SOURCE: ESA, 2006.

The San Rafael Bicycle and Pedestrian Plan is the product of a collaborative effort of the City of San Rafael Department of Public Works, San Rafael Bicycle and Pedestrian Advisory Committee, consultants Alta Planning Design, and members of the public. The purpose of the plan is to integrate proposed bicycle and pedestrian infrastructure improvements into San Rafael's overall transportation plan. In the action area, there are existing Class II and Class III bikeways. In general, there are existing bikeways along North San Pedro Road and Smith Ranch Road, along LGVSD Phase 1 and the Partially Connected System of the recycled water pipelines.

Marin County Recreational Facilities

The Marin County Parks and Open Space Department owns and operates 459 acres of parks. In addition, 464 linear miles of trails are open to the public, including 26 miles of paved pathways. There are two County parks in the project vicinity. The Loma Verde Pacheo Valle, and Ignacio Valley Open Space Preserves are west of the LGVSD Phase 1 project. The preserves are owned by the Marin County Open Space District and provide a western ridgeline along Highway 101 north of San Rafael. The 277-acre open space area offers walking and nature trails. The John F. Mcinnis Park is located east of Highway 101 on Smith Ranch Road in San Rafael and is adjacent to the LGVSD WWTP. The 441-acre park, owned and operated by the Marin County Parks and Open Space Department, includes a 25,000 square foot skatepark, two softball fields, two soccer fields, a canoe launch, four tennis courts, a group picnic area. This park also includes the McInnis Park Golf Center, including a 9 hole course, driving range, miniature golf, batting cages, pro shop, clubhouse, and restaurant. As, shown in **Table 3.13-1**, the LGVSD Phase 1 recycled water alignment would be adjacent to this recreational facility.

The Marin County Department of Public Works has developed a Countywide Bicycle Plan (2001), which has evolved from the collaborative planning efforts of various Pedestrian and Bicycle Advisory Committees. The goal of the Bicycle Plan is to make Marin County a model community for alternative transportation by implementing safe bikeways and pedestrian networks. The plan describes existing bikeways and proposed bikeways that are estimated for completion within five to 25 years. There are three categories of bikeways:

- Class I Bicycle Pathway: a bike path for the exclusive use of bicycles. It is separated from the road by space or a barrier. A Class I bikeway may be on part of a road right-of-way or on a separate right-of-way.
- Class II Bicycle Lane: a bike lane on a right-of-way primarily used by bicycles. Motor vehicles and pedestrians are not permitted on Class II bikeways, although vehicle parking is permitted. Class II bike lanes are separated from motorized vehicle travel lanes by a solid white stripe.
- Class III Bicycle Route: a bike route which shares its right-of-way with either motor vehicles or pedestrians. Class III bike routes can include roadways with shoulder striping.

In the action area, there are existing Class II and Class III bikeways. In general, there are existing bikeways along Hamilton Parkway, Main Gate Road, and Hangar Avenue, along LGVSD Phase 1 of the recycled water pipelines. **Table 3.13-2** lists the existing bikeways and their locations relative to the NBWRP components.

TABLE 3.13-2
EXISTING AND PROPOSED BIKEWAYS AND RECREATIONAL TRAILS ADJACENT TO THE NBWRP FOR LGVSD

Bikeway or Trail Facility	Location	Project Component	Ownership	Status
Class II Bikeway	Hamilton Parkway	Novato South Service Area	City of Novato	Existing
Class II Bikeway	Hangar Avenue	Novato South Service Area	City of Novato	Existing
Class III Bikeway	Main Gate Road	Novato South Service Area	City of Novato	Existing
Class III Bikeway	North San Pedro Road	Peacock Gap Service Area	City of San Rafael	Existing
Class II/ III Bikeway	North San Pedro Road	Peacock Gap Service Area	City of San Rafael	Proposed
San Francisco Bay Trail	North San Pedro Road, Haner Road, Hamilton Parkway, Smith Ranch Road	Phase 1 and Peacock Gap Service Area	City of San Rafael/ City of Novato	Existing

SOURCE: ESA, 2006.

Novato SD

North Bay Regional Trails

The *Novato General Plan* requires Novato to "facilitate the development of an integrated trails system and a continuous Bay Trail that connects regional trails, schools, open space, parks, recreation facilities, and residential areas", as well as to "work with the Marin County Open Space District, ABAG, and other regional, state and federal agencies to implement the trail system as described in the Hamilton Bay Trail Public Access Plan, Marin Countywide Plan and ABAG Bay Trail Project", to "work with the Bay Area Ridge Trail Council to implement the Novato portion of the Bay Area Ridge Trail, encircling San Francisco Bay on ridge lines".

As discussed above two regional trails are in the vicinity of the NBWRP. The San Francisco Bay Trail is south of the Novato Phase 1. The Bay Trail is also in the vicinity of the Partially Connected System and Fully Connected System extensions to Sears Point. The Bay Area Ridge Trail, from Sir Francis Drake Blvd. to Lucas Valley Road, is also in the vicinity of the Phase 1 project.

City of Novato Recreational Facilities

The City of Novato owns over 59 acres of developed parks and 169 acres of undeveloped future park lands.

There are five parks in the vicinity of NBWRP that are owned and maintained by the City of Novato, which are listed in **Table 3.13-3**. Scottsdale Pond Park is located west of Highway 101 at Redwood Boulevard and Rowland Boulevard, adjacent to Phase 1 of NBWRP. It includes a pond, fishing pier, and gazebo. Arroyo Aviche Park is located at 1430 Johnson Street at Arthur Street and Taft Court, and is adjacent to the NBWRP. The park includes play structures, baseball field, and picnic and barbeque areas. The Hill Recreation Area, located at 1560 Hill Road, is located adjacent to the proposed Phase 1 pipeline alignment. The 12.4-acre facility includes baseball field, Multi-use turf area, restroom, soccer fields, senior center, and community hall. Slade Park, located at 593 Manuel Drive, is located east of the proposed central service area pipeline alignment. It includes a barbeque and picnic area, multi-use turf area, and play structure. Olive Park is located at 629 Plum Street, north of the Phase 1 pipe alignment in the northern service area. It includes baseball fields and a play structures.

TABLE 3.13-3
EXISTING AND PROPOSED PARKS ADJACENT TO THE NBWRP FOR NOVATO SD

Park Facility	Location	Project Component	Ownership	Status
Scottsdale Marsh/ Pond Park	Redwood Blvd. and Rowland Blvd.	Central Service Area	City of Novato	Existing
Arroyo Aviche Park	1430 Johnson Street	Central Service Area	City of Novato	Existing
Hill Recreation Area	1560 Hill Road	Central Service Area	City of Novato	Existing
Slade Park	593 Manuel Drive	Central Service Area	City of Novato	Existing
Olive Park	629 Plum Street	North Service Area	City of Novato	Existing

SOURCE: ESA, 2006.

The 2007 Novato Bicycle Plan provides for a citywide network of bicycle paths, lanes and routes, along with bicycle-related programs and support facilities, intended to ensure bicycling becomes a viable transportation option for people who live, work and recreate in Novato. Current bikeway network information was gathered from meetings with the Novato Bicycle/Pedestrian Advisory Committee and City staff, combined with information on proposed routes from the previously adopted City of Novato Bicycle Plan (1995). Relevant bikeway information was also gathered from the Marin County Unincorporated Area Bicycle and Pedestrian Master Plan (2001). As discussed above, there are existing and proposed Class I, Class II and Class III bikeways in the Novato SD action area. They are prominently along Redwood Boulevard, Olive Avenue, Rowland Boulevard, Hill Road, Atherton Boulevard, and Novato Avenue. These bikeways and their relationship to the NBWRP components are listed in **Table 3.13-4**.

TABLE 3.13-4
EXISTING AND PROPOSED BIKEWAYS AND RECREATIONAL TRAILS ADJACENT TO THE NBWRP FOR NOVATO SD

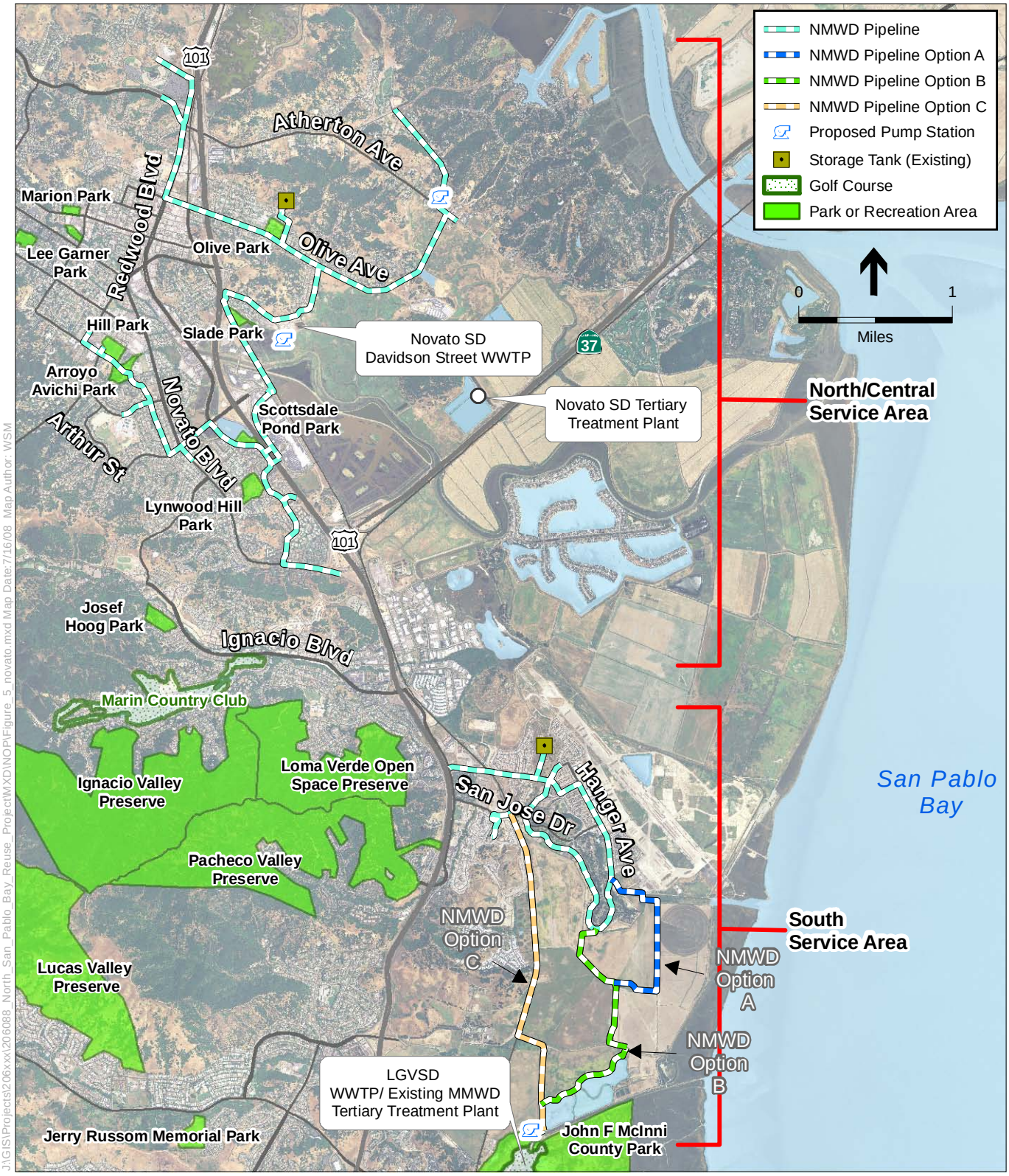
Bikeway or Trail Facility	Location	Project Component	Ownership	Status
Class II Bikeway	Novato Boulevard	Central Service Area	City of Novato	Existing
Class II Bikeway	Rowland Boulevard	Central Service Area	City of Novato	Existing
Class III Bikeway	Redwood Boulevard	Central Service Area	City of Novato	Existing
Class III Bikeway	Hill Road	Central Service Area	City of Novato	Existing
Class II Bikeway	Atherton Avenue	North Service Area	City of Novato	Existing
Class II Bikeway	Olive Avenue	North Service Area	City of Novato	Existing
Class II Bikeway	Connecting Atherton Avenue and San Marin Drive	North Service Area	City of Novato	Proposed
Class II Bikeway	Connecting Olive Avenue and Atherton Avenue	North Service Area	City of Novato	Proposed
San Francisco Bay Trail	Highway 37/ Sears Point Road	Phase 2 and 3	City of Novato	Proposed

SOURCE: ESA, 2006.

Marin County Recreational Facilities

As discussed above, the Marin County Department Parks and Open Space owns and operates 459 acres of parks. The Loma Verde Pacheo Valle, and Ignacio Valley Open Space Preserves are south of the action area, as shown in **Figure 3.13-1**. The preserves are owned by the Marin County Open Space District and provide a western ridgeline along Highway 101 north of the City of San Rafael. The 277-acre open space area offers walking and nature trails.

As discussed above, the Marin County Department of Public Works developed a Countywide Bicycle Plan to make Marin County a model community for alternative transportation by implementing safe bikeways and pedestrian networks. In the Novato SD action area there are both existing or proposed Class I, Class II and Class III bikeways along Redwood Boulevard, Olive Avenue, Rowland Boulevard, Hill Road, Atherton Boulevard, and Novato Avenue.



SOURCE: USDA, 2005; CDM, 2008; ESRI; 2008; and ESA, 2008

Note: Existing Tank Facilities Shown

NBWRA North Bay Water Recycling Program. 206088.01

Figure 3.13-1

Novato Service Area:
Phase 1 Projects with Recreation Areas

SVCSD

California State Parks

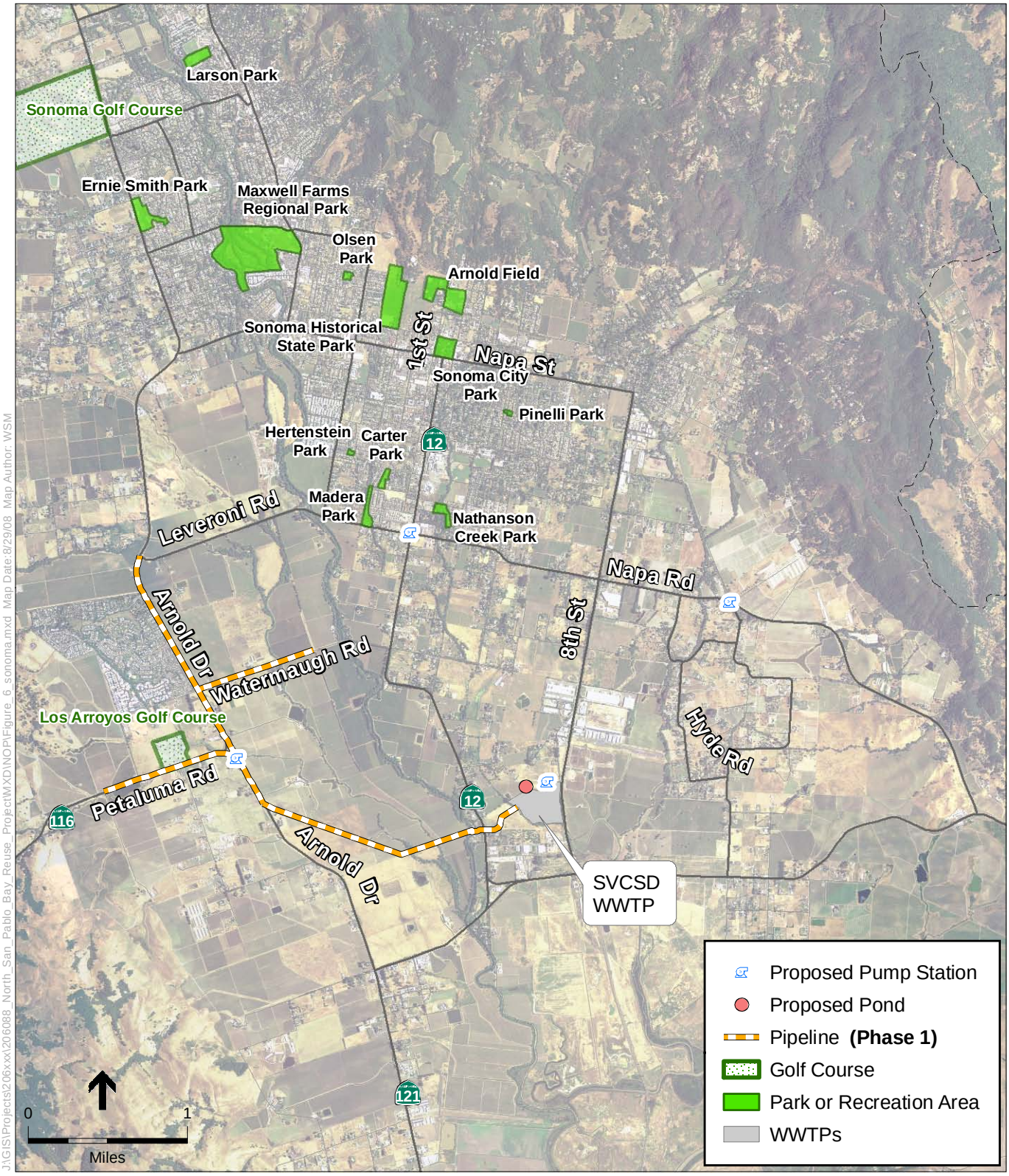
The California State Parks Department owns and operates Sonoma State Historic Park, which is bounded by 1st Street East, West Spain Street, and 4th Street West in Sonoma (see **Figure 3.13.2**). The 60-acre park includes museums and historic structures, a visitor center, guided tours, bike trails, and picnic areas. The park contains six sites: the Vallejo Home, which is located just south of the City of Sonoma storage tanks at the northern end of 3rd Street West and La Casa Grande; Mission San Francisco Solando de Sonoma; the Blue Wing Inn; the Sonoma Barracks; and the Toscano Hotel, which are located on East Spain Street near the intersection of 1st Street East. The Bike Path Segment-West of SVRWP Alignment 2 of the recycled water pipeline would occur near the park.

Recently, the Sonoma County Agricultural Preservation and Open Space District (District) purchased the 157-acre Montini Ranch, the greenbelt area just north of the City of Sonoma. One hundred acres of the ranch are expected to be to be incorporated into the Sonoma State Historic Park, and the remaining 57 acres will be protected through a conservation easement (Sonoma County Agricultural Preservation and Open Space District, 2006). The ranch consists of open grasslands and oak woodlands and would be available to the public for low-intensity uses such as hiking (Sonoma News, 2005). The District is planning new trails for the property that would connect to existing neighboring trails and the Sonoma Trail (described below).

The largest expanse of accessible public open space in proximity to most of the County residents is south of the city of Napa in the Napa-Sonoma salt marshes and Napa River floodplain, which is owned and managed by the California Department of Fish and Game (CDFG). This action area is composed of the Napa River Unit, and access to the northern action area requires travel through a portion of the Huichica Creek Unit of the Napa-Sonoma Marshes Wildlife Area (NSMWA). Both these areas are largely open to the public, although there is limited access because of a lack of trails on-site. CDFG provides two public parking lots, one on SR 37 and one north of the salt ponds at the end of Buchli Station Road. Access to the salt ponds is best accomplished by boat. Nearby boat launch facilities are provided on Cuttings Wharf Road and Skaggs Island Road. The area is used primarily for habitat purposes but is open to the public for various hunting activities and fishing. The CDFG has prepared a draft recreation and public use plan for the NSMWA. The marshes would be in the vicinity of the Partially Connected System project, as well as the No Action and Phase 1 Napa Salt Marsh project (JSA, 2004).

City of Sonoma Recreational Facilities

There are approximately 187 acres of parkland within and adjacent to the City of Sonoma (City of Sonoma, 1995). Recreational facilities along SVRWPAlignment 2 of the proposed recycled water pipeline include: Madera Park on Napa Road; Sonoma City Park (The Plaza) at the intersection of Broadway and Napa Street; Arnold Field, Field of Dreams, and Depot Park on 1st Street West, north of the Sonoma Multi-Use Trail; and Olson Park along the western segment of the Sonoma Multi-Use Trail.



J:\GIS\Projects\206xx\206088_North_San_Pablo_Bay_Reuse_Project\MXD\NOP\Figure_6_sonoma.mxd Map Date:8/29/08 Map Author: WSM

SOURCE: USDA, 2005; CDM, 2008; ESRI, 2008; and ESA, 2008

Note: Existing Facilities Not Shown

NBWRA North Bay Water Recycling Program. 206088.01

Figure 3.13-2

Sonoma Valley Recycled Water Project Area
Phase 1 Projects with Recreation Areas

The Sonoma Multi-Use Trail provides pedestrian and bicycle access along an old railroad right-of-way north of Spain Street. The path, which is used for bike riding, roller blading, walking, and running, has a paved right-of-way of roughly 10 feet with clear shoulders on each side. The trail traverses through Sonoma State Historic Park and Depot Park, provides an east-west corridor within the city, and provides access to recreation areas.

Other recreational facilities in the vicinity of the NBWRP include Sonoma Mission Inn Golf Course, Valley of the Moon Driving Range, and Los Arroyos Golf Course, all located along Alignment 1 of the proposed recycled water pipeline.

Sonoma County Recreational Facilities

The Sonoma County Regional Parks Department (SCRPD) owns and operates 39 recreation areas, five of which are in Sonoma Valley (SCRPD, 2005). There are three County parks in the action area near Alignment 1 of the recycled water pipeline. Maxwell Farms Regional Park, located on Verano Avenue in Sonoma, is 85 acres and includes multi-use fields, Macdougald Skateboard Park, and Valley of the Moon Boys & Girls Club. Larson Regional Park is located between Arnold Drive and Highway 12 in Boyes Hot Springs and includes multi-use fields, tennis courts, and picnic areas. Ernie Smith Community Park is located on Arnold Drive in El Verano and includes multi-use fields and a wetlands restoration area.

SCRPD is developing a regional trail system to link various parks and expand hiking and equestrian opportunities (Sonoma County, 2006). The Sonoma Trail is located in the action area and would follow the existing bike path in the northern part of the City of Sonoma, then extend south along 8th Street East to Highway 121/12. The Sonoma Trail would be a multiple-use trail allowing hiking, biking, and equestrian use. The proposed Sonoma Trail would be directly adjacent to Alignment 2 and 3 of the recycled water pipeline and adjacent to the proposed operational and capacity storage facilities.

The 2003 Countywide Bicycle Plan describes existing bikeways and proposed bikeways that are estimated for completion within five to 25 years. There are three categories of bikeways (Sonoma County Transportation Agency, 2003):

- *Class I Bicycle Pathway*: a bike path for the exclusive use of bicycles. It is separated from the road by space or a barrier. A Class I bikeway may be on part of a road right-of-way or on a separate right-of-way.

- *Class II Bicycle Lane*: a bike lane on a right-of-way primarily used by bicycles. Motor vehicles and pedestrians are not permitted on Class II bikeways, although vehicle parking is permitted. Class II bike lanes are separated from motorized vehicle travel lanes by a solid white stripe.

- *Class III Bicycle Route*: a bike route which shares its right-of-way with either motor vehicles or pedestrians. Class III bike routes can include roadways with shoulder striping.

In the action area, there are both existing and proposed Class I, Class II and Class III bikeways. In general, there are existing and/or proposed bikeways along Alignments 1, 2, and 3 of the recycled

water pipelines, in the vicinity of the City of Sonoma storage tanks, and adjacent to the proposed booster pump station, the proposed operational and capacity storage facilities, and the proposed distribution pump station.

Napa SD

North Bay Regional Trails

As discussed above two regional trails are in the vicinity of the action area. The San Francisco Bay Trail's route has not been firmly established in Napa, although one alternative locates the trail near the Cuttings Wharf area entering Napa on Old Suscol Road through the Stanly Ranch to Stanly Lane and then onto Foster Road where it would connect with Imola, cross the river and proceed through Kennedy Park to the Napa-Vallejo Highway. Connector trails are proposed along Highway 29 and American Canyon Road. Alternatively the trail could use Old Sonoma Road from the Carneros District leading to Imola. The route along Imola Avenue would be in the project vicinity. The proposed Ridge Trail route in the North Bay is to run from Sugarloaf Ridge State Park in Sonoma, through Napa County and the city of Napa, then through Skyline Park to Solano County. The exact alignment through Napa County has tentatively been determined to be a loop trail on both the east and west ridges of the Valley. The trail would be in the vicinity of NBWRP from the City of Napa to Skyline Park.

City of Napa Recreational Facilities

The City of Napa's park system currently (1995) totals 753 acres, of which 287 acres are improved for active recreation and 466 acres are minimally improved for passive uses or remain unimproved. There are two neighborhood park facilities in the project vicinity, however they are not adjacent to the proposed pipeline routes. Shurleff Park, located at 12338 Shetler Avenue, has picnic areas and a dog park. Camille Park, located at Shurtleff Avenue and Kansas Avenue, has walking trails, a play structure, and a picnic area. John F. Kennedy Memorial Park is a community park located on Highway 121 just south of West Imola Road. The park is a multi-use, 350 acre park with barbeques, five picnic areas, children's play area, easy hiking along the Napa River, baseball fields, volleyball, boat launching, and the Napa Golf Course. These facilities are illustrated in **Figures 3.13-3** and **3.13-4** (also refer to **Table 3.13-5**).

Napa County Recreational Facilities

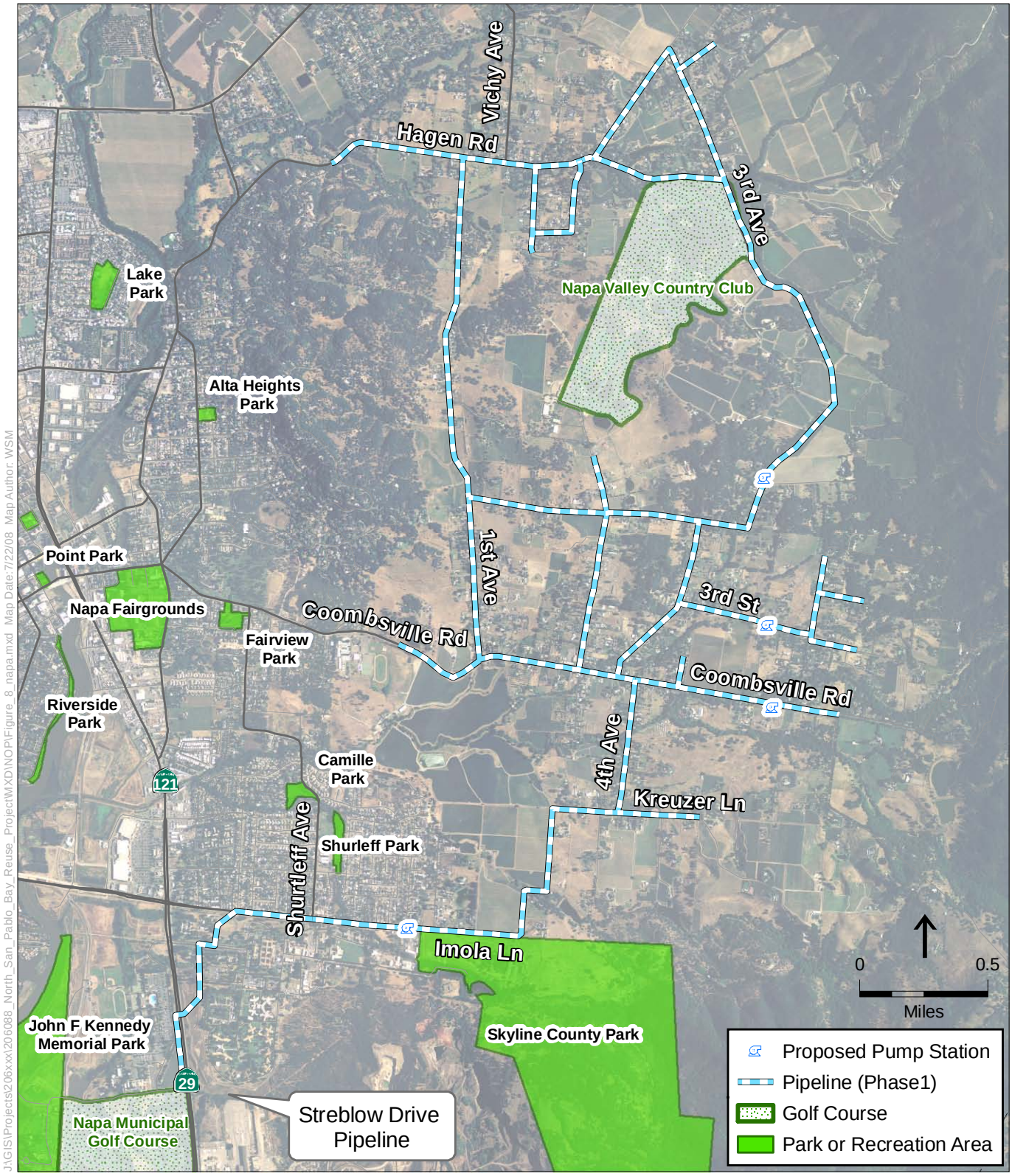
The majority of Napa County's open space is concentrated primarily in the eastern portion of the County. Although open space is open to the public, the access, signage and trail designations at some of these facilities are not well marked and in some instances, not present. There is one park facility located in the vicinity of NBWRP. Skyline Park, located at 2201 Imola Avenue, is an 850-acre open space regional park that is owned by the state but operated and maintained by a non-profit organization through a lease by Napa County. The park offers several activities including camping, RV amenities, and miles of hiking, mountain biking and equestrian trails, an archery range, and a native plant garden. The proposed Napa SD Phase 1 pipe alignment runs along the access road to the park.

SOURCE: USDA, 2005; CDM, 2008; ESRI, 2008; and ESA, 2008

NBWRA North Bay Water Recycling Program. 206088.01

Figure 3.13-3

SVCSD Napa Salt Pond Pipeline
Phase 1 Project with Recreation Areas



SOURCE: USDA, 2005; CDM, 2008; ESRI, 2008;and ESA, 2008

Note: Existing Facilities Not Shown

NBWRA North Bay Water Recycling Program. 206088.01

Figure 3.13-4

Napa SD MST Area:
Phase 1 Projects with Recreation Areas

TABLE 3.13-5
EXISTING AND PROPOSED PARKS ADJACENT TO THE NBWRP IN THE SVCSD SERVICE AREA

Park Facility	Location	Project Component	Ownership	Status
Ernie Smith Community Park	Arnold Drive	Alignment 1	County of Sonoma	Existing
Madera Park	Napa Road	Alignment 1	City of Sonoma	Existing
Sonoma State Historic Park	W Spain St	Alignment 2	State of California	Existing
Depot Park	1st St West	Alignment 2	City of Sonoma	Existing
Sonoma City Park	Napa St	Alignment 2	City of Sonoma	Existing
Field of Dreams	1st St West	Alignment 2	City of Sonoma	Existing
Arnold Field	1st St West	Alignment 2	City of Sonoma	Existing
Olsen Park	Linda Drive	Alignment 2	City of Sonoma	Existing
Montini Ranch	Norrbom Road	Alignment 2	County of Sonoma	Proposed
Napa-Sonoma Salt Marsh	Buchli Station Road and SR 37	Napa Salt Marsh Phase 1	CA Dept. Fish and Game	Existing

SOURCE: ESA, 2006.

TABLE 3.13-6
EXISTING AND PROPOSED BIKEWAYS AND RECREATIONAL TRAILS ADJACENT TO THE NBWRP IN THE SVCSD SERVICE AREA

Bikeway or Trail Facility	Location	Project Component	Ownership	Status
Class II Bikeway	Arnold Drive	Alignment 1	County of Sonoma	Existing
Class II Bikeway	Arnold Drive, Leveroni Rd	Alignment 1	County of Sonoma	Proposed
Class III Bikeway	Highway 116	Alignment 1	County of Sonoma	Proposed
Sonoma Creek Trail	Sonoma Creek between Petaluma Ave and Leveroni Rd	Alignment 1	County of Sonoma	Proposed
Sonoma Multi-Use Trail	Bike path north of Spain St	Alignment 2	City of Sonoma	Existing
Class II Bikeway	Broadway	Alignment 2	City of Sonoma	Existing
Class II Bikeway	Broadway, Napa Rd, 5th St East, MacArthur St	Alignment 2	City of Sonoma	Proposed
Class III Bikeway	Napa St, Broadway, 4th St East	Alignment 2	City of Sonoma	Proposed
Sonoma-Schellville Trail	8th St East	Alignment 3	County of Sonoma	Proposed
Sonoma Trail	8th St East	Alignment 3	County of Sonoma	Proposed
Class II Bikeway	Napa Rd, Denmark St	Alignment 3	County of Sonoma	Proposed

SOURCE: ESA, 2006.

Napa Countywide Bicycle Plan

The Napa County Transportation Planning Agency (NCTPA) has developed a Countywide Bicycle Plan (NCTPA, 2003). The goal of the Bicycle Plan is to create a countywide non-motorized transportation system that links both urban centers and recreation areas. The 2003 Countywide Bicycle Plan describes existing bikeways and proposed bikeways that are estimated for completion within five to 25 years. The plan designates three categories of bikeways, which are equivalent to those described in the SVCSD discussion above.

In the action area, there are both existing and proposed Class II and Class III bikeways, as listed in **Table 3.13-7**. In general, there are existing and/or proposed bikeways along proposed recycled water pipeline routes on West Imola Road and Coombsville Road.

TABLE 3.13-7
EXISTING AND PROPOSED BIKEWAYS, RECREATIONAL TRAILS, AND RECREATION FACILITIES ADJACENT TO THE NBWRP FOR NAPA SD

Recreational Facility	Location	NBWRP Alternative Affecting Facility	Recreational Facility Ownership	Status
Class III Bikeway	Imola Avenue	Phase 1	City of Napa	Existing
San Francisco Bay Trail	Foster Road to Imola Avenue, cross the river and proceed through Kennedy Park to the Napa-Vallejo Highway	Phase 1	ABAG	Proposed
Bay Area Ridge Trail	the City of Napa to Skyline Park via Imola Ave.	Phase 1	Bay Area Ridge Trail Council	Proposed
Skyline Wilderness Park	Imola Avenue	Phase 1 pipeline	State of CA/ Napa County- subleased to Skyline Park Citizens Association	Existing
Napa Valley County Club	Hagen Road	Phase 1 pipeline	Privately owned	Existing

Other Facilities

Other recreational facilities in the vicinity of NBWRP include the Napa Valley County Club, 3385 Hagen Road, located along the Napa SD Phase 1 of the proposed recycled water pipeline.

3.13.2 Regulatory Framework

The policies and regulations associated with impacts to utilities and services within the affected jurisdictions are presented in **Appendix 3.13** of this EIR/EIS.

3.13.3 Environmental Consequences/ Impacts

Significance Criteria under CEQA

Based on the Appendix G of the *CEQA Guidelines*, project implementation would have significant impacts and environmental consequences on recreation resources if it would:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Environmental Consequences/Impact Analysis

Impact 3.13.1: Temporary disturbance. Project construction could result in short-term disturbance adjacent to recreational facilities. (Less than Significant with Mitigation)

Project construction would involve installation of pipelines, and the construction of booster pump stations, storage tanks, and storage reservoirs, as well as treatment upgrades in existing WWTPs. Construction activities could disrupt access to nearby recreational facilities, however the impact would be short-term and temporary. Delivery of construction materials could disrupt bikeways along access roads. Users of the proposed bikeways may experience temporary impacts from noise, dust, traffic, and visual intrusion from pipeline construction. Construction-related impacts would be reduced to a less than significant level with implementation of **Mitigation Measure 3.13.1** and measures identified in Sections 3.8, Air Quality, 3.9, Noise, and 3.7, Transportation and Traffic. After construction is complete, surfaces would be restored to pre-existing conditions.

Construction of pipelines would occur primarily along existing public roadways, however the construction activities could affect recreational facilities as discussed above. Proposed operational and capacity storage reservoirs and booster pump stations would not be directly adjacent to recreational facilities, therefore would not have a significant effect.

Rehabilitation of existing storages tanks and treatment upgrades would not require construction activities that would affect recreational facilities. Therefore, these issues are not discussed further.

No Project Alternative

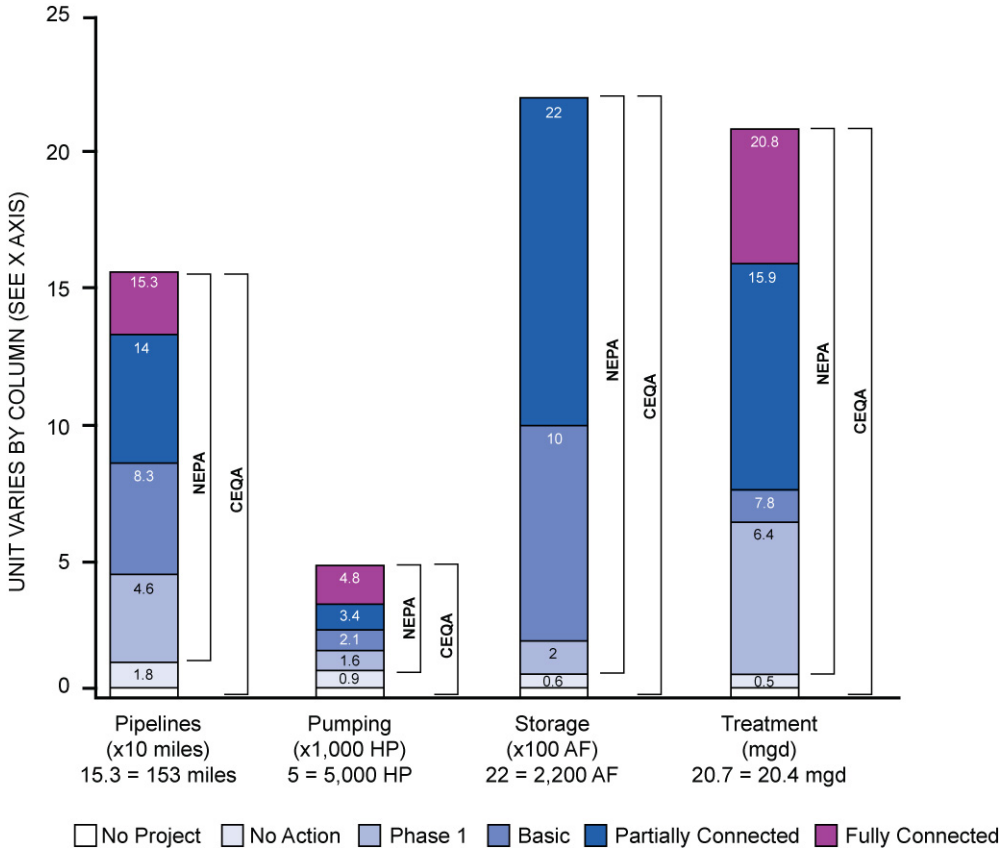
The NBWRP would not be implemented under the No Project Alternative, therefore there would be no impact. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.13-1, No Action**).

CHART 3.13-1
COMPARISON OF NEPA AND CEQA BASELINES FOR PROPOSED FACILITIES, BY ALTERNATIVE



SOURCE: CDM, 2009

Under future baseline (2020) conditions, recreational resources within the region are anticipated to be similar to existing conditions in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Novato SD/NMWD

Novato SD No Action Alternative would include implementation of recycled water distribution facilities within the North Service Area. Construction of the recycled water pipeline could temporarily disrupt adjacent parks- Slade Park and Olive Park- and bikeways along Atherton Avenue, and Olive Avenue. Construction-related impacts would be similar to that discussed above and could be significant. However, the impact would be reduced to a less-than-significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8, Air Quality;** and **3.9, Noise.**

SVCSD

The SVCSD No Action Alternative would include Alignment 1A of the Sonoma Valley Recycled Water Project (SVRWP). As stated in the SVRWP EIR, the main pipeline would originate from the SVCSD WWTP, extend southwest and then northwest through a vineyard to Arnold Drive. Construction of Alignment 1 of the recycled water pipeline would temporarily disrupt Ernie Smith Community Park on Arnold Drive and bikeways along Arnold Drive and Leveroni Road. Users of the Community Park and bikeways may experience temporary impacts from noise, dust, traffic, and visual intrusion from pipeline construction. Construction-related impacts would be similar to those discussed above and would be reduced to a less-than-significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8, Air Quality;** and **3.9, Noise**.

The pipeline and the pump station under Napa Salt Marsh Restoration Project were discussed and analyzed under the Napa River Salt Marsh Restoration Project EIR/EIS (JSA, 2003) under the Water Delivery Project Component (Sonoma Pipeline). Two Alternative Routes (Option B and Option C) as discussed under **Chapter 2, Project Description**, would consist of a pipeline route along existing roadways in the salt marsh areas.

The Huichica Creek Unit is a wildlife preserve that can be accessed only at Buchli Station Road at the east end of the alignment. The pipeline under Option B and C would be placed beneath Buchli Station Road where a parking lot is located. Access may be limited for a period of time until the construction crews complete the pipeline in the area. Buchli Station Road in the action area is a road used specifically for access to the salt marshes and is lightly traveled, with access limited to, or through, DFG personnel. The Sonoma Pipeline alignment also would cross south of a parking lot that serves as an access point to the Ringstrom Bay Unit. Access may be limited temporarily while construction crews are in the immediate area. This impact could be significant. Implementation of **Mitigation Measure 3.13.2** would reduce this impact to a less-than-significant level.

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline Phase 1 projects would provide 46 miles of new pipeline, 1,655 horsepower (HP) of pumping capacity, treatment facilities providing 6.4 million gallons per day (mgd) of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to recreation facilities under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under Phase 1, LGVSD would upgrade tertiary treatment capacity at the LGVSD WWTP and construct a new booster pump station; NMWD install one of three pipeline options, described in **Chapter 2, Project Description**, which would connect the LGVSD WWT Recycled Water Treatment Facility to facilities constructed by NMWD. Construction of pipeline Options A, B, or C in the Novato South Service Area would occur adjacent to the John F. Mcinnis Park on Smith Ranch Road. The Coast Guard Housing Loop portion of the proposed pipeline would occur near bikeways along Hamilton Parkway, Hangar Avenue, Main Gate Avenue and Smith Ranch Road. Also the San Francisco Bay Trail is adjacent to John F. Mcinnis Park. Users of the Regional Park, trails and bikeways may experience temporary impacts from noise, dust, traffic, and visual intrusion from pipeline construction. Construction-related impacts would be reduced to a less–than-significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8, Air Quality;** and **3.9, Noise**.

Pipeline construction would temporarily disrupt a portion of the San Francisco Bay Trail at several locations. Segments of Pipeline Options A and B, proposed adjacent to the LGVSD WWTP ponds, would potentially cross portions of the San Francisco Bay Trail. In addition, segments of the Option C pipeline between the LGVSD WWTP and Main Gate Road would be installed along a half-mile portion of the existing San Francisco Bay Trail along Hamilton Parkway. Under all of the pipeline options, a 25-foot-wide construction work zone would require the temporary closure of the entire trail for approximately two weeks. For the majority of the trail, there would be no readily available detour route if the corridor were closed during construction hours. However, this would be a short-term effect as full access to the trail would be restored upon completion of construction operations. Implementation of **Mitigation Measure 3.13.1a** would provide a partial impact reduction. Specific requirements may be included in the traffic management plans (see **Mitigation Measure 3.7.1a**, in **Section 3.7, Transportation and Traffic**).

Novato SD/NMWD

Construction of North/Central Service Area of the recycled water pipeline could temporarily disrupt adjacent parks- Slade Park, Scottsdale Pond Park, Arroyo Aviche Park, Hill Recreation Area, Olive Park- and bikeways along Novato Boulevard, Rowland Boulevard, Redwood

Boulevard, Hill Road, Atherton Avenue, and Olive Avenue. Construction-related impacts would be similar to that discussed above and would be reduced to a less-than-significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8, Air Quality;** and **3.9, Noise**. Access to Hill Recreation Area, Olive Park, and Scottsdale Pond Park may also be may be affected by pipeline construction and could have significant impacts. Implementation of **Mitigation Measure 3.13.2** would reduce this impact to a less-than-significant level.

SVCSD

Under Phase 1, impacts related to the SVRWP pipeline alignment and the Napa Salt Marsh Restoration Project would be equivalent to those under the No Action Alternative.

Napa SD

Construction of MST Phase 1 of the recycled water pipeline could temporarily disrupt adjacent parks- Skyline Wilderness Park, and the Napa Valley Country Club- and bikeways along Imola Avenue. Construction-related impacts would be similar to that discussed above and would be reduced to a less than significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8, Air Quality;** and **3.9, Noise**. Access to Skyline Wilderness Park may also be may be affected by pipeline construction and could have significant impacts. **Mitigation Measure 3.13.2** would reduce this impact to a less than significant level.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to recreational facilities under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under the Basic System, project construction would involve increasing tertiary treatment capacity by at the LGVSD WWTP by 0.3 mgd through onsite improvements. As discussed above, no additional impacts that would affect recreational facilities are expected.

Novato SD/NMWD

Novato SD the Basic System of NBWRP would involve pipeline installation along existing roadways between the Novato SD WWTP and the Petaluma River and increasing tertiary treatment capacity at the Novato SD treatment plant by 1.2 mgd. Treatment upgrades would be similar to those discussed above and would not cause significant impacts. Pipeline installation

could temporarily disrupt parks and bikeways in the vicinity of the project. Construction-related impacts would be similar to that discussed above for Phase 1**.**

SVCSD

Construction of SVRWPAlignment 2 of the recycled water pipeline would temporarily disrupt adjacent parks—including Sonoma City Park, Depot Park, Arnold Field, and Field of Dreams—and bikeways along Broadway, Napa Road, 5th Street East, and MacArthur Street. Construction-related impacts would be similar to that discussed above and would be reduced to a less than significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8, Air Quality**; and **3.9, Noise**. Access to Arnold Field and Sonoma City Park may also be may be affected by pipeline construction and could have significant impacts. Implementation of **Mitigation Measure 3.13.2** would reduce this impact to a less-than-significant level.

In addition, the Bike Path Segments of Alignment 2 would be installed along a three-quarter-mile portion of the existing Sonoma Multi-Use Trail. The 25-foot wide construction work zone would require the temporary closure of the entire trail for approximately two weeks. For the majority of the trail, there would be no readily available detour route if the corridor were closed during construction hours. Therefore, the impact would be significant and unavoidable during the construction period. However, this would be a short-term effect as full access to the trail would be restored upon completion of construction operations. Please refer to the discussion above under LGVSD.

Construction of Alignment 3 of the recycled water pipeline would temporarily disrupt bikeways along 8th Street East, Napa Road, and Denmark Road, including the proposed Sonoma Trail and Sonoma-Schellville Trail along 8th Street East. Construction-related impacts would be similar to that discussed above and would be reduced to a less than significant level with implementation of mitigation measures identified in Sections 3.7, Transportation and Traffic, 3.8, Air Quality; and 3.9, Noise.

Impacts from construction associated with the proposed operational and capacity storage reservoirs and distribution pump station not directly adjacent to recreational facilities would be similar to that discussed above. The activities could disrupt the bikeway along 8th Street East, however, due to the temporary nature of this impact, it would be considered less than significant. The proposed booster pump station would be located near the intersection of Napa and Denmark Roads. Both roadways are proposed Class II bikeways. Construction-related impacts would be similar to that discussed above and would be reduced to a less than significant level with implementation of mitigation measures identified in **Sections 3.7, Transportation and Traffic, 3.8**, **Air Quality;** and **3.9, Noise**.

Napa SD

Napa SD the Basic System of NBWRP includes service to the Carneros Area, which would involve pipeline installation and a tertiary treatment increase of 5.5 mgd at the Napa SD WWTP. Treatment upgrades would be similar to those discussed above and would not cause significant

impacts. Pipeline installation could temporarily disrupt parks and bikeways in the vicinity of the project; the impacts would be similar to those discussed above.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to recreational facilities under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under the Partially Connected System, project construction would involve installation of pipeline along existing roadways and a fire road through China Camp State Park to Peacock Gap Golf Course. Construction could temporarily disrupt parks in the project vicinity- China Camp State Park and Peacock Park, trails within China Camp State Park and bikeways along North San Pedro Road. As discussed above, construction could cause users of the park and bikeways to experience temporary impacts from noise, dust, traffic, and visual intrusion from pipeline construction. **Mitigation Measure 3.13.2** would reduce this impact to a less than significant level.

Novato SD/NMWD

Under the Partially Connected System, project construction would involve installation of a pipeline from the LGVSD WWTP north to join a pipeline extending from the Novato SD WWTP and extend the pipeline alignment from the WWTP to serve Sears Point service area, which is a primarily open space. Pipeline installation could temporarily disrupt parks and bikeways in the vicinity of the project; however, the impacts would be similar to those discussed above.

SVCSD

Under the Partially Connected System, project construction would include installation of Southern Sonoma Valley pipelines, construction of a new recycled water storage pond within the existing SVCSD WWTP and construction of additional system storage in the Carneros West Area. Pipeline installation could temporarily disrupt parks and bikeways in the vicinity of the project. The impacts would be similar to those discussed above.

Napa SD

Under the Partially Connected System project construction would involve installation of pipelines in the Carneros East Area and an extension of the Napa MST Area. Pipeline installation could temporarily disrupt parks and bikeways in the vicinity of the project. The impacts would be similar to those discussed above.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to recreational facilities under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

The impacts associated with the Fully Connected System would be equivalent to the impacts discussed for the Partially Connected System above.

Novato SD/NMWD

The Fully Connected System would include installing additional pipelines to serve an extended Sears Point service area. Pipeline installation could temporarily disrupt parks and bikeways in the vicinity of the project. The impacts would be similar to those discussed above.

SVCSD

Under the Fully Connected System, project construction would involve installation of pipelines north toward the Central Sonoma Service Area. Pipelines would extend north primarily in open space and agricultural areas. Pipeline installation could temporarily disrupt parks and bikeways in the vicinity of the project. The impacts would be similar to those discussed above.

Napa SD

The impacts associated with the Fully Connected System would be equivalent to the impacts discussed for the Partially Connected System above.

Mitigation Measures

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

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

Mitigation Measure 3.13.2: Before beginning construction, the contractor will develop, in consultation with the appropriate representative(s) of the affected park's managing agency, a plan indicating how public access to the park will be maintained during construction. If

needed, flaggers will be stationed near the construction activity area to direct and assist members of the public around the activity areas while maintaining access to the parks.

Impact Significance after Mitigation: Less than Significant with Mitigation.

3.13.4 Impact Summary by Service Area

Table 3.13-8 provides a summary of potential impacts to recreation from implementation of the NBWRP.

TABLE 3.13-8
POTENTIAL IMPACTS AND SIGNIFICANCE – RECREATION

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.13.1: Temporary disturbance to Recreational Facilities.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	LSM	LSM	NI
Phase 1	LSM	LSM	LSM	LSM
Basic System	LSM	LSM	LSM	LSM
Partially Connected System	LSM	LSM	LSM	LSM
Fully Connected System	LSM	LSM	LSM	LSM

NI = No Impact
LTS = Less than Significant impact, no mitigation required
LSM = Less than Significant with Mitigation
SU = Significant Unavoidable impact
N/A = Not Applicable

3.13.5 References

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3.14 Aesthetics

Aesthetic resources are generally defined as both natural and built features of the landscape that contribute to the public experience and appreciation of the environment. This section describes the existing aesthetic conditions in the North Bay Water Recycling Program (NBRWP) area and evaluates potential impacts on aesthetic resources as a result of NBWRP implementation. The analysis is based on information obtained during field investigations and from local plans. The Impacts and Mitigation Measures section defines significance criteria used for the impact assessment and presents a discussion of potential project-related impacts. Determination of significance of impacts in this EIR/EIS apply only to CEQA, not to NEPA.

3.14.1 Affected Environment/Setting

LGVSD and Novato SD

The NBWRP area contains visual resources that are representative of California's Bay Area region, including farmland, meandering creeks, rolling hills and oak woodlands. The LGVSD area is characterized by Hamilton Army Airfield, St. Vincent's School for Boys, Silveira Ranch, China Camp State Park and Peacock Gap, which are situated between urbanized areas of the city of San Rafael, and the communities of Terra Linda, Lucas Valley and Smith Ranch. The Miller Creek corridor, an important natural area, is east of U.S. Highway 101 and serves as a centerpiece of the watershed. The hills between the city of San Rafael and the surrounding communities are scenic topographical features. Large areas of open space that contain undeveloped ridgelines, hillsides, and oak tree groves also contribute to the natural scenic beauty of the area.

Hamilton Army Airfield is located in the Novato South Service area. The former Hamilton Air Force Base is now a planned community that consists of housing, restaurants, office buildings, a church, library, and theater. A trail network has been established around the Bay and in the hills. While a significant amount of bayfront lands have been protected as open space through acquisition of Hamilton Army Airfield Runways, the Marin Countywide Plan has identified the Hamilton Air Force Base as the largest available site for commercial and industrial development (Marin County, 2007).

The *Marin Countywide Plan* also recognizes the importance of the historical and agricultural legacies of the St. Vincent's and Silveira Ranch areas, which consist of approximately 1,110 acres east of Highway 101 in the unincorporated area of the county between the cities of San Rafael and Novato. Two properties: the 770-acre Catholic Youth Organization/St. Vincent's School for Boys and the 340-acre Silveira Family Ranch are important land uses in the county. The school building is a California historical landmark and is partly visible from Highway 101. Silveira Ranch provides scenic vistas of grasslands, valley oaks, the Miller Creek riparian corridor, and diked tideland habitats (Marin County, 2007). The level of development in this area is limited under the Marin Countywide Plan, which designates the St. Vincent's and Silveira lands as an urban reserve area within the unincorporated area of Marin County. This area is an integral part of the character of the region due to the visual and aesthetic appearance of the

buildings and surrounding area, and its function as a physical and visual separator between Novato and San Rafael.

China Camp State Park is also in the NBWRP vicinity. The park contains a natural watershed that flows into San Francisco Bay that includes a tidal marsh bordered by meadow and oak habitats. Recreational amenities include camp sites, hiking trails, and picnic areas. China Camp State Park experiences a high volume of visitors throughout the year due to the natural beauty and access to scenic vistas that are characteristic of the Bay Area.

Peacock Gap Golf Course is located on Biscayne Drive in San Rafael, adjacent to China Camp State Park, overlooking the Bay. From the country club and areas throughout the course, there are scenic views of surrounding hills, large residential estates, and the coast.

The City of San Rafael is characterized by scenic hills and valleys, San Francisco Bay, and historic downtown structures. The Mission San Rafael Arcangel, St. Rafael's Church, and many historic homes are notable structures that contribute to the visual quality to the city.

Existing public facilities and water storage facilities include the LGVSD WWTP, and water storage tanks near Hamilton Army Airfield and Atherton Avenue. The WWTP includes primarily low-lying structures that do not obstruct viewsheds or scenic vistas. The storage tanks are located on hillsides and are visible from nearby neighborhoods and roadways. The storage tanks are surrounded by trees and shrubs that help them to blend into the landscape.

Novato SD

The City of Novato is a growing urban area. Commercial development exists along U.S. 101 and is concentrated around areas of Redwood Boulevard and Rowland Boulevard. Scottsdale Pond, a reservoir that provides a scenic buffer between commercial centers, roadways, and residences, is adjacent to the commercial centers. From Scottsdale Pond, visitors get views of Mt. Burdell, which dominates the Novato skyline and is covered by oak woodland and open grassland. The Mt. Burdell Open Space Preserve, maintained and operated by the Marin County Open Space District, hosts a display of wildflowers in the spring. Views of these natural features are accessible by trails that switchback up the hillside.

Indian Valley Open Space Preserve, also maintained and operated by the Marin County Open Space District, contains heavily wooded oak woodlands, Big Rock Ridge, seasonal creeks, and canyons and valleys that open up to grasslands. The trail that traverses the preserve is popular for its views of undisturbed natural areas. Bel Marin Keys in Ignacio is an unincorporated community in Marin County that contains waterfront homes along beautiful lagoons and the Novato Creek. The Coastal Conservancy, in coordination with the San Francisco Bay Conservancy and the U.S. Army Corps of Engineers, has developed a Wetlands Restoration Plan for the Bel Marin Keys Unit V property, located in southeast Novato. This open space contains marshes and waterways that support wildlife and scenic vistas.

California Department of Transportation (Caltrans) has identified segments of U.S. 101 State Route 37 in Novato as "eligible" to be designated as scenic highways (see **Table 3.14-1** for the scenic highways in Marin County). The City of Novato has also established roadways as locally-defined scenic routes. Atherton Avenue, Novato Boulevard and State Route 37 are considered gateways to Novato. The visual character experienced by roadway users is rural, with views of open space obstructed only by natural topography of vegetated rolling hills. Areas east of U.S. 101, along Atherton Avenue toward the Petaluma River are open space, agricultural, coastal agricultural, and rural residential areas.

Existing facilities include the Novato SD WWTP and several storage reservoirs which are primarily low-lying structures that do not obstruct viewsheds or scenic vistas.

TABLE 3.14-1
SCENIC HIGHWAYS IN MARIN COUNTY

Highway Name	Location	Length	Status
State Route 1	Roadway from the northernmost point in the county to the southernmost point in the county	Undefined	Caltrans Eligible Scenic Highway
U.S. 101	North of State Route 37	Several miles	Caltrans Eligible Scenic Highway; City of Novato Scenic Route
State Route 37	East from U.S. 101 east	Several miles	Caltrans Eligible Scenic Highways; City of Novato Scenic Route
Atherton Avenue	East from U.S. 101 east	Several miles	City of Novato Scenic Route
Novato Boulevard	From San Marin Drive to the westerly City of Novato Planning Area boundary	Several miles	City of Novato Scenic Route

SOURCE: Caltrans, 2008; City of Novato, 1996.

SVCSD

Coastal bluffs, vineyards, rolling hills, and mountains define the aesthetic character of Sonoma County (Sonoma County, 1998). In southern Sonoma County, the Sonoma Mountains and Arrowhead Mountains are valuable scenic landscape features. The Sonoma Mountains define the eastern edge of the Santa Rosa plain between the cities of Petaluma and Sonoma. As part of California's coastal range, the mountain peaks are less than 1,000 feet above mean sea level, but provide scenic backdrops to local communities and visual relief from urban densities. Sonoma creek and valleys in the mountains are characterized by riparian forest, and a mixture of deciduous and evergreen tree species, which provide food, water, migration and dispersal corridors, breeding sites, and thermal cover for wildlife.

The NBWRP area includes the city of Sonoma and surrounding unincorporated Sonoma County land, and is characterized by rolling hills with vast expanses of vineyards, agricultural fields, and open space. The NBWRP area includes both undeveloped areas, such as the valley

oak woodlands of the Sonoma Mountains, and urban areas in and around the city of Sonoma. The valley floors of the Sonoma Mountains are generally located on the western edge of the city. The valley landscape is relatively flat and fertile, lending itself to the presence of vineyards and other agriculture. The city of Sonoma contains suburban developments, small neighborhood parks, and commercial buildings.

Caltrans has designated corridors along State Routes 12, 116, and 121 in Sonoma as scenic highways, or corridors that are eligible to be designated as scenic highway (see **Table 3.14-2**). Similarly, the City of Sonoma (2006) has identified Broadway Street as a scenic corridor, and the intersection of Broadway, Leveroni, and Napa Roads as a gateway to the city. The NBWRP area is primarily located along Arnold Drive, Watmaugh Road, Highway 116, and Broadway/ Highway 12. Arnold Drive is a tree-lined residential street that provides distant views of the mountains. The southern gateway at the Broadway/ Napa Road/ Leveroni Road intersection contains visitor-serving uses that feature high quality architecture, open space, landscaping, street trees, lights, unified sidewalk materials, storefront design, street side planters and median planter strips, and sidewalk seating. Verano Avenue is also identified as a gateway to the city. Viewsheds from these major roadways are characterized by varying degrees of development, ranging from open space, agricultural (viticulture and agrarian), and riparian to commercial and residential development. Views of vineyards, rolling hillsides, and open space are evident from rural roads on the eastern and western edges of the NBWRP area. Along Sonoma Creek, views from roadways that cross or parallel the creek, such as Watmaugh Road, are characterized by dense, riparian vegetation.

TABLE 3.14-2
SCENIC HIGHWAYS IN SONOMA COUNTY

Highway Name	Location	Length	Status
Valley of the Moon	Danielli Avenue east of Santa Rosa to London way near Agua Caliente	12 miles	Caltrans Designated Scenic Highway
State Route 116	From State Route 1 east to the Sebastopol City Limit	26 miles	Caltrans Designated Scenic Highway
Various stretches of State Routes 12, 121, and 116 in the City of Sonoma	Highway 116 from Sebastopol to Rohnert park area; Highway 12 from Highway 101 in Santa Rosa to Highway 121 north of Sonoma; Highway 121 in Sonoma to Highway 37	Undefined	Caltrans Eligible Scenic Highways
Napa Road	Broadway east then south to Fremont Drive/ State Routes 12 and 121	5 miles	County Designated Scenic Corridor
Verano Avenue	Intersection of Verano Avenue and State Route 12	-	City of Sonoma gateway
Four Corners	Intersection of Broadway/ Leveroni Road/ Napa Road	-	City of Sonoma gateway

SOURCE: Caltrans, 2008; City of Sonoma, 2006

The Greenbelt is an important visual resource in the City of Sonoma consisting of hillsides and agricultural land that surrounds the city. Open space within the city is comprised of agricultural land, hillsides, creeks, riparian corridors, parks and small pockets of vineyard, garden, grazing, and horse pasture land. Two notable waterways that exist in Sonoma are Nathanson Creek, which flows from the northeast corner of the City through the east side residential area, and Fryer Creek, which flows from the west to the southwestern area of the city. Schocken Hill is another distinct visual resources. The hillside north of Vallejo Home State Park also contributes to the visual character of the area and remains protected as open space.

Existing facilities include the SVCSD WWTP and the City of Sonoma storage tanks. The WWTP includes primarily low-lying structures that do not obstruct viewsheds or scenic vistas. The storage tanks are located on a hillside and are visible from nearby neighborhoods and roadways. The storage tanks are surrounded by trees and shrubs that help them to blend into the landscape.

Napa SD

Natural scenery and the vineyards and wineries form the community character of the Napa County. The landscape is characterized by a mosaic of orchards and cultivated agricultural fields, vineyards, dairies, pasture, and rural residences, bordered to the east by mountains, hills, and valleys, and Lake Berryessa to the north. The scenery of these areas range from redwood and oak forests to rolling grass covered hills. Lake Berryessa, one of the largest lakes in California, is in Napa County. The land uses in the unincorporated areas outside of the City jurisdiction are urbanized, non-agricultural rural residential uses or open space agricultural uses in the Coombsville planning area and south of the Silverado planning area. The south county contains more of the industrial uses. Important visual resources identified in the General Plan include:

- Agricultural land, particularly the Hess Vineyard (located in southern Napa County east of the airport), and areas surrounding the city of Napa;
- Open space;
- The Napa River, which flows from the headwaters of Mt. St. Helena to San Pablo Bay through varied landscapes of forested mountain slopes, vineyards, urban areas, open pasture, grasslands, industrial zones, and marshes;
- Landmarks, including the di Rosa Preserve, Trubody Ranch, and August Hirsh Winery;
- Unique urban centers in Rutherford and Oakville, which host visitor-serving commercial uses, wineries, and other historic attractions; and
- Scenic highways.

There are approximately 280 miles of county-designated scenic roadways in Napa County. Although none of the roads are officially designated as State Scenic Highways, segments of Highway 29, State Route 121 and State Route 221 are eligible for scenic highway designation (Napa County, 2007). **Table 3.14-3** shows the scenic highways in Napa County.

TABLE 3.14-3
SCENIC HIGHWAYS IN NAPA COUNTY

Highway Name	Location	Length	Status
State Route 29	Roadway from the northernmost point in Napa County to the intersection with State Route 121	Approximately 20 miles	Caltrans Designated Scenic Highway
State Route 121	State Route 121 near Napa, south to the southern Napa County line	Approximately 12 miles	Caltrans Designated Scenic Highway
Dry Creek Road	Napa County	Undefined	County Designated Scenic Roadway
Petrified Forest Road	Napa County	Undefined	County Designated Scenic Roadway
Deer Creek Road	Napa County	Undefined	County Designated Scenic Roadway
Pope Canyon Road	Napa County	Undefined	County Designated Scenic Roadway
Wooden Valley Road	Napa County	Undefined	County Designated Scenic Roadway
Berryessa Knoxville Rd	Napa County	Undefined	County Designated Scenic Roadway
Oakknoll Road	Napa County	Undefined	County Designated Scenic Roadway
Yountville Cross Road	Napa County	Undefined	County Designated Scenic Roadway
Zinfandel Lane	Napa County	Undefined	County Designated Scenic Roadway
Lodi Land	Napa County	Undefined	County Designated Scenic Roadway
Bale Lane	Napa County	Undefined	County Designated Scenic Roadway

SOURCE: Napa County, 2007; Caltrans, 2008

Napa County has a diverse plant life, including oak woodlands, grasslands, mixed serpentine chaparral, mixed willow riparian forests, redwood forests, and vernal pools. The landscape has a varied topography, with peaks and valleys, rolling hills, numerous microclimates, and many creeks, streams, and rivers.

The Napa Milliken-Sarco-Tulocay (MST) Area includes areas in the city of Napa and portions of Napa County. The unincorporated areas are designated for rural residential, open space, watershed, and agricultural uses by the Napa County General Plan. State Route 121, north of Imola Road, within the MST area, is designated as a scenic corridor by the City of Napa. The City is bound by designated greenbelt land, which borders the MST area to the east.

The Carneros area is situated slightly southwest of the city of Napa in unincorporated areas of the County. The visual character of the area is rural, as the predominant land use is agriculture. Views from Sonoma Highway, Las Amigas Road, and Duhig Road include agricultural scenery

and flat terrain. A residential community is located near the intersection of Sonoma Highway and State Route 12. To the south, the Carneros area is bordered by the Napa Salt Marsh.

3.14.2 Regulatory Framework

State

CalTrans administers the State Scenic Highways Program to preserve and protect scenic highway corridors from projects that would diminish the aesthetic value of lands adjacent to highways (Sections 260 *et seq*. of the California Streets and Highways Code). Scenic highway corridors are defined as the land generally adjacent to and visible by motorists from a scenic highway. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in Section 263 of the Streets and Highways Code.

Officially designated state scenic highways within the NBWRP area include State Route 29, portions of State Route 12, and portions of State Route 121 (CalTrans, 2005). The portion of Highway 12 that crosses through the NBWRP area is an eligible state scenic highway.

Local

Other local general plans, policies, and regulations associated with impacts to aesthetic resources within the affected jurisdictions are presented in **Appendix 3.14**. The goals, policies, and programs applicable to aesthetics were considered in this analysis to define scenic resources, determine NBWRP consistency with policies, and evaluate significant impacts in the following section.

3.14.3 Environmental Consequences/ Impacts

Significance Criteria under CEQA

Based on the Appendix G of the *CEQA Guidelines,* NBWRP implementation would have significant impacts and environmental consequences on aesthetic resources if it would:

- Have a substantial adverse effect on a scenic vista;
- Substantially degrade the existing visual character of the site and its surroundings;
- Substantially damage scenic resources, such as scenic highway corridors and scenic landscape units;
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area; or
- Conflict with adopted environmental plans.

Impairment of existing aesthetic resources may result from the degradation of a visual feature that has aesthetic significance, or from the introduction of objects or patterns that exhibit a relatively high degree of visual contrast with the existing objects and patterns on the site. Physical changes

that may impair the quality of important views include changes in scale, form, color and texture of natural features existing on the site. Such changes could result from new structures, grading and excavation, landscaping, or elimination of existing vegetation.

Environmental Consequences/Impact Analysis

Impact 3.14.1: Temporary Impact to Scenic Vistas. NBWRP construction activities could temporarily affect scenic vistas or corridors in the NBWRP area. (Less than Significant with Mitigation)

NBWRP construction could cause temporary disruption of existing visual resources. However, NBWRP activities would involve improvements that would partially occur at existing WWTP facility sites and roadway right-of-ways, thereby reducing the likelihood for conflicts with aesthetics during construction. Treatment upgrades within the WWTP sites would have no impacts to aesthetics because the existing visual character of the sites is already industrial and utilitarian. In most cases, the impacts would be short-term and intermittent, and disruption of visual resources would be considered less than significant. Furthermore, measures to limit certain temporary construction impacts to aesthetics would be implemented as mitigation. Although pipeline installation would progress along the local roadways, construction would only affect a specific location for a short period of time. Staging areas associated with these projects could be used for a longer period of time. In addition, any projects involving nighttime construction would require lighting, and adjacent areas could be exposed to visual impacts associated with nighttime construction (see **Impact 3.14.3**).

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

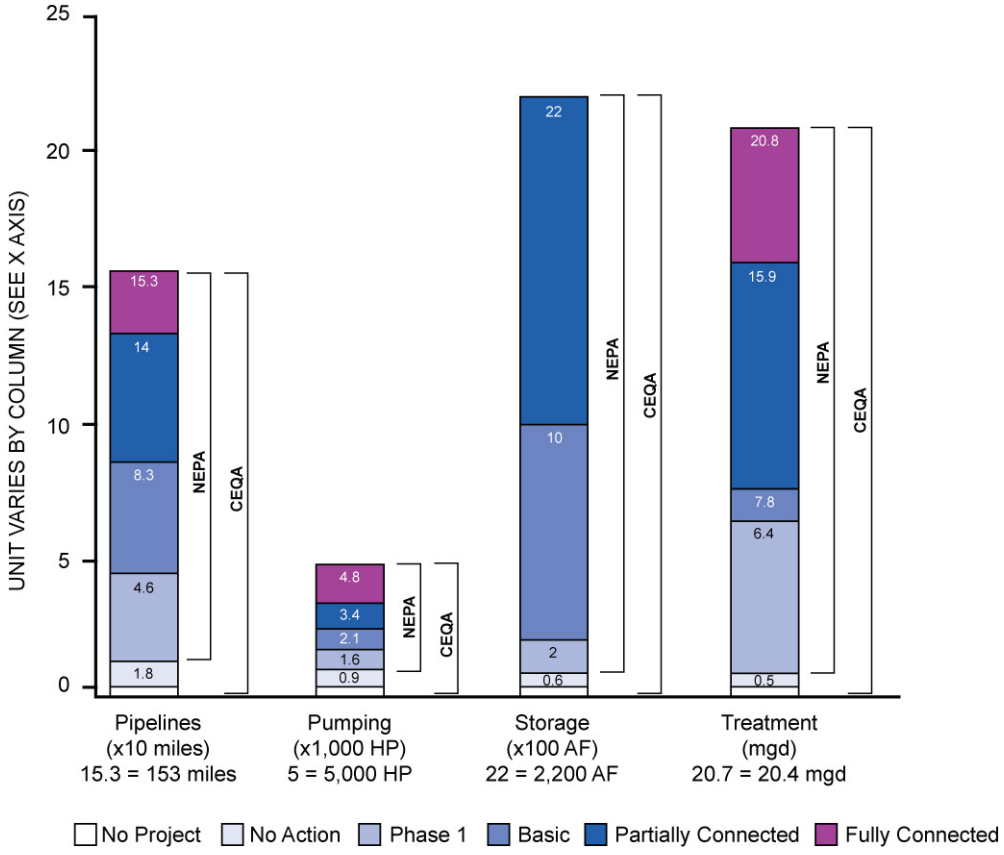
No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.14-1, No Action**).

Under future baseline (2020) conditions, scenic vistas within the region are anticipated to be similar to existing conditions in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

CHART 3.14-1
COMPARISON OF NEPA AND CEQA BASELINES FOR PROPOSED FACILITIES, BY ALTERNATIVE



SOURCE: CDM, 2009

LGVSD/NMWD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Novato SD/NMWD

The No Action Alternative would consist of construction of 4.4 miles of pipeline in the Novato North Service Area, 0.5 mgd upgrade at the Recycled Water Treatment Plant, and one pump station at the intersection of Atherton Avenue and Olive Avenue. Pipeline installation would occur from the Novato SD WWTP north to Olive Avenue, then extend along Olive Avenue to serve areas north of Atherton Avenue, along Redwood Boulevard, and along San Marin Avenue west of U.S. 101. Views experienced by roadway users from these roadways include scenic vistas of hillsides, oak woodlands, and agricultural resources. Construction of recycled water pipelines would result in short-term impacts to scenic resources. Construction activities would require the use of heavy equipment and storage of materials at construction sites. During construction,

excavated areas, stockpiled soils, and other materials within the construction easement and staging areas would constitute negative aesthetic elements in the visual landscape. Impacts from dust, excavation, drilling, and road closures could reduce pedestrian access, uproot street trees, displace landscaping and streetscaping, and damage sidewalk materials. However, these impacts are temporary and associated with short-term construction and would be reduced to a less-than-significant level with implementation of **Mitigation Measures 3.14.1a** through **3.14.1c**. Upgrades at the Recycled Water Treatment Facility would have a less-than-significant impact on aesthetics because the upgrade activities would be mostly confined within the existing WWTP property and would generally be consistent with the existing visual character of the site. Construction of the pump station would cause short-term impacts such as dust and noise, but impacts would be mitigated by measures identified in **Sections 3.8, Air Quality,** and **3.9, Noise**.

SVCSD

SVCSD would implement Sonoma Valley Recycled Water Project (SVRWP) pipeline Alignment 1A, which would result in short-term construction impacts to scenic landscapes, scenic corridors, and scenic vistas. Alignment 1A includes a main pipeline that would originate from the SVCSD WWTP, extend southwest and then northwest through a vineyard to Arnold Drive. The pipeline would continue north along Arnold Drive to Orange Avenue, and extend north on Orange Avenue to Elm Avenue. The pipeline would then continue east on Elm Avenue, cross a field to Arnold Drive, extend north on Arnold Drive, and terminate just north of Leveroni Road. Secondary pipelines would extend from the main pipeline on Highway 116, Watmaugh Road, and Leveroni Road. The eastern portions of the proposed pipeline corridor are predominantly rural agricultural areas. The area from the SVCSD WWTP to Arnold Drive is almost exclusively vineyard land. There are several residential and agricultural structures just west of State Route 12 that would be affected for several days during construction. Construction activities would not be visible from any roadways until the pipeline corridor reaches Arnold Drive. There are intermittent residences along the southern portion of Arnold Drive, but views from the residences of the roadway are partially screened by trees. Residences along Orange Avenue are mostly setback from the road and screened by trees. Views of vineyards experienced by roadway users would temporarily be obstructed during construction. The northern portion of Orange Avenue and where the pipeline would re-connect with Arnold Drive contains residences with views that would be temporarily affected during construction. Construction of the secondary pipelines along Highway 116 and Leveroni Road would disrupt open views of vineyard areas during the short-term construction period. Construction of the pipelines would result in impacts similar to those discussed under Novato SD, and would be reduced to a less-than-significant level with incorporation of **Mitigation Measures 3.14.1a** through **3.14.1c**.

As discussed in the SVRWP EIR, construction of the proposed pump station would result in a short-term impact to aesthetic resources. The distribution pump would be located at the existing SVCSD WWTP, which is an industrial site surrounded by agricultural land uses. Construction and grading activities, potentially visible to vehicles traveling on Schellville Road or 8th Street, adjacent to the WWTP, would result in impacts similar to those discussed above. However, the effects would be temporary during project construction and would be mitigated to less than significant by measures identified in **Sections 3.8, Air Quality**, and **3.9, Noise**.

The proposed pipeline alignment and alternative routes under the Napa Salt Marsh Restoration Project would traverse areas of cultivated vineyard and open areas. Construction of the pipeline would result in impacts similar to those discussed for Novato SD above. Construction activities would affect views from Green Island Road, Milton Road, Las Amigas Road, and Buchli Station Road. Construction activities would temporarily alter scenic views along the pipeline route; however there are no sensitive residential receptors with views of the area. There is one winery located near Ramal Road and Duhig Road that would potentially be affected by construction activities for a short period. Construction- related impacts would be temporary, as pipelines would be buried underground, and disturbed areas would be restored.

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline Phase 1 projects would provide 46 miles of new pipeline, 1,655 horsepower (HP) of pumping capacity, treatment facilities providing 6.4 million gallons per day (mgd) of tertiary capacity, and 65 acre-feet (AF) of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to scenic vistas under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under Phase 1, LGVSD would upgrade tertiary treatment capacity at the LGVSD WWTP and construct a new booster pump station. NMWD would install one of three pipeline options, described in **Chapter 2, Project Description**, which would connect the LGVSD WWTP to facilities constructed by NMWD. The level of impact on visual resources in the LGVSD service area would be incrementally greater under Phase 1 than the level of impact under the No Action Alternative in the LGVSD service area.

Construction of the pipelines would result in impacts similar to those discussed under Novato SD. NBWRP could affect scenic vistas as protected by the *City of Novato General Plan* and the *Marin Countywide Plan*. Portions of Pipeline Options A, B, and C in Marin County would traverse through designated open space and agricultural land and occur adjacent to St. Vincent's and Silveira Ranch. Since this area is important to the character of the community and is a prominent feature on the landscape, the NBWRP could affect the views of St. Vincent's from surrounding roads and structures. Construction activities would be visible to the residential communities along the hillside at the border between the Novato and San Rafael, particularly along Club View Drive. However, residences along Bolling Circle adjacent to the pipeline corridor are screened by trees

and would not be affected. Views from residences along South Oakwood Drive and Hangar Avenue would temporarily be affected during the short-term construction period. However, these effects would be temporary during NBWRP construction and would not significantly impact the long-term visual character of the area. Surface restoration would involve repaving roadways and replanting grasses, shrubs, and trees in unpaved areas outside of the roadways (see **Mitigation Measure 3.14.1a**).

Novato SD/NMWD

The components that are reasonably likely to occur under the No Action Alternative, including the pipeline in the North Service Area along Olive Avenue and Atherton Avenue, would also be implemented under Phase 1; and would therefore have identical impacts to aesthetics. Additional short-term construction impacts would occur under Phase 1, as additional pipeline would be installed in the Central Service Area, so impacts to aesthetics would be incrementally greater under Phase 1 compared to the No Action Alternative.

Novato North Service Area. Impacts to scenic vistas from construction of proposed recycled water pipelines would be similar to those discussed under the No Action Alternative. Additional impacts would occur to scenic vistas on Atherton Avenue, Olive Avenue, Redwood Boulevard, Delong Avenue, Novato Boulevard, and South Novato Boulevard. Other sensitive visual resources in the vicinity of the proposed pipeline corridors include wetlands in the Ignacio/ Bel Marin Keys area, and large areas of oak woodland (in the Atherton Avenue vicinity) are proximate to proposed construction areas.

NBWRP construction would have similar impacts on scenic vistas compared to those discussed under Novato SD for the No Action Alternative; however these impacts would be less than significant with mitigation (see **Mitigation Measure 3.14.1a**).

Installation of the proposed booster pump station near the intersection of Atherton Avenue and Olive Avenue could result in short-term impacts to aesthetic and scenic resources, as discussed above under Phase 1. Construction and grading activities would require the use of heavy equipment and storage of materials on-site. During construction, excavated areas, stockpiled soils, and other materials at the construction site and staging areas would constitute negative aesthetic elements in the visual landscape. Vegetation would be removed in order to install the pump station and to connect the pump station to the existing Plum Street Tank. However, construction would last for a short time period and the architecture of the pump station housing would be designed to blend in with the surrounding environment. Landscaping around the structure and revegetation along the distribution connection would restore the appearance of the disturbed area. (see **Mitigation Measures 3.14.1a** and **3.14.1c**). This would reduce the short-term effects of the booster pump station on aesthetic resources to a less-than-significant level. The Plum Street Storage Tank that will support the new booster pump station is an existing structure, and therefore does not impact visual resources.

Novato Central Service Area. Please refer to the discussion under Novato North Service Area. The major roadways that would be affected under Phase 1 are Redwood Boulevard, Rowland

Boulevard and Hill Road. The proposed pipeline corridor would traverse along Redwood Boulevard, adjacent to Scottsdale Pond, which receives pedestrians and cyclists for its aesthetic qualities. Construction in the area would cause a significant impact which would be minimized by implementation of **Mitigation Measure 3.14.1a**.

SVCSD

Phase 1 will cause an incrementally greater impact to aesthetics during construction because it includes more pipeline and additional built structures. In general, the impacts would be less-than-significant after incorporation of **Mitigation Measure 3.14.1a**.

Phase 1 of the NBWRP would include implementation of SVRWP pipeline Alignment 1A. Impacts associated with implementation of the SVRWP component include short-term construction impacts to scenic landscapes, scenic corridors, and scenic vistas similar to those discussed under SVCSD for the No Action Alternative.

The eastern portions of the proposed pipeline corridor are predominantly rural agricultural areas. The implementation of Alignment 1A would include construction of approximately 5.2 miles of pipeline in western Sonoma Valley and one pump station at the SVCSD WWTP. The eastern portions of the proposed pipeline corridor are predominantly rural agricultural areas (see discussion under SVCSD for No Action Alternative above).

As discussed in the SVRWP EIR, construction of the proposed pump stations would result in short-term impacts to aesthetic resources. The distribution pumps would be located at the existing SVCSD WWTP, which is an industrial site surrounded by agricultural land uses. Construction and grading activities would result in impacts similar to those discussed above. The effects would be temporary during project construction and would not significantly impact the long-term visual character of the area. Construction of the pump stations would result in a similar impact to that discussed under the No Action Alternative. Under Phase 1, impacts related to the Napa Salt Marsh Restoration Project would be equivalent to those under the No Action Alternative.

Napa SD

Under Phase 1, approximately 17.5 miles of additional pipeline and four additional booster pump stations along pipeline routes, and one pump station at the Napa SD WWTP would be constructed. Phase 1 represents an incremental increase in short-term construction impacts to aesthetic resources compared to the No Action Alternative. Phase 1 would have less than significant short-term construction impacts, after mitigation, to aesthetic resources. The land uses surrounding the proposed pipeline corridor in the MST area are primarily rural residential and agricultural, so staging activities and machinery from construction would contrast with the existing scenery. Many residences are screened from adjacent roadways by street trees. Construction activities would be temporarily visible from some vantage points of the Napa Valley Country Club golf course. Construction impacts would be similar to those discussed above and would be reduced to less-than-significant levels by implementation of **Mitigation Measure 3.14.1a**.

The proposed pump station at the WWTP would be consistent with the existing visual character of the WWTP facility; therefore there is a less than significant impact associated with that pump station. The other proposed pump station sites are along existing roadways in areas surrounded by residential and agricultural land uses. Construction of the proposed pump stations would temporarily disrupt the scenic vistas and viewsheds from residences and of agricultural land in this area and would have similar impacts as discussed above. The pump stations housings would be 15 to 20 feet above grade, introducing a new, contrasting object into the landscape that could be incompatible with existing views and vistas from the existing residences in the site vicinity. The proposed pump station sites on Coombsville Road and East 3rd Street are adjacent to both low density residential and cultivated agricultural land, while the proposed site on North 3rd Avenue is surrounded primarily by vineyards. The proposed Imola Avenue site is undeveloped, and surrounded by underutilized land and commercial space. Vegetation would also be removed for installation of the pump stations. This could be a significant impact, which would be minimized by implementation of **Mitigation Measures 3.14.1a** and **3.14.1c**.

Alternative 1: Basic System (Program Level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to scenic vistas under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

In general, implementation of NBWRP components will result in short-term construction impacts and temporary disturbance to aesthetics. Installation of pipelines would occur predominantly along existing roadways, however construction activities could temporarily obstruct the views of roadway users. Construction of new pump stations and storage reservoirs would disturb vegetation and permanently alter the existing landscape. Treatment upgrades would not affect aesthetics because they are generally consistent with existing land uses, therefore are not discussed further.

LGVSD/NMWD

There would be no additional short-term construction impacts to visual resources in the LGVSD service area under the Basic System that were not previously discussed under Phase 1. Additional NBWRP components would be constructed at the existing WWTP site and at an existing reservoir. These facilities are already part of the existing landscape, so construction impacts will be less than significant.

Novato SD

The Basic System would involve onsite improvements to increase tertiary treatment capacity at the Novato SD WWTP, utilize existing available storage, and rehabilitate of one water reservoir. An additional segment of pipeline would be constructed to connect the Novato SD recycled water facilities to serve the Sears Point area. Construction of the recycled water pipelines would result in short-term impacts to scenic resources. Impacts to aesthetic resources would be greater that the impacts described for Novato SD under the Phase 1 and the No Action Alternative, proportionate to the amount of facilities. Construction-related impacts would be similar to those discussed above and would be reduced to less-than-significant levels by implementation of **Mitigation Measure 3.14.1a**.

Utilization of existing storage tanks would not induce short-term impacts to visual resources because they are existing units of the landscape and will require no additional construction or altered operational activities.

Re-operation of the existing storage tanks would not require new construction. The activities required to refurbish the storage tanks would not disturb the character of the hillside area, which is surrounded by open space and parkland. Therefore, short-term impacts to aesthetic resources would be less than significant.

SVCSD

In addition to the impacts to visual resources in the SVCSD service area under Phase 1, short-term disturbance impacts under the Basic System would include effects from the interconnectivity between SVCSD and Napa SD to serve the Napa Salt Marsh Restoration Area. The General Plans for Napa and Sonoma Counties, as well as the Cities of Napa and Sonoma govern the visual resources along the proposed pipeline corridor, which would extend through areas in both Sonoma and Napa Counties to the Napa Salt Marsh.

Under the Basic System, pipeline connection between Arnold Drive and Broadway would be extended via Leveroni and West Watmaugh Roads. These extensions represent an incremental increase in temporary construction impacts to visual resources. The pipeline extension areas would occur along existing roadways, which are bordered primarily by vineyards. Views of the vineyard from the roadway would be temporarily obstructed to vehicular traffic. There are several residences along Leveroni Road, but their views of the street are screened by trees. The Basic system would extend the pipeline on Arnold Drive north to El Rancho Feliz Road and branch out on Orange Avenue. This extension corridor is bordered by residences with views on the street. The northern end of the extension on Arnold Drive would occur adjacent to a golf course and vineyards, which would temporarily affect views from the country club and disturb views of the scenic vineyards.

The pipeline corridor from the WWTP to Specht Road traverses agricultural land, and construction activities would not be directly visible to any sensitive receptors. Broadway has been locally-defined as a scenic corridor and a gateway to the city; therefore short-term construction would affect scenic views along this roadway. The eastern pipeline corridor extends east from the

WWTP, traverses a large area of vineyard, extends north to Napa Road, parallel to Hyde road, and then extends along Napa Road, Denmark Street and 8th Street East. Construction in this area would generally not be visible to sensitive receptors or roadway users. The impacts would be similar to those discussed above and would be minimized by implementation of **Mitigation Measure 3.14-1a**.

Installation of the proposed distribution pumps would not result in significant short-term construction impacts or long-term operational impacts to aesthetic resources. The pumps would be located at the existing SVCSD treatment facility and would not introduce a new contrasting object into the landscape. Similarly treatment upgrades, including the creation of additional storage, would occur within the existing WWTP property, which is an industrial site surrounded by agricultural land uses. Construction and grading activities could be visible to vehicles traveling on Schellville Road or 8th Street, adjacent to the WWTP. However, these effects would be temporary during project construction and would not significantly impact the long-term visual character of the area.

The Basic System would also include construction of a new recycled water storage pond near the SVCSD WWTP. Pond construction will require excavation, stock piling of materials, and presence of construction vehicles. The precise location of the pond is undetermined, assuming a conservative approach, construction could be viewed from 8th Street, Schellville Road by passing vehicular traffic. Short-term impacts during construction would be mitigated with the implementation of measures to limit construction at a location, restore affected roadways by repaving, and revegetating disturbed areas (**Mitigation Measures 3.14.1a** through **3.14.1c**).

Under the No Action Alternative, the SVRWP components would cause short-term construction impacts to visual resources. The majority of the SVRWP components are part of the NBWRP, so the impacts under both alternatives would be the same for overlapping pipeline components. The Basic System also requires additional pipelines and ponds; therefore there would be an incremental increase in impacts to aesthetics if the Basic System is implemented.

Napa SD

The Basic System would involve onsite improvements to increase tertiary treatment capacity at the Napa WWTP and reconfiguration of existing WWTP storage ponds. These activities would not alter the existing appearance of the WWTP or the pond area. Short-term impacts to aesthetic resources associated with WWTP improvements would be less than significant.

The Basic System would involve construction of additional pipelines that would affect scenic landscape units and vistas protected by the city and county. The impact would be similar to that discussed above minimized by implementation of **Mitigation Measure 3.1.1a** for the additional segments.

Proposed pipelines under the Basic Alternative represent an incremental increase in temporary impacts to aesthetics during the short-term construction period compared to the No Action

Alternative. A greater volume of pipelines would be implemented in addition to the pipeline and pump station proposed under the MST component.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to scenic vistas under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under the Partially Connected System, NBWRP involves construction of additional recycled water pipelines to extend service to the Peacock Gap Golf Course that would result in short-term impacts to scenic resources. The Peacock Gap Golf Course is located in San Rafael on the Bay, and is surrounded by hills, which act as a buffer between the golf course and the nearby community of Santa Venetia. China Camp State Park is also adjacent to the Peacock Gap Golf Course. There is potential for views from the State Park and park trails to be obstructed or altered by construction activities or staging sites. The pipeline would likely traverse areas of open space that abut the hills adjacent to the golf course. Since these are considered visual resources under the local plans, the proposed pipeline conflicts with policies under the local plans. Construction-related impacts would be similar to those discussed above under the Basic System and would be reduced to less-than-significant levels by implementation of **Mitigation Measure 3.14.1a** for the additional segments.

Utilization of the existing recycled water distribution system would not require new construction, and there are no short-term or long-term impacts to visual resources associated with continued operation of the system.

Re-operation of the existing storage reservoir near Peacock Gap Golf Course would not require new construction. The activities required to refurbish the storage tanks would not disturb the character of the hillside area, which is surrounded by open space and golf amenities. Therefore, short-term impacts to aesthetic resources would be less than significant. There would be no long-term impacts to aesthetic resources due to the re-operation of the existing reservoir because the reservoir is an existing physical feature.

Implementation of additional NBWRP components under the Partially Connected System represent an incremental increase in adverse effects from short-term construction impacts compared to the No Action Alternative, which has no anticipated aesthetic effects from construction in the LGVSD.

Novato SD/NMWD

In addition to the components described under the Basic System, the Partially Connected System would include construction of the recycled water pipelines that Novato SD would install to serve portions of the Novato Urban Recycled Water Action area and connect LGVSD and Novato SD through a joint pipeline to serve the Sears Point area, which would result in short-term impacts to scenic resources. Construction impacts would be similar to those discussed above under the Basic System and would apply to the additional pipelines. **Mitigation Measure 3.14.1a** would minimize the impact.

In the Novato North Service Area, the pipeline corridor would occur within existing roadways that have not been designated as scenic highways. The area is urbanized and built up, so impacts to views from residences or other sensitive areas could be significant.

In the Hamilton Field Area, a pipeline would extend from Long Point, to the east of Hamilton Army Airfield, and along Bel Marin Keys to State Route 37. This area is characterized by the views from the waterfront residences at Bel Marin Keys and the scenic views of open space protected as part of the San Pablo Bay National Wildlife Refuge. Construction would be visible by vehicles along Perimeter Road and Bel Marin Keys Boulevard, and from trails in the in the hills near Hamilton Field.

In the Central Novato Service Area, recycled water pipeline would extend along Alameda del Prado Road, Nave Drive, and Ignacio Boulevard. Construction will occur along existing roadways in urbanized areas. The roadways experience high volumes of traffic, especially along U.S. Highway 101, so construction activities would be highly visible for a short time period to a large number of people.

In general, the effect on the views from the residences, recreational areas, and vehicles would be temporarily impacted by construction activities. Implementation of **Mitigation Measure 3.14.1a** would reduce the impacts to less-than-significant levels.

Re-operation of an existing water reservoir located in the northern portion of the Novato Urban Recycled Water Action area would not require new construction. Impacts would be similar to those discussed under LGVSD above.

Implementation of the Partially Connected System would incrementally increase adverse effects from short-term construction impacts compared to the No Action Alternative. Under the No Action Alternative, pipeline in the North Service Area is anticipated, but the Partially Connected System involves a higher volume of pipeline than what is reasonably anticipated to occur under the No Action Alternative.

SVCSD

In addition to the components described as art of the Basic System, the Partially Connected System would expand interconnectivity between SVCSD and Napa SD to serve the Sears Point Area along Lakeville Highway. Wastewater treatment and distribution would also be extended to the Southern Sonoma Valley service area via a new recycled pipeline network that runs along

Arnold Drive (State Routes 116 and 121). Lakeville Highway and Arnold Drive are almost entirely surrounded by agricultural land, open space, and undeveloped land. There are few to no residences with views of the roadways that would be affected by construction activities. Cornerstone Gardens is located along Arnold Drive, so there is a potential impact to visual access available to Cornerstone Gardens customers. The roadways do not experience a high volume of traffic, so temporary impacts to aesthetics would be less than significant.

The Partially Connected System pipelines will extend to the Carneros West area, east on Old Sonoma Road and Dealy Lane on existing roadways that are bordered entirely by vineyards. There are no visitor-serving facilities or residences with views that would be affected during pipeline construction, as the few existing residences are setback from the road. Residences along Congress Valley Road along NBWRP corridor are mostly screened from the road by vegetation. A new storage facility is proposed in the Carneros area. The precise location of the storage facility is undetermined, so proper placement would ensure there are no impacts to aesthetics.

Construction activities would occur adjacent to the di Rosa Preserve, which is recognized in the *Napa County General Plan* as a landmark. The pipeline corridor is not visible from most vantage points near the lake at the di Rosa Preserve.

In general, short-term temporary construction impacts associated with the proposed pipelines and recycled water facilities will temporarily impact aesthetics by altering scenic views. The impacts would be similar to those discussed above and implementation of **Mitigation Measure 3.14.1a** would reduce the impact to less-than-significant level.

Under the No Action Alternative, Alignment 1A described under the SVRWP is reasonably anticipated to occur, therefore some short-term construction impacts to aesthetics in the SVCSD would be the same. The Partially Connected System also requires additional pipeline, which represents an incremental increase in aesthetic impacts during the short-term construction period compared to the No Action Alternative.

Napa SD

In addition to the components described under the Basic System, the Partially Connected System includes extension of service to an expanded MST area and an expanded Carneros East area, which would require additional pipelines for conveyance. Construction of the recycled water pipelines would result in short-term impacts to scenic resources, similar to those discussed above.

Approximately two miles of additional pipeline would extend to the Carneros East area, south of Napa, perpendicular to State Route 29. The landscape primarily consists of agriculture. The pipelines would be constructed in Milliken Canyon, north of Hagen Avenue along Vichy and Atlas Peak Roads, which contain moderate to low density residential areas that have direct views of the road. The pipeline corridor is proposed adjacent to Silverado Golf Course, so views from the Country Club could be temporarily affected. However, these effects would be temporary during project construction and would not significantly impact the long-term visual character of the area. Surface restoration would involve replanting grasses, shrubs, and trees in unpaved areas outside of the roadways (see **Mitigation Measure 3.14.1a**).

Construction of the proposed storage reservoir in the MST area would result in short-term impacts to aesthetic resources. It is expected that the reservoir would be constructed on Napa State Hospital property, in the same location as an existing abandoned water reservoir. Therefore, while the recycled water reservoir would be larger than the existing abandoned reservoir, the site would be improved, which would be an aesthetic benefit to the area. If the reservoir was sited in a different location, and if it was located adjacent to the golf course or the southern end of Vichy Road, it would be visible. There are undeveloped areas along the MST corridor that would not induce impacts to visual resources. Depending on placement, it is reasonable to assume there may be short-term construction impacts. The impacts would be similar to those discussed above.

Operational reconfiguration of the existing WWTP storage ponds not would alter the existing appearance of the ponds, and the general visual character of the pond area would remain. Therefore, there would be no impact.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts the scenic vistas under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD, Novato SD/NMWD, and Napa SD

No additional construction is proposed in this service area, that would affect scenic vistas. No additional impact is expected.

SVCSD

SVCSD would extend service north of the Sonoma Valley Recycled Water Service Area to the Central Sonoma Service Area. The major increment that will be implemented under the Fully Connected System is the pipeline that would be constructed in the Sears Point area. Construction of the recycled water pipelines would result in short-term impacts to scenic resources as discussed above.

The pipeline extensions beyond that under the Partially Connected System would occur in areas that contain similar land uses as previously discussed, but extension of these pipelines represents an incremental increase in the impact to aesthetics. The areas are primarily vineyards and agricultural lands. State Route 12 is eligible to be designated as a scenic highway, and is traveled frequently by motorists. Views from the highway of the surrounding vineyards could be temporarily affected by construction activities. During construction impacts like dust, excavation,

drilling, and road closures may reduce pedestrian access, uproot street trees, displace landscaping and streetscaping, and damage sidewalk materials. However, these effects would be temporary during project construction and would not significantly impact the long-term visual character of the area. Surface restoration would involve repaving roadways and replanting grasses, shrubs, and trees in unpaved areas outside of the roadways (see **Mitigation Measure 3.14.1a**).

Implementation of the Fully Connected Alternative represents the maximum build-out of recycled water projects and therefore would have considerably greater short-term impacts to aesthetics during construction compared to the No Action Alternative.

Mitigation Measures

The appropriate Member Agency will implement the following measures:

> **Mitigation Measure 3.14.1a:** Following construction activities, disturbed areas shall be restored to baseline conditions, including repaving roadways, replanting trees, and/or reseeding with a native seed mix typical of the immediately surrounding area.
>
> **Mitigation Measure 3.14.1b:** Berms around constructed reservoirs shall be vegetated with native seed mixes to soften the visual effect of the reservoirs from adjacent roadways.
>
> **Mitigation Measure 3.14.1c:** Design elements shall be incorporated to enhance visual integration of the booster pump station and distribution pump station with their surroundings. Proposed facilities shall be painted low-glare earth-tone colors that blend with the surrounding terrain. Highly reflective building materials and/or finishes shall not be used in the designs for proposed facilities.

Impact Significance after Mitigation: Less than Significant.

Impact 3.14.2: Impact to views along scenic roadways. Implementation of NBWRP could affect views along eligible or designated Caltrans Scenic Highways, or locally-defined scenic routes. (Less than Significant with Mitigation)

Pipeline installation would occur predominantly within existing right-of-ways, however could potentially occur along a Caltrans-designated scenic highway, or a locally-defined scenic corridor identified in a local General Plan. Although pipeline construction activities would progress along the alignment and would affect a specific location for a short period of time, staging areas associated with these projects could be used for longer duration.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.14-1**).

Under future baseline (2020) conditions, scenic vistas within the region are anticipated to be similar to existing conditions and in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD

No recycled water projects are anticipated in the LGVSD service area; therefore no impacts on scenic highways are expected.

Novato SD/NMWD

The *City of Novato General Plan* establishes Atherton Avenue as a locally-defined scenic route. The pipeline corridor would extend for less than a mile along Atherton Avenue, and would impact the scenic views experienced by roadway users. This impact would be less than significant with mitigation, as construction would last for a short duration and the roadway and vegetation would be reestablished.

SVCSD

Alignment 1A, proposed under the SVRWP, would include pipeline along Highway 116, between Arnold Drive and Highway 12, and along County designated scenic corridors on Arnold Drive, Highway 116 and Highway 12. As discussed in the SVRWP EIR (ESA, 2006) construction activities, after mitigation, would not detract from the visual quality of the areas. Further, the pipelines would be buried underground; therefore, there would be a less than significant impact to scenic highways.

There are no scenic highways in the vicinity of the proposed Napa Salt Marsh Restoration Pipeline or the Alternative Route; therefore, there is no impact to scenic highways associated with this component.

Napa SD

No recycled water projects are anticipated in the Napa SD service area, therefore no impacts to scenic highways are expected.

Phase 1 (Project level)

Compared to the CEQA Baseline Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to scenic roadways under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

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

Novato SD/NMWD

In the Novato SD service area, there are no Caltrans designated scenic highways, however portions of U.S. Highway 101 and State Route 37 are eligible for designation. The City of Novato has also designated areas of Atherton Avenue and Novato Boulevard as locally-important scenic routes (see Table 3.14-1). Under Phase 1, the NBWRP would have no impact on the scenic areas of State Route 37 or Novato Boulevard. The proposed pipeline would cross the eligible portion of U.S. Highway 101 at Olive Avenue and at two places south of Rowland Boulevard. At these crossings, the project would not detract from the visual quality of the areas, and pipelines would be buried underground; therefore, the impact would be less than significant.

The pipeline would also traverse along Atherton Avenue, at the intersection of Atherton Avenue and Olive Street. Although U.S. Highway 101 and Atherton Avenue are not designated by Caltrans as scenic highways, they are established by the City of Novato as locally-defined scenic routes; therefore there would be an impact to scenic highways. Following construction, measures including roadway repaving and landscaping would restore the disturbed area, resulting in a less-than-significant temporary impact with mitigation (**Mitigation Measures 3.14.1a** and **3.14.1c**). The pipelines would be buried; therefore, there would be no long-term impacts to these scenic corridors.

Installation of the booster pump station adjacent to Atherton Avenue could permanently affect views experienced by roadway users. However, the architecture of the pump station housing would be designed to blend in with the surrounding environment, and landscaping around the structure and revegetation along the distribution connection would minimize the appearance of the constructed area. Implementation of **Mitigation Measure 3.14.1b** would reduce the effects of the booster pump station on aesthetic resources to a less-than-significant impact.

The pipeline proposed under the No Action Alternative is also proposed under Phase 1. Phase 1 represents an incremental increase in impacts to scenic highways because it also proposes a booster pump station, which would impact scenic highways.

SVCSD

NBWRP components would not directly affect Caltrans designated scenic highways, including Valley of the Moon Highway or portions of State Route 116, because project facilities do not cross or run adjacent to these roadways (see Table 3.14-2). Portions of the proposed pipeline could affect scenic resources adjacent to County-designated scenic routes. In general the level of impact is equivalent under both the No Action Alternative and Phase 1.

Napa SD

Under Phase 1, installation of the 17.5 miles of pipeline would occur predominantly along existing roadways. Napa County has designated a series of roadways as locally-defined scenic routes, as described above in Table 3.14-3. Pipeline corridors do not directly overlap these Scenic Highway areas, so there would be no impact to scenic highway resources.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to scenic roadways under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

There are no Caltrans-designated scenic highways in the LGVSD service area; therefore, there is no impact.

Novato SD/NMWD

Under the Basic System, pipelines are proposed along a portion of State Route 37, which is eligible for designation as a Caltrans Scenic Highway, and along small portions of Novato Boulevard. Views of open space and agricultural land are experienced by roadways users. These views would be temporarily disrupted during short-term construction activities. However, following construction, measures including roadway repaving and landscaping would restore the disturbed area, resulting in a less than significant temporary impact with mitigation (**Mitigation Measures 3.14.1a** and **3.14.1c**). The pipelines would be buried; therefore, there would be no long-term impacts to these scenic corridors.

Implementation of the Basic System would affect Atherton Avenue in addition to Novato Boulevard, therefore the impacts from the Basic System would be incremental as compared to Phase 1 and the No Action Alternative.

SVCSD

An extension of the pipeline corridor along Arnold Drive is proposed under the Basic System. Portions of State Route 121/ Arnold Drive are eligible for Caltrans Scenic Highway designation. The proposed pipeline would occur along Highway 116, between Arnold Drive and Highway 12, and along County-designated scenic corridors on Arnold Drive, Highway 116 and Highway 12. In the city of Sonoma, pipeline corridors would traverse along Broadway, through the intersection of Broadway/ Leveroni Road/ Napa Road. The Broadway intersection has been established by the City as a locally-defined gateway to the city. Impacts to views and disruption of streetscaping on Broadway would be temporary during the construction period. Following construction, measures including roadway repaving and landscaping would restore the disturbed area, resulting in a less than significant temporary impact with mitigation (**Mitigation Measures 3.14.1a** and **3.14.1c**). Due to the nature of the proposed pipelines, which would be buried underground, the project would not detract from the permanent visual quality of the scenic highways. Due to the nature of pipelines, these views would be temporarily disrupted during short-term construction activities. Following construction, measures including roadway repaving and landscaping would restore the disturbed area, resulting in a less than significant temporary impact with mitigation (**Mitigation Measures 3.14.1a** and **3.14.1c**). The pipelines would be buried; therefore, there would be no long-term impacts to these scenic corridors (see Impact 3.14.4).

Additional project components, including recycled water pipelines, are proposed under the Basic System, which would affect eligible scenic routes in Sonoma County; therefore, there is an incremental increase in adverse impacts to scenic highways in the SVCSD service area under the Basic System compared to the No Action Alternative.

Napa SD

Under the Basic System, the proposed pipeline corridor would not overlap or run adjacent to Caltrans designated Scenic Highway segments along State Routes 29 and 121 near Napa; therefore there is no impact to scenic highway resources. Installation of the pipeline would occur predominantly along existing roadways. The level of impact is the same as that discussed for the No Action Alternative.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to scenic roadways under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Novato South Service Area-Hamilton Field.

The pipeline route would cross under State Route 37, which is eligible for Caltrans Scenic Highway designation, near the onramp from U.S. Highway 101. The construction activities would most likely not be visible from the highway, and the project would not detract from the visual quality of the areas; therefore, views of open space from the roadway at this crossing point would not be affected. The pipelines would be buried, therefore, there are no long-term adverse impacts from facility operation to scenic highways. There would be an incremental increase in adverse impacts to scenic highways in the LGVSD service area under the Partially Connected System compared to the No Action Alternative.

Novato SD/NMWD

Under the Partially Connected System, pipelines would be installed along Novato Boulevard, which has been identified by the City of Novato as a locally-important scenic route. Impacts to views from this roadway would be temporarily affected during a short-term construction period. However following construction, Novato Boulevard would be repaved and landscaped to restore disturbed areas; therefore the impact would be less than significant with implementation of **Mitigation Measures 3.14.1a** and **3.14.1c**. The pipelines would be buried, therefore, there are no long-term adverse impacts from facility operation to scenic highways.

There would be an incremental increase in adverse impacts to scenic highways in the Novato SD service area under the Partially Connected System compared to the No Action Alternative.

SVCSD

Under the Partially Connected System, extended service to the Sears Point area would require additional pipeline along State Route 37, which is eligible for Caltrans scenic highway designation. A pipeline would also be extended approximately 6 miles south along State Route 121/Arnold Drive, which is also eligible for Caltrans Scenic Highway designation. Views of open space, agricultural land, and some wetland areas from these roadways would be temporarily disrupted during the short-term construction period. The impact would be similar to that discussed under Novato SD and would be less than significant with mitigation.

There would be an incremental increase in adverse impacts to scenic highways in the SVCSD service area under the Partially Connected System compared to the No Action Alternative.

Napa SD

Under the Partially Connected System, an additional 1.75 mile-pipeline would extend east from the Napa SD WWTP into the Carneros area. Views of open space, agricultural land, and some wetland areas are visible from these roadways. The project is not anticipated to detract from the visual quality of the areas, and pipelines would be buried underground; therefore, there is a less than significant impact to scenic highways.

There would be an incremental increase in adverse impacts to scenic highways in the SVCSD service area under the Partially Connected System compared to the No Action Alternative.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to scenic vistas under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

There are no additional project facilities proposed under the Fully Connected System, therefore, there are no impacts to scenic corridors. Similar to the Partially Connected System, there would be an incremental increase in adverse impacts to scenic highways in the LGVSD service area compared to the No Action Alternative.

Novato SD/NMWD

There are no additional project facilities proposed under the Fully Connected System that were not identified under the Partially Connected System. No additional impact is expected. Similar to the Partially Connected System, there would be an incremental increase in adverse impacts to scenic highways in the Novato SD service area compared to the No Action Alternative.

SVCSD

Under the Fully Connected System, an approximately 2.5-mile pipeline would connect the pipeline along Arnold Drive to the pipeline at Sears Point and would cross State Route 37. Views of open space and wetlands would be temporarily disrupted during the short-term construction period. The pipeline corridor would run adjacent to sections of State Route 12 and State Route 121 (Arnold Dive), where it is eligible for the scenic highway designation. The pipeline would traverse one mile north along Arnold Drive, through Eldridge to Madrone Road, and one mile along State Route 12 north of Agua Caliente. Similar to the impact discussed under the Partially Connected System, the impact would be less than significant with mitigation for the additional pipelines discussed.

Additional recycled water pipelines, are proposed under the Partially Alternative would affect eligible scenic routes in Sonoma County; therefore, there is an incremental increase in adverse impacts to scenic highways in the SVCSD service area under the Fully Connected System compared to the No Action Alternative.

Napa SD

There are no additional project facilities proposed under the Fully Connected System, therefore, there are no impacts to scenic corridors. Similar to the Partially Connected System, there would be an incremental increase in adverse impacts to scenic highways in the Napa SD service area compared to the No Action Alternative.

Mitigation Measures

The appropriate Member Agency will implement the following measures:

Mitigation Measure 3.14.1a
Mitigation Measure 3.14.1b

Impact Significance after Mitigation: Less than Significant.

Impact 3.14.3: Source of Light or Glare. NBWRP components could introduce new sources of light and glare on the project sites. (Less than Significant with Mitigation)

Exterior lighting would be installed around the constructed water storage reservoirs, distribution pump stations, storage tanks, and booster pump stations. Exterior lighting could adversely affect day and nighttime views by introducing a new source of light and glare. The lighting would be used for security purposes only and would be timed. If nighttime construction is required, nighttime lighting at construction sites would contribute to ambient light. Also, building materials for new facilities could be reflective, and contribute to additional glare from constructed facilities. Implementation of the identified mitigation measures would reduce potentially significant lighting and glare impacts to a less-than-significant level. There would be no long-term lighting installed for the pipelines, therefore is not discussed further.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact is expected. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.14-1**).

Under future baseline (2020) conditions, aesthetics within the region are anticipated to be similar to existing conditions in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

There could be lighting installed associated with some of the storage and pump station facilities as part of the recycled water projects that would be implemented under the No Action Alternative. Increased lighting and glare could affect visual resources.

LGVSD/NMWD

No recycled water projects are anticipated in the LGVSD service area, therefore no impacts from light and glare are expected.

Novato SD/NMWD, SVCSD

There would be no exterior lighting associated with the proposed pump stations and storage reservoirs, therefore no impact is expected.

Napa SD

No recycled water projects are anticipated in the Napa SD service area, therefore no impacts from light and glare are expected.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts from new sources of light and glare under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under Phase 1, impacts from long term security lighting for the proposed pump station could be significant. Implementation of **Mitigation Measures 3.14.3a and 3.13.3b** would reduce the impact to less than significant.

Novato SD/NMWD

Expansion of tertiary treatment capacity at the Novato SD WWTP would not result in impacts from lighting and glare to aesthetics because the WWTP currently uses emergency and operational lighting for existing facilities. Modification of the existing plant may involve additional lights, but the overall effect from lighting would remain the same.

Installation of the proposed booster pump station near the intersection of Atherton Avenue and Olive Avenue would potentially require nighttime construction lighting and exterior lighting, which could result in long-term impacts to aesthetic and scenic resources. The proposed site is currently undeveloped, but it is adjacent to existing residences. Exterior lighting for the booster pump station could be visible from nearby residences as well as from receptors on the nearby ridge areas. Implementing timed-lighting and orienting lights downward would reduce significant lighting impacts to a less than significant level (**Mitigation Measures 3.14.1c, 3.14.3a, 3.14.3b**). Therefore, the exterior lighting at the booster pump station would not substantially increase ambient light in the action area.

SVCSD

Lighting could be installed for the proposed booster pump station for the portion of Sonoma Valley Recycled Water Project under the No Action Alternative. Implementation of **Mitigation Measures 3.14.3a** and **3.14.3b** would reduce potential construction-related lighting impacts to a less-than-significant level.

The new pump station proposed would be located at the existing SVCSD WWTP. Emergency and operational lighting, and building materials would be consistent with existing facilities, therefore impacts from lighting and glare would be less than significant.

Napa SD

Four new booster pump stations would be constructed on sites along North 3rd Avenue, East 3rd Avenue, and Coombsville Road (Wild Horse Valley Road), and Imola Road. The sites are surrounded mainly by viticulture, and several low density detached single-family homes. Views from the residences would potentially be affected by the additional lighting. With implementation of mitigation measures addressing design, landscape screens, and lighting features (**Mitigation Measures 3.14.1c, 3.14.3b, 3.14.3c**), the impact would be less-than-significant. The proposed booster pump site along Imola Drive is situated on a flat, undeveloped parcel that is surrounded by undeveloped parcels, a commercial center, and bound by the roadway. There are several residences set back from Imola Drive on the side opposite of the proposed site. Based on the surrounding land uses, the additional security and operational lighting would not impact views in this area.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts from new sources of light and glare under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

There would be no additional impacts from lighting and glare to aesthetics other than the impacts associated with the implementation of Phase 1.

Novato SD/NMWD

WWTP improvements and utilization of existing storage tanks would rely on existing light at the facilities, and would not increase lighting and glare; therefore the Basic System would not adversely affect visual resources.

Reoperation of existing storage tanks may require installation of new security or emergency lighting. The Main Gate Road/ Hangar Avenue Tank is situated on top of a hill overlooking open space and state access land to the north, and a residential development to the south, so lighting and glare effects would not be easily visible. Similarly, the existing storage tank near Olive Drive is situated in a shallow valley between two low hills to the north of Zandra Place. It is mostly surrounded by trees, and there is only one residence that would potentially be affected by additional emergency lighting at this facility. Implementation of **Mitigation Measures 3.14.3a and 3.14.3b** would reduce the impact to less-than-significant level.

SVCSD

There would be no additional impacts from lighting and glare to aesthetics other than the impacts associated with the implementation of Phase 1.

Napa SD

There are no anticipated impacts on aesthetics from lighting and glare other than those previously discussed under Phase 1, as additional components proposed under the Basic System will be located at the existing WWTP. Therefore, the Basic System represents an incremental increase in adverse impacts to ambient light compared to the No Action Alternative.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts from new sources of light and glare under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Reoperation of existing storage tanks under the Partially Connected System may require installation of new security or emergency lighting. The Peacock Gap Storage Tank is situated in open space at

the foot of a hill between Biscayne Road and San Pedro Road. Approximately three residences along Partridge Drive are in the same viewshed, but lighting and glare effects would not be easily visible. Effects from lighting and glare on scenic views would be less than significant.

There would be no anticipated impacts to ambient light under the No Action Alternative, therefore exterior lighting as part of the Partially Connected System would have a greater impact than the No Action Alternative in the LGVSD service area.

Novato SD/NMWD

Impacts from reoperation of an existing storage tank under the Partially Connected System would be similar to that discussed under LGVSD. Implementation of **Mitigation Measure 3.14.3b** would ensure a less-than-significant impact.

In general, the level of impact to ambient light is similar under the Basic System. If nighttime construction is required for NBWRP construction, there will be an incremental increase in ambient light compared to the No Action Alternative.

SVCSD

The impacts would be similar to those discussed under the Basic System and would be incrementally greater than those discussed under the No Action Alternative.

Napa SD

Under the Partially Connected System, emergency and security lighting may be used during operation of a new storage reservoir would reduce dark-sky effects and potentially affect residential views. Similarly, there is potential for the structure itself to be constructed of bright or reflective material. Implementing structural design features, screening and lighting mitigation (**Mitigation Measures 3.14.3b** and **3.14.1c**) would reduce the impacts from lighting and glare to a less than significant level.

The Partially Connected System represents an incremental increase in ambient light compared to the No Action Alternative.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts from new sources of light and glare under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD, Novato SD/NMWD, and Napa SD

No additional construction is proposed under the Fully Connected Alternative. Therefore, there will be no additional effect from construction lighting or emergency lighting on ambient light.

Implementation of the Fully Connected Alternative, which includes components under the Partially Connected System, would represent an incremental increase in impacts to ambient light, compared to the No Action Alternative.

SVCSD

Under the Fully Connected System, there would be no new sources of lighting installed for any new project facilities, therefore no impact is expected. The Fully Connected System, which includes components under the Partially Connected System and additional pipeline, represents an incremental increase in ambient light.

Mitigation Measures

The appropriate Member Agency will implement the following measures:

> **Mitigation Measure 3.14.1c**
>
> **Mitigation Measure 3.14.3a:** The exterior lighting installed around the operational and capacity storage reservoirs, distribution pump station, storage tanks, and booster pump station shall be of a minimum standard required to ensure safe visibility. Lighting also shall be shielded and directed downward to minimize impacts of light and glare.
>
> **Measure 3.14.3b:** All exterior lighting is directed downward and oriented to insure that limited light source is directly visible from neighboring residential areas. If necessary, landscaping would be provided around proposed facilities. The vegetation would be selected, placed, and maintained to minimize off-site light and glare onto surrounding areas.

Impact Significance after Mitigation: Less than Significant.

Impact 3.14.4: Long-term impact to aesthetic character. Development of the proposed facilities, particularly pump stations and storage reservoirs, would permanently alter the aesthetic character of the action area. (Less than Significant with Mitigation)

Construction of facilities on graded or undeveloped areas would change the landscape by introducing a new structure above the grade or the skyline. Facilities that would be constructed above-grade include pump stations and new storage reservoirs. In some cases, the pump stations and reservoirs would be located near sensitive receptors or roadways, however views may be buffered by street trees, minimized by property setbacks, or limited by topography. In areas where the structures would significantly alter views, mitigation would be required. Adverse effects specific to certain proposed components are described in the subsections below.

No Project Alternative

No project components would be implemented under the No Project Alternative. No impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.14-1, No Action**).

Under future baseline (2020) conditions, aesthetic character of the region is anticipated to be similar to existing conditions in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

Under the No Action Alternative, permanent changes to landscape units could occur, therefore affecting the long-term visual character of the action area. Projects that are reasonably anticipated to occur under the No Action Alternative include increased distribution facilities in the Novato SD service area, SVRWP Alignment 1A pipeline and Napa Salt Marsh pipeline in the SVCSD service area.

LGVSD/ NMWD

No recycled water projects are anticipated in the LGVSD service area, therefore no permanent impacts to visual character would occur.

Novato SD/ NMWD

The No Action Alternative would not involve any long term aboveground features that would permanently alter the aesthetic character of the area. No impact would occur.

SVCSD

The No Action Alternative would include construction of a pump station at the SVCSD WWTP, which is an existing developed property. The pump station would be installed within the footprint of the existing WWTP, and would be generally consistent with the existing landscape. The impact would be less than significant.

The SVWRP Alignment 1A pipeline and the SVCSD Napa Salt Pond Pipeline would not permanently affect visual resources because pipelines would be buried underground, and disturbed areas would be restored after construction.

Napa SD

No recycled water projects are anticipated in the Napa SD service area, therefore no permanent impacts to visual character would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The long-term impacts to aesthetics under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

There are no storage facilities or other structures proposed under Phase 1 that would permanently alter the visual character of the area. No impact is expected. The facilities proposed under Phase 1 would have the same level of impact as compared to the No Action Alternative.

Novato SD/NMWD

North Novato Service Area. Modification of the tertiary treatment capacity and construction of a one new booster pump station would not alter the general existing visual character of the WWTP. An additional pump station is proposed near the intersection of Atherton Avenue and Olive Avenue on an undeveloped parcel bordered by H Lane and single-family residences. Installation of the proposed booster pump station could result in long-term impacts to aesthetic and scenic resources by introducing a new structure to the landscape. The booster pump station would extend up to 15 to 20 feet above grade. The views of the pump station from residences on the east and west sides of H lane would be buffered by trees. It would most likely not be visible to vehicular traffic from Atherton Avenue. Implementation of **Mitigation Measures 3.14.4a** and **3.13.4b** will mitigate impacts to the permanent visual character of the area to a less than significant level.

Central Novato Service Area. Under Phase 1, construction of a booster pump station would have an impact to aesthetics. The level of impact to the visual character of the area would be similar to the impact discussed above, and would be incrementally greater than the level of impact discussed above No Action Alternative.

SVCSD

Additional storage and an additional pumping station are proposed at the existing WWTP. The WWTP is visible from 8th Street and Schellville Road. Land surrounding the WWTP is flat open and undeveloped land, vineyard, and commercial land. While the pond would be in the ground and only visible from proximate vantage points, the pump station would be above grade,

introducing a new, contrasting object to the landscape. Construction of another storage pond and pumping station would alter the appearance of the WWTP, however would be generally consistent with the existing visual character of the site. Addition of the pond and pump station would not significantly impact the existing visual resources or the permanent visual character of the action area. Furthermore, incorporation of screening and vegetation measures would continue to reduce potential impacts to a less than significant level.

Thus, Phase 1 includes Alignment 1A, and additional structures, which would have a permanent impact on the long-term visual character of the area; therefore, long-term effects on the permanent character of the landscape would be incrementally greater under Phase 1 compared to the No Action Alternative.

Napa SD

Phase 1 requires the installation of four new booster pump stations on North 3rd Avenue, East 3rd Avenue, Coombsville Road (Wild Horse Valley Road), and Imola Avenue. The areas along North 3rd Avenue, East 3rd Avenue, Coombsville Road/ Wild Horse Valley Road contain primarily low density rural residential and agricultural land uses.

The precise location of the North 3rd Street Pump Station is undefined, but in general, the area is characterized by vineyard and low density residential land uses, and a minimum number of sensitive receptors are present. North 3rd Avenue is bordered to the west by street trees, which would obstruct views of the pump station by nearby residents. The physical structure would affect the aesthetic character of the adjacent vineyard. Potential sensitive residential receptors along East 3rd Avenue are set back at a considerable distance from the road and are surrounded by trees and open space. The precise location of this pump station is undetermined, but in general, it would be built on relatively flat, open terrain in a low density residential and agricultural neighborhood. There are approximately five residential or visitor-serving buildings in the adjacent area. Coombsville Road/ Wild Horse Valley Road is bordered by street trees, and the pump station would be setback from the road, therefore the pump station would not be readily visible from the road. There are two agricultural and community buildings adjacent to the undeveloped parcel where the pump station may be located that would be affected by the introduction of a new public utility structure. A new booster pump station situated in the flat, undeveloped area bordering Imola Avenue would be visible from Imola Avenue, Penny Lane, and approximately four sensitive residential receptors. It would also be visible from the parking lot connected to the commercial center on Walnut Court, however would coincide with the existing visual character of this commercial structure. Since the NBWRP would introduce new above-grade structures that will alter the physical character and scenic views of the area, there would be a significant impact to visual resources. Implementation of **Mitigation Measures 3.14.4a** and **3.14.4b** would minimize the effects of the facilities on the surrounding viewshed and reduce the contrast between visual resources to a less than significant level.

The impact to the visual character of the area is incrementally greater under Phase 1 compared to the No Action Alternative because three additional pump stations are proposed.

Alternative 1: Basic System

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The long-term impacts to aesthetics under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

There would be no additional permanent impacts to the visual character of the LGVSD service area under the Basic System as compared to Phase 1.

Novato SD/NMWD

The Phase 1 analysis discussed the potential permanent impacts to the visual character of the Novato SD area. Under the Basic System, there are no additional impacts to visual resources that were not discussed in the Phase 1 analysis, because the Basic System addition consists of modification and utilization of existing facilities.

Improvements at the WWTP site would slightly alter the existing appearance of the WWTP, but the general visual character of the plant would remain. There would be no long-term impacts to aesthetic resources due to the continued operation of the existing WWTP because the WWTP is an existing physical feature.

Utilization of existing storage tanks would not induce long-term impacts to visual resources because they are existing units of the landscape.

Re-operation of the existing storage tanks would not require new construction. The activities required to refurbish the storage tanks would not disturb the character of the hillside area, which is surrounded by open space and parkland. Therefore, permanent impacts to the visual character of the action area would be less than significant.

The Basic System would include the booster pump previously discussed in Phase 1; therefore, the level of impact to the visual character of the area would be incrementally greater under the Basic Alternative than the level of impact anticipated under the No Action Alternative.

SVCSD

There would be no additional permanent impacts to the visual character of the SVCSD service area under the Basic Alternative compared to Phase 1. The facilities, including Alignment 1 and additional pipeline and structures, are anticipated to have a permanent impact on the long-term visual character of the area; therefore, long-term effects on the permanent character of the landscape would be similar to those under the No Action Alternative.

Napa SD

Improvements at the WWTP site would slightly alter the existing appearance of the WWTP, but the general visual character of the area would remain. Therefore, there would be no permanent impacts to the visual character of the action area.

Operational reconfiguration of the existing storage WWTP ponds would not alter the existing appearance of the ponds, and the general visual character of the pond area would remain. Therefore, there would be no impact.

The permanent impact to aesthetics would be incrementally greater under the Basic System, which includes Phase 1, as compared to the No Action Alternative.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The long-term aesthetics impacts under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

The Partially Connected System would involve use of additional conveyance capacity in the existing MMWD recycled water distribution system, and rehabilitation of an existing water reservoir near Peacock Gap Golf Course and would not result in permanent impacts to visual resources. The re-operation of existing water reservoirs would not introduce any new structures to the landscape.

The Partially Connected System, which includes components proposed under the Basic System, and the No Action Alternative would have the same level of impact long-term character of visual resources.

Novato SD/NMWD

The components proposed under the Partially Connected System will have no additional impacts to the permanent visual character of the area that were not previously discussed as part of the Basic System. Utilization of existing facilities would not introduce new structures to the landscape.

The level of impact to the visual character of the area would be incrementally greater under the Partially Connected System than the level of impact anticipated under the No Action Alternative based on incremental effects discussed under Phase 1 and the Basic Alternative.

SVCSD

In addition to the permanent impacts to the visual character of the action area discussed under the Basic System, components of the Partially Connected System could induce incremental impacts to visual resources. Extension of service to the Southern Sonoma Valley service area and Sear's Point area would a new recycled water storage pond near SVCSD WWTP and in the Carneros West area.

The SVCSD WWTP is an existing public utility that is surrounded primarily by viticultural land uses and some undeveloped parcels. The precise location for the storage pond is undetermined, but is will likely be located adjacent to the WWTP on flat, undeveloped land. The pond would be delineated by berms which would alter the existing view of the immediate areas. In general, the pond would be consistent with existing views associated with the WWTP, further implementation of **Mitigation Measures 3.14.4a** and **3.14.4b** would minimize the contrast between the berms and surrounding fields, and reduce the permanent effect on the visual character of the area to a less than significant level.

The long-term effects from the Partially Connected System on the permanent character of the landscape would be incrementally greater under the Basic System, as compared to the No Action Alternative.

Napa SD

In addition to the components described under the Basic System, the Partially Connected System would include service to expanded MST, Napa, and Carneros East areas, construction of a new storage reservoir, and reconfiguration of existing WWTP ponds. The new storage reservoir is proposed within the MST area, which contains primarily agricultural and partially residential land uses. Since the precise location of the storage reservoir is undetermined, it is reasonable to assume that since the storage reservoir would be an above-grade facility and could affect the visual landscape. Implementation of **Mitigation Measures 3.14.4a** and **3.14.4b** would reduce the impact to less-than-significant levels.

The existing WWTP ponds would be reconfigured to provide recycled water storage. Operational reconfiguration of the ponds would not change the appearance of the immediate area, and would be consistent with the existing visual characteristic of the WWTP; therefore there would be no impact to the visual character.

There would be no long-term impacts to aesthetic resources due to operation of the recycled water pipelines. All pipelines would be buried except for pipelines suspended beneath bridge crossings. Pipelines would not impair or obstruct any scenic resources.

In general, permanent impacts to the aesthetic character of the SVCSD service area under the Partially Connected System, which builds on the Basic System, are less than significant after mitigation. Implementation of the Partially Connected Alternative represents and incremental increase in permanent impacts to the visual character of the area compared to the No Action Alternative.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The long-term aesthetics impacts under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD, Novato SD/NMWD, SVCSD, Napa SD

The impacts associated with the Fully Connected System would be equivalent to the impacts discussed for Partially Connected System above in addition to the following impacts. There are no additional proposed aboveground structures, such as storage tanks or pump stations proposed under the Fully Connected Alternative that have not been discussed in the Partially Connected System analysis.

Since the Fully Connected Alternative includes the components proposed under Phase 1, the Basic Alternative, and the Partially Connected Alternative, the Fully Connected System would have an incrementally greater impact to the permanent visual character of the area compared to the No Action Alternative, even though they contain some similar elements.

Mitigation Measures

The appropriate Member Agency will implement the following measures:

> **Mitigation Measure 3.14.4a:** After construction of any facility that is above grade and visible to sensitive receptors, visual screening and vegetation measures will be implemented to reduce impacts to scenic views. Trees or other suitable vegetation along the fenceline of the facility should be incorporated to reduce the industrial appearance of the structures. Similarly, berms for new storage ponds or pond reconfiguration will be re-vegetated to reduce the barren appearance of the berms.
>
> **Mitigation Measure 3.14.4b:** Dark colored, non-reflective building materials should be used for project components that cause potentially significant impact from glare to visual resources.
>
> **Impact Significance after Mitigation**: Less than Significant

3.14.4 Impact Summary by Service Area

Table 3.14-4 provides a summary of potential aesthetic impacts associated with implementation of the NBWRP.

TABLE 3.14-4
POTENTIAL IMPACTS AND SIGNIFICANCE – AESTHETICS

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.14.1: Temporary impact to scenic vistas.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	LSM	LSM	LSM
Phase 1	LSM	LSM	LSM	LSM
Alternative 1: Basic System	LSM	LSM	LSM	LSM
Alternative 2: Partially Connected System	LSM	LSM	LSM	LSM
Alternative 3: Fully Connected System	LSM	LSM	LSM	LSM
Impact 3.14.2: Impact to Scenic Corridors.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	LSM	LSM	NI
Phase 1	NI	LSM	LSM	NI
Alternative 1: Basic System	NI	LSM	LSM	NI
Alternative 2: Partially Connected System	LTS	LSM	LSM	LTS
Alternative 3: Fully Connected System	LTS	LSM	LSM	LTS
Impact 3.14.3: Impact from new sources of light.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	LSM
Phase 1	LSM	LSM	LSM	LSM
Alternative 1: Basic System	LSM	LSM	LSM	LSM
Alternative 2: Partially Connected System	LSM	LSM	LSM	LSM
Alternative 3: Fully Connected System	LSM	LSM	LSM	LSM
Impact 3.14.4: Permanent impact to visual character.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	LTS	LTS	LSM
Phase 1	NI	LSM	LSM	LSM
Alternative 1: Basic System	NI	LSM	LSM	LSM
Alternative 2: Partially Connected System	NI	LSM	LSM	LSM
Alternative 3: Fully Connected System	LTS	LSM	LSM	LSM

NI = No Impact
LTS = Less than Significant impact, no mitigation required
LSM = Less than Significant with Mitigation

3.14.5 References

California Department of Transportation (Caltrans), California Street and Highway Code 263.

California Department of Transportation (Caltrans), *California Scenic Highway Mapping System*, Sonoma County, Napa County, Marin County, 2008, http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm, Accessed March 23, 2009.

City of Napa, Planning Department, *City of Napa General Plan, Land Use Element*, Adopted 1 December 1998, amended 1 January 2007.

City of Novato, Community Development Department, *City of Novato General Plan, Community Identity Element*, adopted 8 March 1996, revised 25 March 2003 by Resolution No. 33-03.

City of San Rafael, Community Development Department, *2020 General Plan, Community Development Element and Open Space Element,* 2004.

City of Sonoma, *City of Sonoma General Plan: 2020*, October 2006.

Sonoma County, Permit and Resource Management Department, 2008. Sonoma County General Plan 2020, adopted September 23, 2008.

Marin County Community Development Agency, *Marin Countywide Plan (General Plan), Community Design Element*, 6 November 2007.

Napa County, Department of Conservation, Development, and Planning, *Napa County General Plan*, June 4, 2008.

3.15 Environmental Justice

This section identifies minority and low-income populations that exist within the North Bay Water Recycling Program (NBWRP) area and evaluates whether the potential environmental impacts of each alternative would be disproportionately high and adverse on minority and low-income populations. The Impacts and Mitigation Measures section defines significance criteria used for the impact assessment and presents a discussion of potential project-related impacts. Determination of significance of impacts in this EIR/EIS apply only to CEQA, not to NEPA.

3.15.1 Affected Environment/Setting

LGVSD and Novato SD

Table 3.15-1 lists the demographics of the cities of Novato and San Rafael and Marin County from the 2000 U.S. Census. In 2000, over 75 percent of the population in Novato, San Rafael, and the County were white, approximately 2 to 3 percent were black, and about 5 percent were Asian. About 23 percent of San Rafael's population was Hispanic or Latino, which was more than double the County's percentage population of Hispanic or Latino. Novato's Hispanic or Latino population was approximately 13 percent, similar to that of the County.

TABLE 3.15-1
DEMOGRAPHICS: CITIES OF NOVATO AND SAN RAFAEL AND MARIN COUNTY

	Novato		San Rafael		Marin County	
	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population
Total Population	47,630	--	53,525	--	247,289	--
Race						
White	39,414	82.8	42,472	75.8	207,800	84.0
Black or African American	948	2.0	1,257	2.2	7,142	2.9
American Indian or Alaska Native	246	0.5	312	0.6	1,061	0.4
Asian	2,479	5.2	3,133	5.6	11,203	4.5
Native Hawaiian or other Pacific Islander	82	0.2	304	0.5	388	0.2
Some other Race	2,587	5.4	6,256	11.2	11,116	4.5
Two or more Races	1,874	3.9	2,538	4.5	8,579	3.5
Hispanic or Latino (of any race)						
Hispanic or Latino	6,229	13.1	13,070	23.3	27,351	11.1
Not Hispanic or Latino	41,401	86.9	42,993	76.7	219,938	88.9

SOURCE: U.S. Census Bureau, 2000.

Table 3.15-2 presents household income, per capita income, and poverty status for Novato, San Rafael, and Marin County in 1999. Median household income was $63,453 in Novato, $60,994 in San Rafael, and $71,306 in Marin County. Between 3 and 6 percent of families and 5 and 10 percent of individuals were below the poverty level in the three areas. In 2000, the weighted average federal poverty threshold was $8,794 for one person and $13,738 for a three-person family.

TABLE 3.15-2
INCOME AND POVERTY STATUS: CITIES OF NOVATO AND SAN RAFAEL AND MARIN COUNTY

Income and Poverty Status (1999)	Novato		San Rafael		Marin County	
	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population
Households	18,554	--	22,378	--	100,736	--
Less than $14,999	1,310	7.0	2,256	10.1	7,811	7.7
$15,000 to $24,999	1,373	7.4	1,899	8.5	6,854	6.8
$25,000 to $34,999	1,540	8.3	2,008	9.0	7,399	7.3
$35,000 to $49,999	2,618	14.1	3,024	13.5	12,151	12.1
$50,000 to $74,999	4,064	21.9	4,005	17.9	18,240	18.1
$75,000 to $99,999	2,632	14.2	2,949	13.2	12,947	12.9
$100,000 to $149,999	2,940	15.8	3,157	14.1	16,128	16.0
Greater than $150,000	2,077	11.2	3,080	13.7	19,206	19.1
Median Household Income ($)	63,453	--	60,994	--	71,306	--
Per Capita Income ($)	32,402	--	35,762	--	44,962	--
Poverty Status – Families	--	3.1	--	5.6	--	3.7
Poverty Status – Individuals	--	5.6	--	10.2	--	6.6

SOURCE: U.S. Census Bureau, 2000

SVCSD

Table 3.15-3 lists demographics of the City of Sonoma and Sonoma County from the 2000 Census. About 94 percent of the population in the City and 82 percent of the County was white. About 3 percent in the City and 6 percent in the County was black, American Indian, Asian, or Pacific Islander. About 7 percent of the population in the City was Hispanic or Latino, which was much lower than the County.

Table 3.15-4 presents household income, per capita income, and poverty status for the City and County in 1999. Median household income was $50,505 in the City and $53,076 in the County. Approximately 2 percent of families and 4 percent of individuals were below the poverty level in the City, which was less than the total County poverty status.

Napa SD

Table 3.15-5 lists demographics of the City of Napa and Napa County from the 2000 Census. About 80 percent of the population in both the City and County was white. About 3 percent in the City and 5 percent in the County was black, American Indian, Asian, or Pacific Islander. About 27 percent of the population in the City was Hispanic or Latino, which was generally similar to that of the County.

Table 3.15-6 presents household income, per Capita income, and poverty status for the City and County in 1999. Median household income was $49,154 in the City and $51,738 in the County. Approximately 6 percent of families and 9 percent of individuals in the City were below the poverty level, which was generally similar to total County poverty status.

TABLE 3.15-3
DEMOGRAPHICS: CITY OF SONOMA AND SONOMA COUNTY

	City of Sonoma		Sonoma County	
	Number	Percent of Total Population	Number	Percent of Total Population
Total Population	9,128	--	458,614	--
Race				
White	8,562	93.8	374,209	81.6
Black or African American	33	0.4	6,522	1.4
American Indian or Alaska Native	31	0.3	5,389	1.2
Asian	155	1.7	14,098	3.1
Native Hawaiian or other Pacific Islander	5	0.1	934	0.2
Some other Race	147	1.6	38,717	8.4
Two or more Races	195	2.1	18,745	4.1
Hispanic or Latino (of any race)				
Hispanic or Latino	625	6.8	79,511	17.3
Not Hispanic or Latino	8,503	93.2	379,103	82.7

SOURCE: U.S. Census Bureau, 2000

TABLE 3.15-4
INCOME AND POVERTY STATUS: CITY OF SONOMA AND SONOMA COUNTY

	Sonoma		Sonoma County	
Income and Poverty Status (1999)	Number	Percent of Total Population	Number	Percent of Total Population
Households	4,276	--	172,690	--
Less than $14,999	570	13.3	17,775	10.3
$15,000 to $24,999	445	10.4	16,423	9.5
$25,000 to $34,999	510	11.9	18,620	10.8
$35,000 to $49,999	584	13.6	27,222	15.8
$50,000 to $74,999	854	20.0	38,103	22.1
$75,000 to $99,999	522	12.2	23,321	13.5
$100,000 to $149,999	479	11.2	20,364	11.8
Greater than $150,000	315	7.4	10,862	6.3
Median Household Income ($)	50,505	--	53,076	--
Per Capita Income ($)	32,387	--	25,724	--
Poverty Status – Families	--	2.0	--	4.7
Poverty Status – Individuals	--	3.7	--	8.1

SOURCE: U.S. Census Bureau, 2000

TABLE 3.15-5
DEMOGRAPHICS: CITY OF NAPA AND NAPA COUNTY

	City of Napa		Napa County	
	Number	Percent of Total Population	Number	Percent of Total Population
Total Population	72,585	--	124,279	--
Race				
White	58,302	80.3	99,396	80.0
Black or African American	381	0.5	1,645	1.3
American Indian or Alaska Native	657	0.9	1,045	0.8
Asian	1,241	1.7	3,694	3.0
Native Hawaiian or other Pacific Islander	117	0.2	289	0.2
Some other Race	9,181	12.6	13,604	10.9
Two or more Races	2,706	3.7	4,606	3.7
Hispanic or Latino (of any race)				
Hispanic or Latino	19,475	26.8	29,416	23.7
Not Hispanic or Latino	53,110	73.2	94,863	76.3

SOURCE: U.S. Census Bureau, 2000

TABLE 3.15-6
INCOME AND POVERTY STATUS: CITY OF NAPA AND NAPA COUNTY

	City of Napa		Napa County	
Income and Poverty Status (1999)	Number	Percent of Total Population	Number	Percent of Total Population
Households	27,032	--	45,395	--
Less than $14,999	2,650	9.8	4,397	9.7
$15,000 to $24,999	3,117	11.5	4,825	10.6
$25,000 to $34,999	3,395	12.6	5,247	11.6
$35,000 to $49,999	4,583	17.0	7,331	16.1
$50,000 to $74,999	5,557	20.6	9,147	20.1
$75,000 to $99,999	3,498	12.9	6,022	13.3
$100,000 to $149,999	2,760	10.2	5,062	11.2
Greater than $150,000	1,472	5.4	3,364	7.5
Median Household Income ($)	49,154	--	51,738	--
Per Capita Income ($)	23,642	--	26,395	--
Poverty Status – Families	--	6.1	--	5.6
Poverty Status – Individuals	--	8.9	--	8.3

SOURCE: U.S. Census Bureau, 2000

3.15.2 Regulatory Framework

The federal, state, and local policies and regulations associated with impacts to environmental justice within the affected jurisdictions are presented below.

Federal

The 1994 Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* requires all federal agencies to conduct "programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin." Section 1-101 of the Order requires federal agencies to identify and address "disproportionately high and adverse human health or environmental effects" of programs on minority and low-income populations (U.S. Environmental Protection Agency [USEPA], 1994).

The USEPA released the 1996 Environmental Justice Implementation Plan that provides a framework for developing specific plans and guidance for implementing Order 12898. The plan establishes a goal for the USEPA to review NEPA documents for effects to environmental justice and help establish environmental justice impact analysis methods (USEPA, 1996). In 1998, USEPA published Guidance for Incorporating Environmental Justice Concerns in the USEPA's National Environmental Policy Act Compliance Analysis. This guidance presents procedures to evaluate disproportionately high and adverse effects on minority and low-income populations (USEPA, 1998).

State

California Government Code Section 65040.12(e) defines environmental justice as the "fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies." Section 65040.12(a) designates the Governor's Office of Planning and Research (OPR) as the coordinating agency in State government for environmental justice programs and directs the agency to coordinate with Federal agencies regarding environmental justice information. In 2001, Assembly Bill 1553 was signed into law requiring OPR to incorporate environmental justice considerations in General Plan Guidelines. AB 1553 specifies that local governments should address planning for equitable distribution of new public facilities and services, industrial facilities and uses, new schools and residential dwellings, and expanding opportunities for transit-oriented development.

In 2003, OPR published *Environmental Justice in California State Government*. The policy report provides a brief history on environmental justice, reports on OPR's efforts, outlines environmental justice findings, goals, and policies for future environmental justice efforts within State government. OPR has also incorporated environmental justice into the 2003 General Plan Guidelines and is updating them for the 2007 edition (OPR 2003, OPR 2008). Many California

State agencies have made efforts to incorporate environmental justice into programs and activities, including, but not limited to, California Department of Water Resources, California Air Resources Board, California Bay Delta Authority, California Environmental Protection Agency, and the California Resource Agency. However, many agencies do not yet have guidance for incorporating environmental justice impact assessment into CEQA.

Local

The Association of Bay Area Governments (ABAG), a consortium of nine Bay Area counties, which includes Marin, Sonoma, and Napa Counties, addressed social justice and equity in its Smart Growth Strategy and developed a policy to improve conditions in disadvantaged neighborhoods, ensure environmental justice, and increase access to jobs, housing, and public services for all residents in the region (ABAG, 2004).

The 2007 *Marin Countywide Plan* addresses environmental justice issues. The plan identifies general environmental inequities in Marin based on both race and income level relating to access and exposure to healthy food, air, and soils and sets a goal to ensure that all persons in Marin live in a safe and healthy environment (County of Marin, 2007).

The General Plans for Napa and Sonoma Counties do not discuss environmental justice issues.

3.15.3 Environmental Consequences/ Impacts

This section describes environmental justice effects relative to both minority and low-income populations in the action area. According to the Federal Council of Environmental Quality (CEQ) guidelines for environmental justice analyses, minority population[1] should be identified where the minority population of the affected area exceeds 50 percent or the minority population percentage of the affected area is meaningfully greater than the majority population percentage of the general population (CEQ, 1997).

The CEQ guidelines do not specifically define low-income populations, but some agencies have developed thresholds for environmental justice impacts analysis. This analysis uses California Department of Water Resources (DWR) guidelines to evaluate impacts. DWR incorporated environmental justice into the Integrated Regional Water Management planning guidelines to receive state funding. The Proposition 50 guidelines required applicants to involve disadvantaged communities in the planning process and identify and address environmental justice needs and issues within the region. California Water Code § 79505.5(a) defines disadvantaged communities as those communities with an annual median household income less than 80 percent of the statewide annual median household income, which was $47,493 in the 2000 Census (U.S. Census, Bureau 2000). The 80 percent threshold would be a median household income of $37,944, which is rounded to $38,000 for this analysis.

[1] Minority is defined as individuals who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic.

Information on racial composition, minority populations, and median household income was obtained from 2000 U.S. Census data to identify environmental justice populations. The analysis assumes that construction and operation of the project could affect populations within a one-half mile radius of the project components. If minority or low-income communities are predominant in the area, the analysis identifies potentially significant impacts to air quality, traffic, and noise from project construction and operation that may disproportionately affect minority or low-income communities. If potentially significant impacts to noise, air quality and traffic were to occur, there could be disproportionate environmental justice impacts and mitigation would be required. The analysis also discusses potential environmental justice impacts from increased water and sewer fees and changes in farm worker employment.

Identification of Disproportionately High and Adverse Environmental Effects

The NBWRP would result in a significant environmental justice impact if it would result in one or more of the following:

- An impact to the natural or physical environment that significantly and disproportionately adversely affects the identified minority or low-income population. Such effects may include ecological, cultural, human health, economic, or social impacts on the identified communities when those impacts are interrelated with impacts to the natural or physical environment.

- A significant environmental effect that would result in an adverse impact on the identified population that appreciably exceeds or is likely to appreciably exceed that impact on the general population or other appropriate comparison group.

Environmental Consequences/Impact Analysis

Impact 3.15.1: Project construction could result in air quality, noise, and/or other environmental impacts that could disproportionately affect nearby minority communities. (No Impact)

The NBWRP would include construction for pipeline installation, pump stations, storage reservoirs, and treatment plant upgrades. Earthmoving activities such as excavation, grading, soil stockpiling, and filling would occur during construction. Pipelines would be installed through trenching and jack-and-bore tunneling along the roadways. As discussed in **Sections 3.6** through **3.11** and **Section 3.14**, construction activities would result in short-term increases in traffic from construction vehicles, and increases in fugitive dust, equipment exhaust emissions, and noise levels. Construction would also cause temporary aesthetic and visual impacts. However, these impacts would be localized to a smaller construction area. The impacts discussed would be typical of construction projects and the magnitude of these impacts would be less than significant with mitigation measures listed in the individual sections. If the minority populations are larger than 50 percent of the total population in the affected area, whether the impact to the minority populations would be disproportionate is discussed further.

No Project Alternative

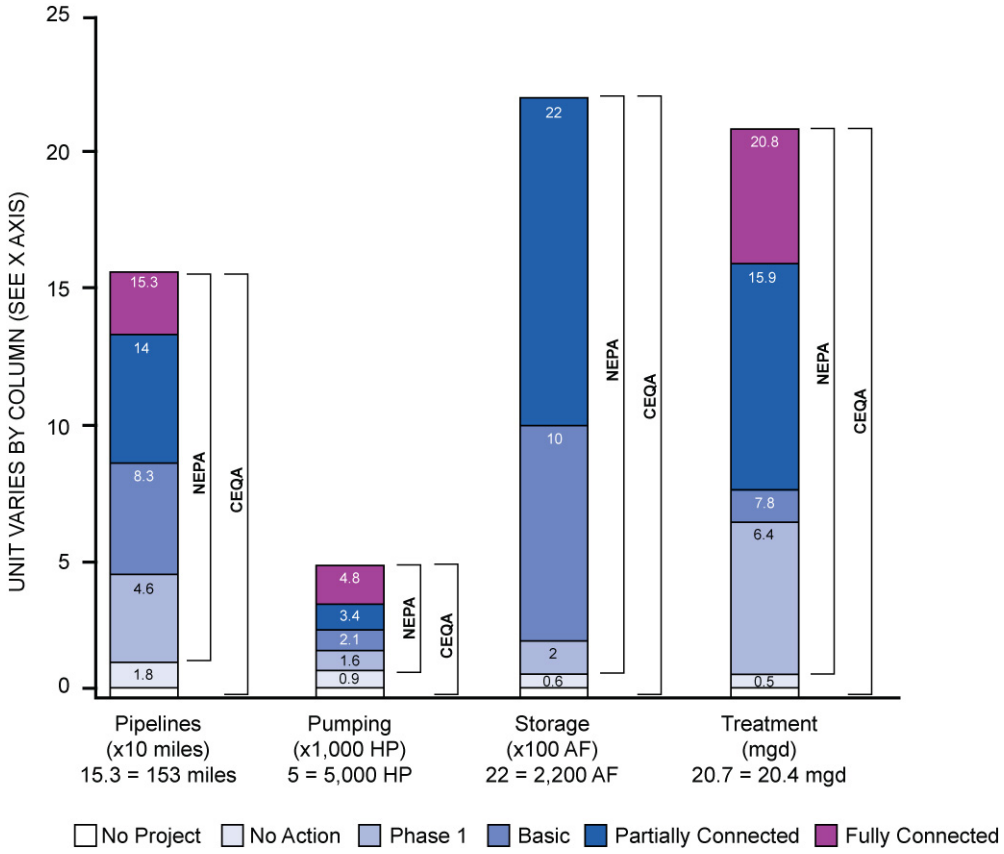
The NBWRP would not be implemented under the No Project Alternative, therefore no impacts would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.15-1, No Action**).

CHART 3.15-1
COMPARISON OF NEPA AND CEQA BASELINES FOR PROPOSED FACILITIES, BY ALTERNATIVE



SOURCE: CDM, 2009

Under future baseline (2020) conditions, the minority populations within the region are anticipated to change in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Novato SD/NMWD

In Marin County, construction would only occur in the Novato North Service Area under the No Action Alternative. Project construction could cause adverse effects to traffic, air quality, and noise, as discussed in other sections of **Chapter 3**. The effects would occur in Census blocks 101100.1, 101200.1, 102100.3, 102201.1, and 102201.4 (see **Figure 3.15-1**). Most of the action area is predominantly white with small percentages of black, American Indian, Asian, and Native Hawaiian populations. The highest percentage of Hispanic population was 28.5 percent in Census block 102201.1 in Novato (U.S. Census Bureau, 2000). Census data shows that minorities are less than 50 percent of the population in any of the Census blocks and would not be disproportionately affected. No impact would occur to minority communities in San Rafael or Novato as a result of the No Project/No Action Alternative.

SVCSD

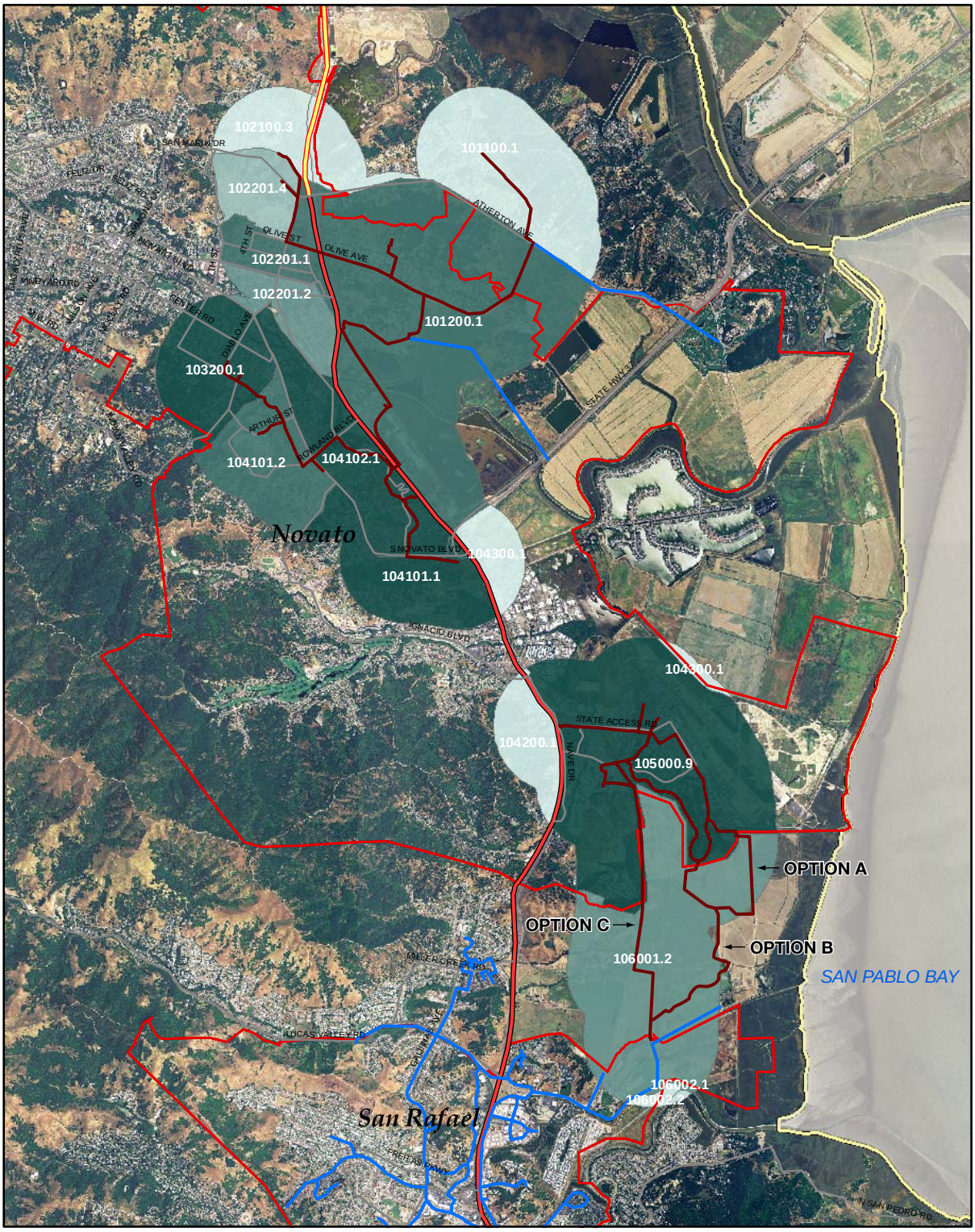
In Sonoma County, the Sonoma Valley Recycled Water Plan (SVRWP) Alignment 1A and the Napa Salt Marsh Restoration Project would be implemented under the No Action Alternative. This could affect Census blocks 150303.1, 150303.4, 150100.2, and 150606.1 (see **Figure 3.15-2**). Most of the action area is predominantly white with small percentages of black, American Indian, Asian, and Native Hawaiian, and other populations. The highest percentage of Hispanic population was 25 percent in Census block 150100.2 in 2000 (U.S. Census Bureau, 2000). Census data shows that minorities form less than 50 percent of the population in any of the Census blocks and would not be disproportionately affected. There would be no impacts to minority communities in Sonoma County as a result of the No Action Alternative.

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

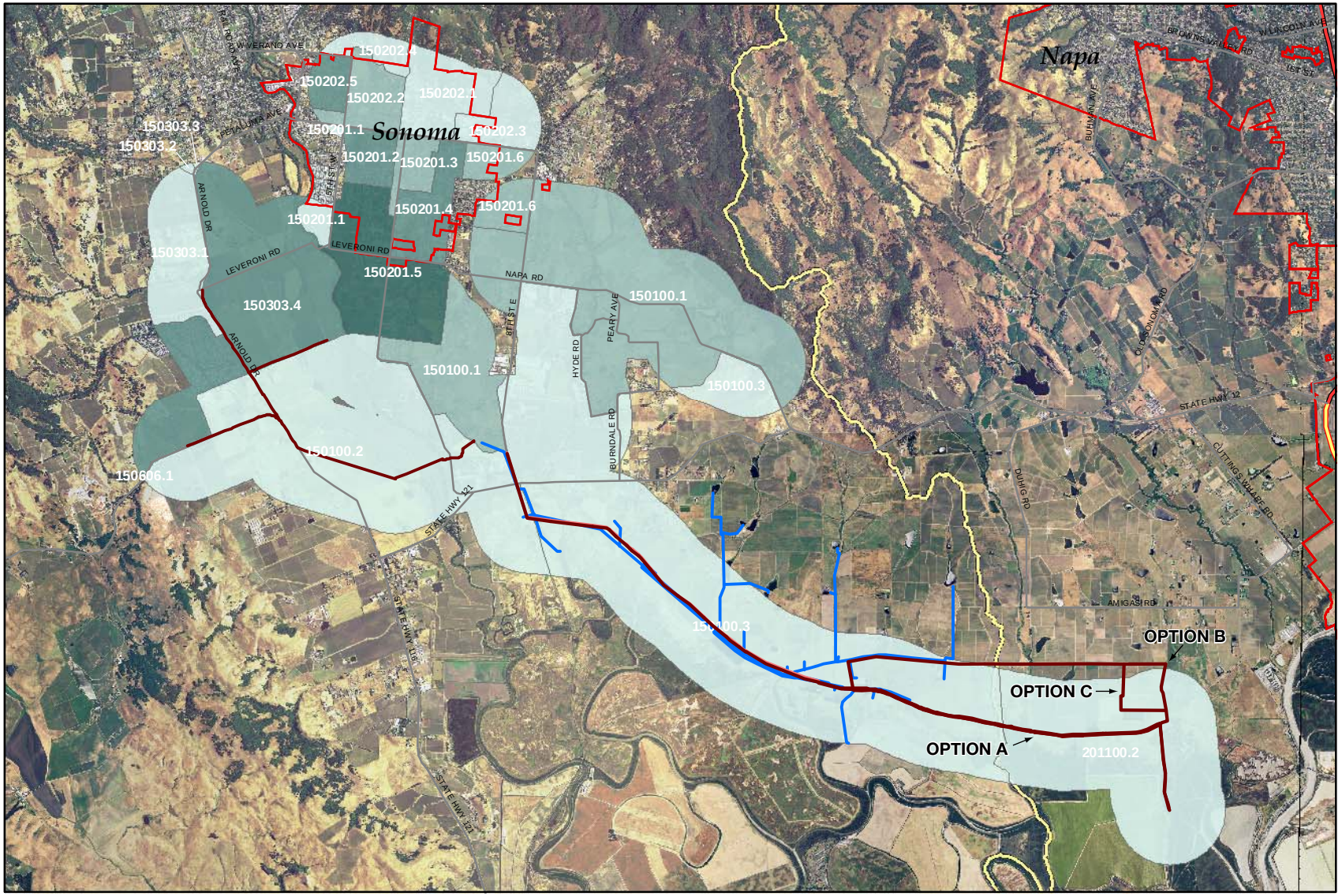


SOURCE: CDM, 2008

NBWRA North Bay Water Recycling Program . 206088.01

Figure 3.15-1

Total Populations within Half-Mile of the Project Area in Marin County (Phase 1)



SOURCE: CDM

NBWRA North Bay Water Recycling Program. 206088

Figure 3.15-2

Total Populations within Half-Mile of the Project Area in Sonoma County (Phase 1)

The impacts to minority populations under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/ NMWD and Novato SD/ NMWD

Figure 3.15-1 shows population and **Table 3.15-7** shows percentages of race and Hispanic origin within the one-half mile radius of the action area in San Rafael and Novato. Most of the area is predominantly white with small percentages of black, American Indian, Asian, and Native Hawaiian populations. The highest percentage of Hispanic population was 28.5 percent (between 1,000 and 1,499) in Census block 102201.1 in Novato. Census data shows that minorities are less than 50 percent of the population in any of the Census blocks and would not be disproportionately affected. There would be no environmental justice impacts to minority communities in San Rafael or Novato as a result of Phase 1 and thus no incremental effects as compared to the No Action Alternative.

TABLE 3.15-7
RACE AND HISPANIC POPULATION WITHIN ONE-HALF MILE RADIUS OF PIPELINE ALIGNMENTS IN MARIN COUNTY (IN PERCENTAGE)

Census Block	Population within half-mile radius	White	Black	American Indian	Asian	Native Hawaiian	Other	Two or more races	Hispanic	Non-Hispanic
101100.1	256	91.6%	< 1%	< 1%	3.2%	< 1%	1.1%	2.8%	3.5%	96.5%
101200.1	1858	86.2%	< 1%	< 1%	6.6%	< 1%	2.6%	3.1%	8.7%	91.3%
102100.3	191	86.5%	1.2%	< 1%	4.1%	< 1%	3.8%	3.2%	7.2%	92.8%
102201.1	1831	71.7%	4.1%	1.2%	4.1%	< 1%	13.7%	5.2%	28.5%	71.5%
102201.2	1468	77.9%	2.6%	< 1%	5.6%	< 1%	9.1%	4.1%	20.7%	79.3%
102201.4	973	84.5%	2.0%	< 1%	7.0%	< 1%	2.8%	2.9%	8.2%	91.8%
103200.1	2451	83.3%	1.4%	< 1%	5.8%	< 1%	5.1%	3.8%	11.1%	88.9%
104101.1	2020	80.3%	1.6%	< 1%	6.1%	< 1%	6.8%	4.4%	14.3%	85.7%
104101.2	1757	85.8%	1.7%	< 1%	6.5%	< 1%	2.9%	2.9%	7.4%	92.6%
104102.1	4954	73.0%	3.5%	< 1%	5.8%	< 1%	10.7%	6.3%	22.4%	77.6%
104200.1	292	83.9%	1.6%	< 1%	3.9%	< 1%	6.1%	3.8%	16.5%	83.5%
104300.1	120	91.9%	< 1%	< 1%	2.9%	< 1%	1.9%	2.5%	4.9%	95.1%
105000.9	2248	80.8%	3.0%	< 1%	4.7%	< 1%	6.6%	3.6%	15.7%	84.3%
106001.2	1375	79.7%	3.8%	< 1%	7.7%	< 1%	3.1%	5.2%	7.2%	92.8%
106002.1	26	74.1%	2.8%	< 1%	8.2%	< 1%	8.1%	5.8%	18.6%	81.4%
106002.2	84	81.7%	4.5%	< 1%	6.7%	< 1%	1.5%	5.0%	8.3%	91.7%

SOURCE: U.S. Census Bureau, 2000

SVCSD

Figure 3.15-2 shows population and **Table 3.15-8** shows percentages of race and Hispanic origin within a one-half mile radius of the proposed area in Sonoma County. As discussed above under No Action Alternative, most of the area is predominantly white with small percentages of black, American Indian, Asian, and Native Hawaiian populations. The highest percentage of Hispanic population was 25 percent (population of 500) in Census block 150100.2, which is less than

TABLE 3.15-8
RACE AND HISPANIC POPULATION WITHIN ONE-HALF MILE RADIUS OF PIPELINE ALIGNMENTS IN SONOMA COUNTY (IN PERCENTAGE)

Census Block	Population within half-mile radius	White	Black	American Indian	Asian	Native Hawaiian	Other	Two or more races	Hispanic	Non-Hispanic
150100.1	769	92.2%	< 1%	1.2%	1.9%	< 1%	2.9%	1.7%	6.7%	93.3%
150100.2	136	84.9%	< 1%	1.2%	< 1%	< 1%	9.7%	2.8%	25.0%	75.0%
150100.3	106	86.4%	< 1%	< 1%	< 1%	< 1%	10.6%	2.3%	21.9%	78.1%
150201.1	464	94.8%	< 1%	< 1%	2.1%	< 1%	< 1%	1.4%	5.3%	94.7%
150201.2	1194	92.5%	< 1%	< 1%	3.1%	< 1%	< 1%	2.4%	9.5%	90.5%
150201.3	634	96.5%	< 1%	< 1%	< 1%	< 1%	< 1%	1.4%	5.8%	94.2%
150201.4	1145	95.6%	< 1%	< 1%	< 1%	< 1%	1.0%	1.8%	3.2%	96.8%
150201.5	1665	92.5%	< 1%	< 1%	1.9%	< 1%	3.1%	1.9%	8.8%	91.2%
150201.6	603	96.8%	< 1%	< 1%	1.1%	< 1%	< 1%	1.7%	4.4%	95.6%
150202.1	397	96.4%	< 1%	< 1%	< 1%	< 1%	< 1%	1.2%	3.0%	97.0%
150202.2	859	91.8%	< 1%	< 1%	1.6%	< 1%	3.1%	2.6%	8.4%	91.6%
150202.3	43	92.3%	< 1%	< 1%	3.0%	< 1%	2.1%	2.0%	6.7%	93.3%
150202.4	42	91.5%	< 1%	< 1%	1.9%	< 1%	4.0%	1.7%	9.9%	90.1%
150202.5	1089	89.5%	< 1%	< 1%	1.8%	< 1%	3.9%	3.9%	11.3%	88.7%
150303.1	58	95.6%	< 1%	1.1%	1.3%	< 1%	1.0%	< 1%	5.6%	94.4%
150303.2	1	92.6%	< 1%	< 1%	1.1%	< 1%	2.3%	3.5%	6.3%	93.7%
150303.3	5	92.0%	< 1%	< 1%	2.7%	< 1%	2.3%	2.5%	6.8%	93.2%
150303.4	1031	96.3%	< 1%	< 1%	1.8%	< 1%	< 1%	< 1%	5.2%	94.8%
201100.2	105	87.8%	< 1%	< 1%	1.8%	< 1%	7.2%	2.3%	15.2%	84.8%

SOURCE: U.S. Census Bureau 2000

50 percent of the population in any of the Census blocks. There would be no disproportionate impacts to minority communities in Sonoma County as a result of Phase 1, which would be similar to that discussed under No Action Alternative (see above).

A portion of the proposed pipeline for Option B (see Figure 3.15-2) falls outside the half-mile radius. Because of the agricultural nature of the area, the total population in the vicinity of the Option B pipeline is likely to be small. The inclusion of any additional population would not change the overall ethnic makeup of the affected area. White population would continue to be the majority of the population and minorities would remain less than 50 percent. There would be no environmental justice impacts as a result of implementing Option B.

Napa SD

Figure 3.15-3 shows population and **Table 3.15-9** shows percentages of race and Hispanic origin within the one-half mile radius of the action area in Napa County. As discussed above under No Action Alternative, most of the area is predominantly white with small percentages of black, American Indian, Asian, and Native Hawaiian populations. The highest percentage of Hispanic population was 53.4 percent (between 500 and 999) in Census block 200300.5. In Napa County, project construction from the Locally Funded MST Option 1 would result in the impacts discussed above and would occur in Census blocks 200300.3, 200300.4, 200300.5, 200900.1,

TABLE 3.15-9
RACE AND HISPANIC POPULATIONS WITHIN ONE-HALF MILE RADIUS OF PIPELINE ALIGNMENTS IN NAPA COUNTY (IN PERCENTAGE)

Census Block	Population within ½ mile radius	White	Black	American Indian	Asian	Native Hawaiian	Other	Two or more races	Hispanic	Non-Hispanic
200300.1	382	88.1%	< 1%	1.3%	1.7%	< 1%	4.4%	4.6%	7.9%	92.1%
200300.2	112	83.7%	< 1%	< 1%	1.4%	< 1%	8.3%	5.1%	17.4%	82.6%
200300.3	2075	67.8%	< 1%	1.3%	1.5%	< 1%	24.3%	4.1%	47.4%	52.6%
200300.4	1494	81.5%	< 1%	1.6%	1.5%	< 1%	11.3%	2.7%	25.0%	75.0%
200300.5	995	64.8%	< 1%	< 1%	< 1%	< 1%	27.8%	5.6%	53.4%	46.6%
200400.1	1087	93.9%	< 1%	< 1%	< 1%	< 1%	1.9%	2.9%	5.9%	94.1%
200400.2	88	80.6%	< 1%	1.0%	1.3%	< 1%	13.0%	3.5%	26.3%	73.7%
200802.3	90	89.5%	< 1%	< 1%	2.2%	< 1%	4.4%	2.4%	16.5%	83.5%
200900.1	912	68.1%	20.9%	1.5%	4.1%	< 1%	1.9%	3.2%	15.2%	84.8%
201002.1	61	85.1%	2.5%	1.4%	1.2%	< 1%	4.3%	4.9%	10.0%	90.0%
201100.2	105	87.8%	< 1%	< 1%	1.8%	< 1%	7.2%	2.3%	15.2%	84.8%
201400.2	819	93.5%	< 1%	1.1%	2.4%	< 1%	< 1%	2.4%	2.6%	97.4%
201400.4	485	94.1%	< 1%	< 1%	< 1%	< 1%	1.1%	2.8%	4.8%	95.2%
201400.5	1	93.9%	< 1%	< 1%	1.8%	< 1%	1.3%	2.0%	5.4%	94.6%
201400.6	668	93.4%	< 1%	< 1%	1.7%	< 1%	1.4%	2.5%	5.9%	94.1%

SOURCE: U.S. Census Bureau, 2000

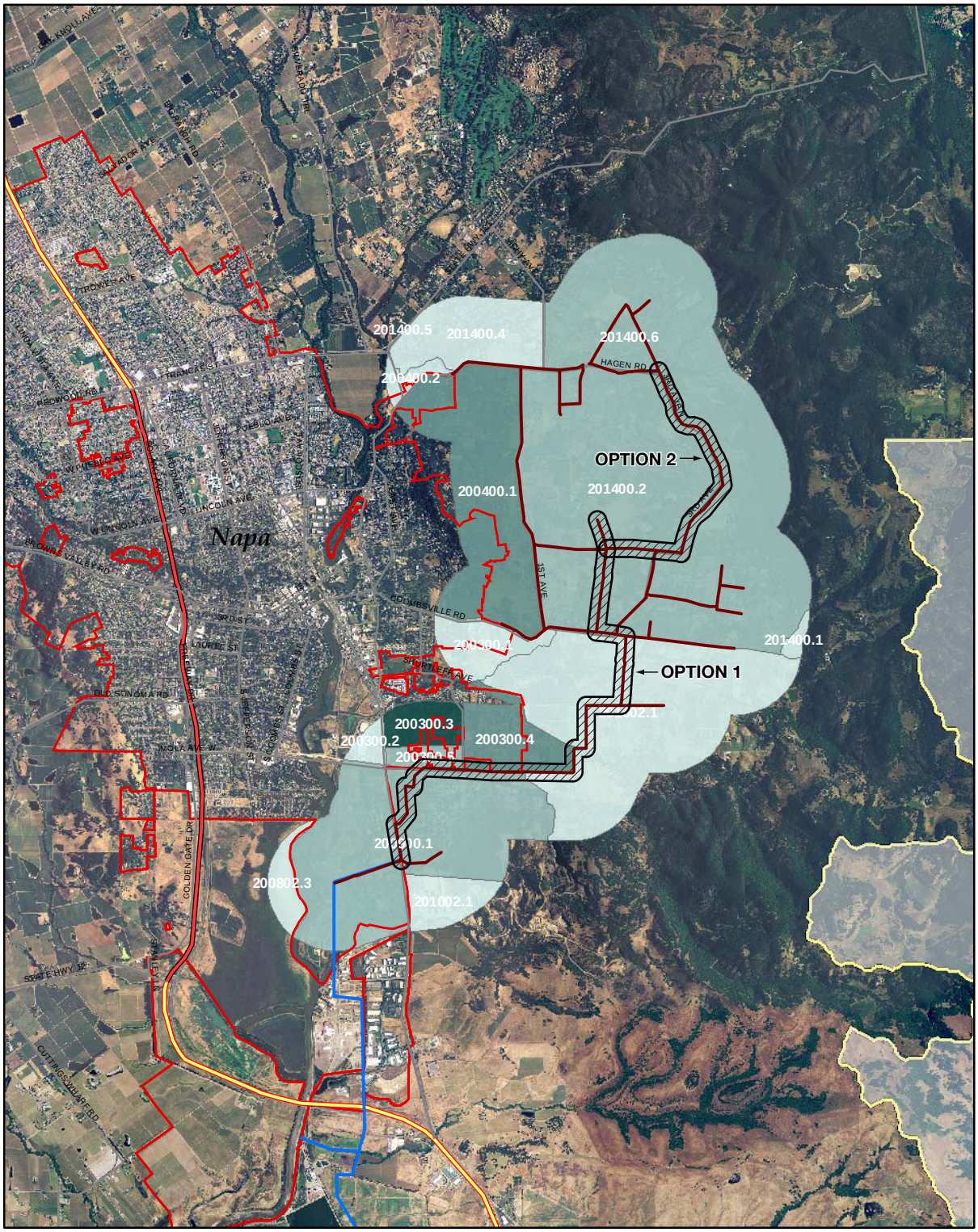
201002.1, and 201400.2 (see **Figure 3.15-3**). Most of the area is predominantly white with small percentages of black, American Indian, Asian, and Native Hawaiian populations. The highest percentage of Hispanic population was 53.4 percent in Census block 200300.5 (U.S. Census Bureau, 2000), however the proposed pipelines would extend through other areas and would not traverse through minority neighborhoods only. The impact would therefore apply to all neighborhoods and would not be disproportionate. No impact is expected.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to minority populations under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

Because this is a program-level analysis, potential minority populations were identified for the whole census tracts in areas with the additional pipeline routes as compared to Phase 1.



SOURCE: CDM, 2008

NBWRA North Bay Water Recycling Program . 206088.01

Figure 3.15-3

Total Populations within Half-Mile of the Project Area in Napa County (Phase 1)

LGVSD/NMWD and Novato SD/NMWD

In Marin County, new proposed pipelines under the Basic System would extend through Census tract 1011. The white population alone made up about 93 percent of the population of 2,539. Black, American Indian, Asian, Native Hawaiian and other races each made up less than 3 percent of the population. Hispanic or Latino, of any race, was about 3 percent of the population (U.S. Census Bureau, 2000). Based on these percentages, project construction would not disproportionately affect minority populations in Marin County. There would be no impact.

SVCSD

In Sonoma County, the proposed pipelines towards Central Sonoma Valley Service Area would extend through Census tracts 150302, 150303, and 1505. In Census tract 150302, the white population made up about 76 percent of the population of 9,227. Black, American Indian, Asian, Native Hawaiian each made up less than 1 percent of the population. Other race was about 16 percent. Hispanic or Latino, of any race, was about 41 percent of the population (U.S. Census, Bureau, 2000).

In Census tract 150303, the white population made up about 94 percent of the population in the Census tract of 4,456. Black, American Indian, Asian, Native Hawaiian, and other each made up less than 2 percent of the population. Hispanic or Latino, of any race, was about 6 percent of the population (U.S. Census Bureau, 2000).

In Census tract 1505, the white population made up about 90 percent of the population of 6,149. Black, American Indian, Asian, Native Hawaiian, and other each made up less than 3 percent of the population. Hispanic or Latino, of any race, was about 8 percent of the population (U.S. Census Bureau, 2000).

Given that the minority populations form only a small percentage in the action area in Sonoma County, project construction would not disproportionately affect minority populations. There would be no environmental justice impacts, which would be similar to that discussed under the No Action Alternative.

Napa SD

In Napa County, the proposed pipelines in the Carneros East Service Area would extend through Census tract 2011. The White population made up about 91 percent of the population of 4,186. Black, American Indian, Asian, Native Hawaiian and other races each made up less than 4 percent of the population. Hispanic or Latino, of any race, was about 10 percent of the population (U.S. Census Bureau, 2000). Given that the minority populations form only a small percentage in the action area in Napa County, project construction would not disproportionately affect minority populations. There would be no environmental justice impacts, which would be similar to that discussed under the No Action Alternative.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary

capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to minority populations under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD and Novato SD/NMWD

In Marin County, the additional pipelines under the Partially Connected System would extend through Census tracts 106001, 106002, and 1082. In Census tract 106001, the white population made up about 81 percent of the population of 3,826. Black, American Indian, Asian, Native Hawaiian, and other each made up less than 7 percent of the population. Hispanic or Latino, of any race, was about 7 percent of the population (U.S. Census Bureau, 2000).

In Census tract 106002, the white population made up about 78 percent of the population of 5,745. Black, American Indian, Asian, Native Hawaiian, and other each made up less than 7 percent of the population. Hispanic or Latino, of any race, was about 2 percent of the population (U.S. Census Bureau, 2000).

In Census tract 1082, the white population made up about 82 percent of the population of 6,120. Black, American Indian, Asian, Native Hawaiian, and other each made up less than 3 percent of the population. Hispanic or Latino, of any race, was about 9 percent of the population (U.S. Census Bureau, 2000).

Given that the minority populations form only a small percentage in the action area in Marin County, project construction would not disproportionately affect minority populations. There would be no impacts, which would be similar to that discussed under the No Action Alternative.

SVCSD

In Sonoma County, the proposed pipelines under the Partially Connected System would extend through new areas in Census tract 1501 and Census tract 150606. In Census tract 1501, the white population made up about 93 percent of the population of 2,670. Black, American Indian, Asian, Native Hawaiian and other races each made up less than 6 percent of the population. Hispanic or Latino, of any race, was about 15 percent of the population (U.S. Census Bureau, 2000).

In Census tract 150606, white alone made up about 85 percent of the population of 7,210. Black, American Indian, Asian, Native Hawaiian and other races each made up less than 6 percent of the population. Hispanic or Latino, of any race, was about 13 percent of the population (U.S. Census Bureau, 2000).

Project construction would not disproportionately affect minority populations in Sonoma County. There would be no impacts.

Napa SD

In Napa County, the additional pipelines under the Partially Connected System would extend through Census tracts 200801 and 200802. In Census tract 200801, the white population made up about 67 percent of the population of 7,491. Black, American Indian, Asian, and Native Hawaiian each made up less than 2 percent of the population. Other races were about 29 percent of total population. Hispanic or Latino, of any race, was about 45 percent of the population (U.S. Census Bureau, 2000).

In Census tract 200802, white alone made up about 84 percent of the population of 4,991. Black, American Indian, Asian, and Native Hawaiian and other races each made up less than 8 percent of the population. Hispanic or Latino, of any race, was about 22 percent of the population (U.S. Census Bureau, 2000).

Given that the minority populations form only a small percentage in the action area in Napa County, project construction would not disproportionately affect minority populations. There would be no environmental justice impacts, which would be similar to that discussed under the No Action Alternative.

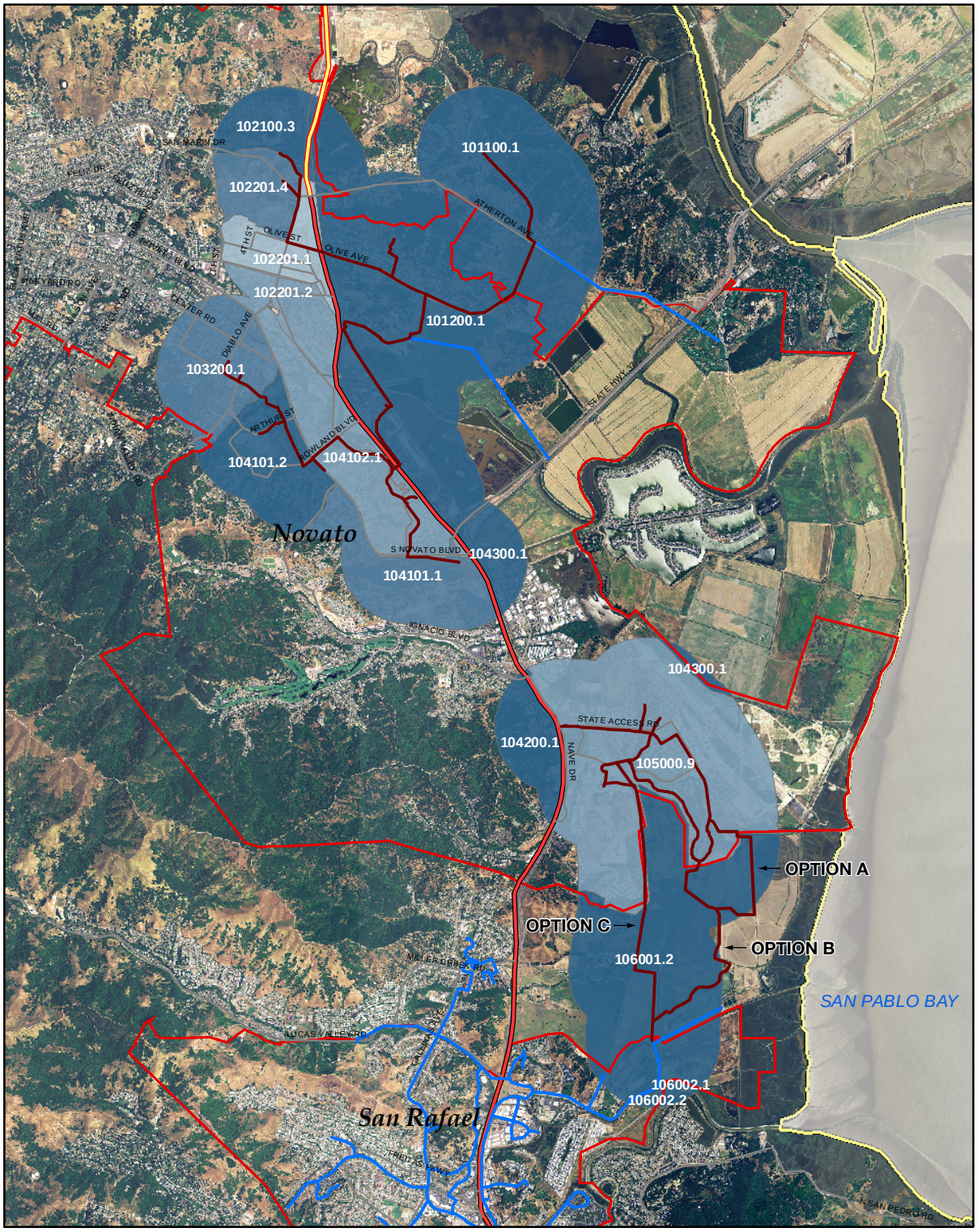
Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts associated with the Fully Connected System would be equivalent to the impacts discussed for the Partially Connected System. New pipelines under the Fully Connected System would extend through the same Census tracts as the Partially Connected System and affect similar percentages of minority populations at the Census tract level. There would be no additional environmental justice impacts. Please refer to the discussions above.

Impact 3.15.2: Project construction could result in environmental impacts that could disproportionately affect nearby low-income communities. (No Impact)

This analysis assumes the California Water Code definition for disadvantaged communities to identify potentially disproportionate impacts to low-income communities. Using the 2000 Census data, the statewide annual median household income for disadvantaged communities was $37,944, rounded up to $38,000 for this analysis. **Figure 3.15-4** shows median household incomes for Census blocks in the North Bay Area. Low-income communities were identified within a one-half-mile radius of the proposed pipeline alignments and compared to the threshold of $38,000.



SOURCE: CDM, 2008

NBWRA North Bay Water Recycling Program . 206088.01

Figure 3.15-4
Median Household Income
within 1/2-Mile of Pipeline
(Phase 1)

As discussed in **Sections 3.6** through **3.11** and **Section 3.14**, construction activities would result in short-term increases in traffic from construction vehicles, and increases in fugitive dust, equipment exhaust emissions, and noise levels. Construction would also cause temporary aesthetic and visual impacts however, these impacts would be localized to a smaller construction area. The impacts discussed would be typical of construction projects and the magnitude of these impacts would be less than significant with mitigation measures listed in the individual sections. If there are low-income communities in the affected area (i.e., if the median household income levels were less than the threshold of $38,000 discussed above), whether the impact to the communities would be disproportionate is discussed further.

No Project Alternative

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.15-1, No Action**).

Under future baseline (2020) conditions, the low-income populations within the region is anticipated to change in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Novato SD/NMWD

In Marin County, construction would only occur in the Novato North Service Area under the No Action Alternative. Project construction could cause environmental impacts discussed under No Action Alternative (see above). The impacts would occur in Census blocks 101100.1, 101200.1, 102100.3, 102201.1, and 102201.4. According to the Census data, median household income for Census block 102201.1 was $38,571, which is slightly higher than the threshold and the remaining Census blocks had a median household income over $50,000. However the proposed pipelines would extend through other areas and would not traverse only through low-income neighborhoods. The impact would therefore apply to all neighborhoods and would not be disproportionate. No impact is expected.

SVCSD

Project construction impacts would occur in Census blocks 150303.1, 150303.4, 150100.2, and 150606.1, and 201100.2. All Census blocks have median household incomes greater than the median income threshold. There would be no impacts to low-income communities in Sonoma County.

A portion of the proposed pipeline for Option B falls outside the half-mile radius. The median income of the affected area is greater than $65,000. The inclusion of any additional population would not substantially change median income of the affected area. It would continue to be greater than the threshold for low income communities. There would be no environmental justice impacts as a result of implementing Option B.

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

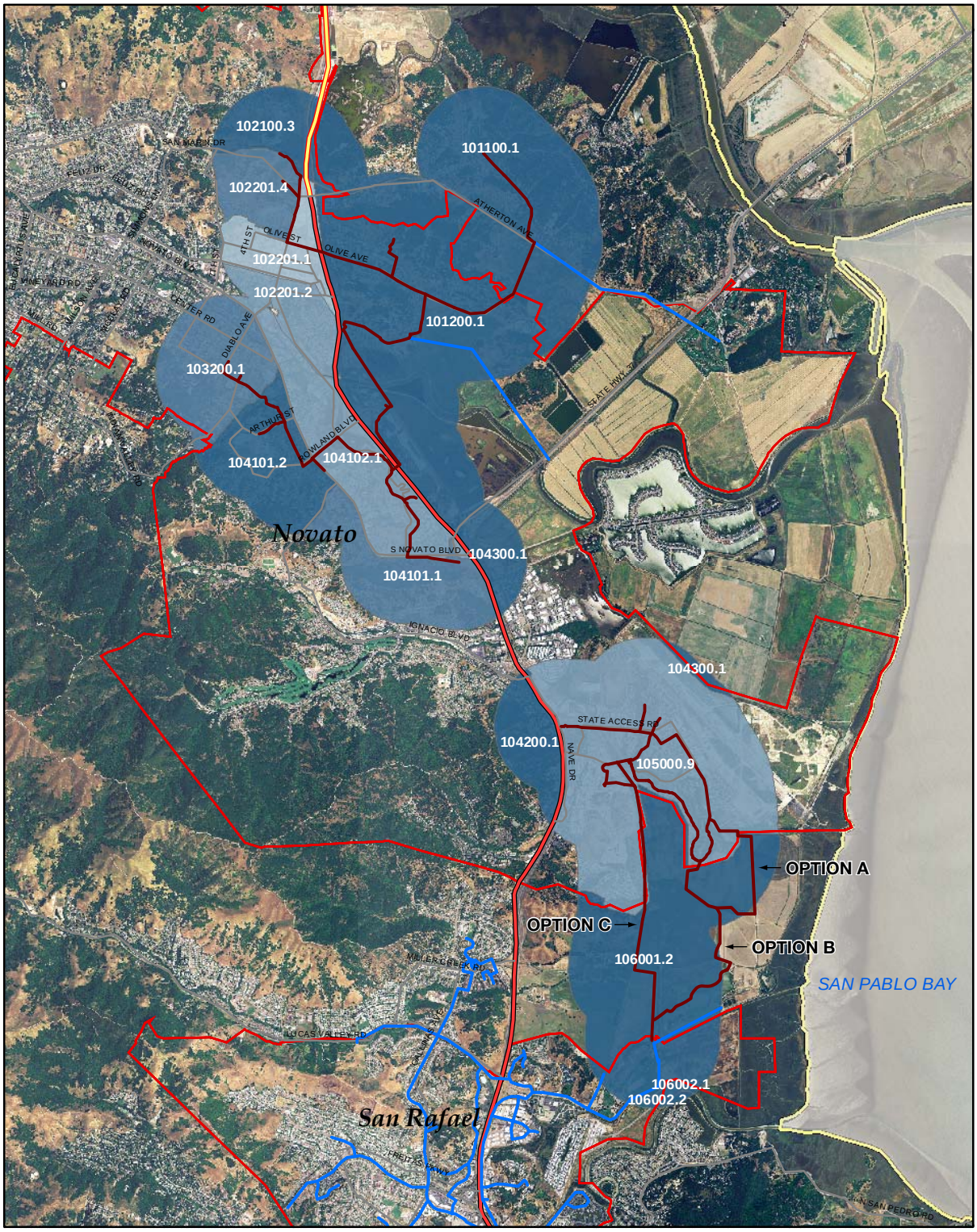
The impacts to potential low-income communities under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD and Novato SD/NMWD

Figure 3.15-5 shows median household income levels within a one-half mile of the pipeline alignments in Novato and San Rafael. Census blocks 102201.1 and 105000.9 show median household incomes less than $38,000. The project construction activities could affect the low-income communities in these blocks. The impact would be similar to those discussed under No Action Alternative; no impact would occur.

SVCSD

Figure 3.15-6 shows Census blocks and median household income levels within a one-half-mile radius of the proposed components in Sonoma County. Three Census blocks in the area show median household incomes less than $38,000; out of which two blocks (150303.2 and 150303.3) are located just within the one-half mile buffer line around the pipelines and have few to no households in the potentially affected areas and one block (150201.6) had a median household income of $25,827 (i.e., approximately 32 percent lower than the threshold). The impact would be similar to that discussed the LGVSD and Novato SD above.

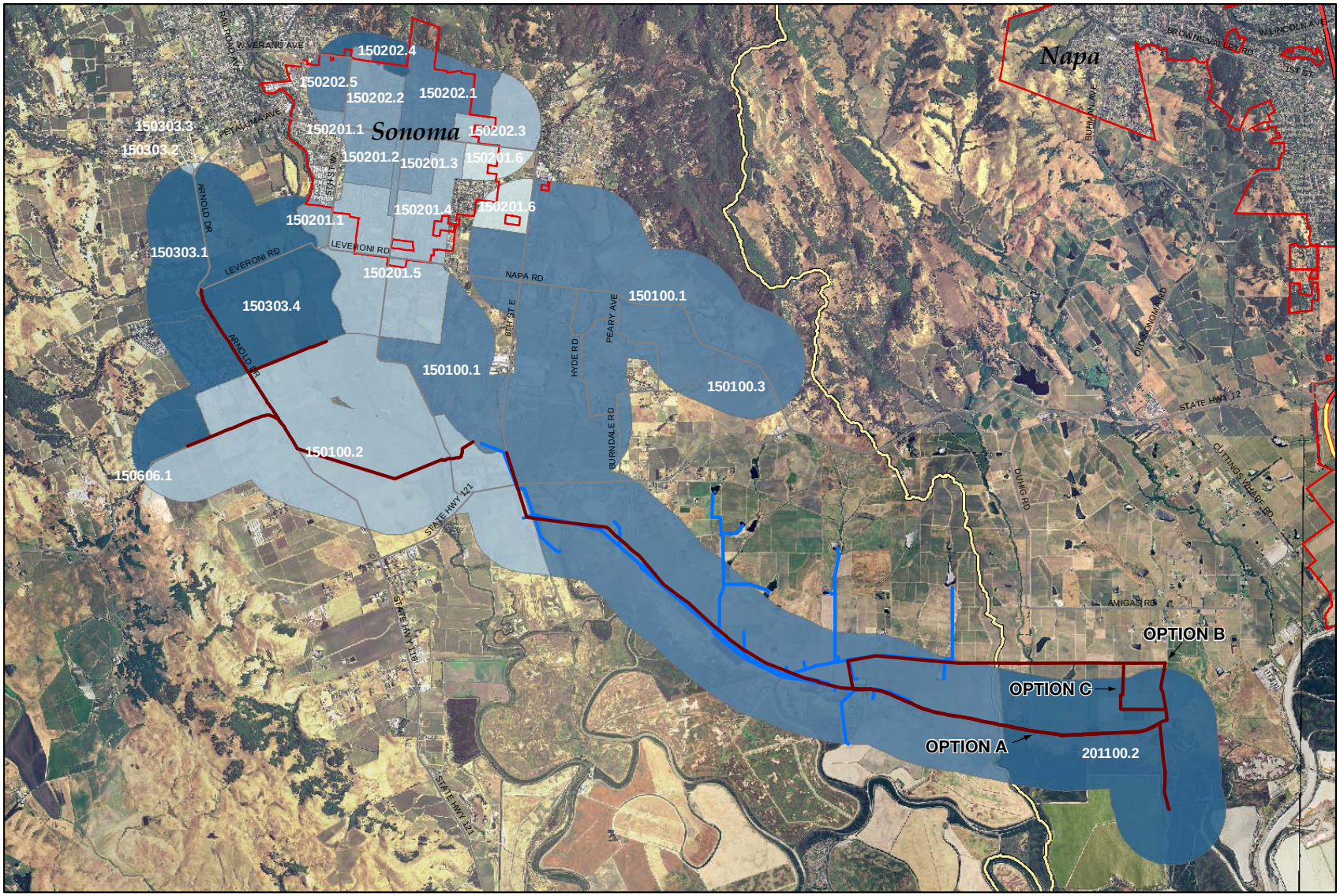


SOURCE: CDM, 2008

NBWRA North Bay Water Recycling Program . 206088.01

Figure 3.15-5

Median Household Incomes within Half-Mile of the Project Area in Marin County (Phase 1)



SOURCE: CDM

NBWRA North Bay Water Recycling Program. 206088

Figure 3.15-6

Median Household Incomes within Half-Mile of the Project Area in Sonoma County (Phase 1)

Napa SD

Figure 3.15-7 shows median household income levels within a one-half mile of the pipeline alignments in Napa County. Census block 200300.4 showed median household of $35,026, which was less than the threshold. Project construction impacts would occur in Census blocks 200300.3, 200300.4, 200300.5, 200900.1, 201002.1, and 201400.2. According to the Census data, median household incomes were greater than the threshold for all the Census blocks except for the Census block 200300.4, which had a median household income of $35,026 (slightly lower than the threshold). Disadvantaged communities along Imola Avenue would be potentially affected by project construction. However, the pipeline construction would occur in other areas with both low-income and higher income neighborhoods and would not disproportionately affect the low-income communities along Imola Avenue. No impact is expected.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to potential low-income communities under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD and Novato SD/NMWD

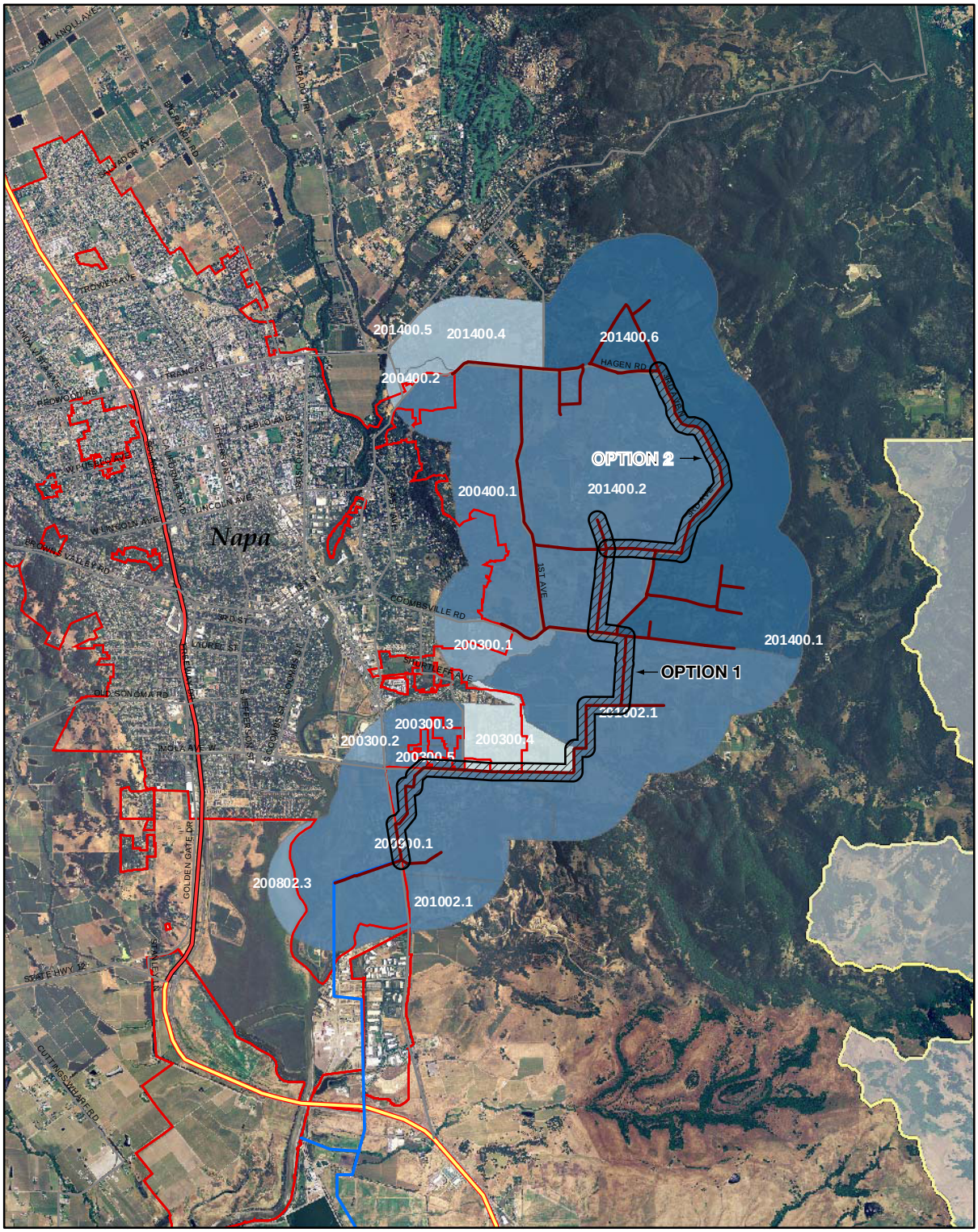
In Marin County, Census tract 1011 could be affected by construction activities under the Basic System. Median household income in Census tract 1011 was $99,899, which is substantially higher than the threshold of $38,000. There would be no low-income communities in the action area, therefore no additional impact would occur.

SVCSD

In Sonoma County, Census tracts 150302, 150303, and 1505 could be affected by construction activities under the Basic System. The median household incomes were $46,807, $53,373, and $60,678 in the tracts respectively, which were higher than the threshold of $38,000. There would be no low-income communities in the action area, therefore no additional impact would occur.

Napa SD

In Napa County, Census tract 2011 could be affected by construction activities under the Basic System. The median household income in the tract was $71,696, which is substantially higher than the threshold of $38,000. There would be no low-income communities in the action area, therefore no further impact would occur.



SOURCE: CDM, 2008

NBWRA North Bay Water Recycling Program . 206088.01

Figure 3.15-7

Median Household Incomes within Half-Mile of the Project Area in Napa County (Phase 1)

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to potential low-income communities under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/ NMWD and Novato SD/ NMWD

In Marin County, Census tracts 106001, 106002, and 1082 could be affected by construction activities under the Partially Connected System. Median household income was $63,974 in Census tract 106001, $76,564 in Census tract 106002, and $57,029 in Census tract 1082, which are higher than the threshold of $38,000. There would be no low-income communities in the action area, therefore no additional impact would occur.

SVCSD

In Sonoma County, Census tracts 1501 and 150606 could be affected by construction activities under the Partially Connected System. Median household income was $55,000 in Census tract 1501, and $77,281 in Census tract 150606, which are higher than the threshold of $38,000. There would be no low-income communities in the action area, therefore no additional impact would occur.

Napa SD

In Napa County, Census tracts 200801 and 200802 could be affected by construction activities under the Partially Connected System. The median household incomes in both the tracts were $51,442 and $51,442 respectively, which are higher than the threshold of $38,000. There would be no low-income communities in the action area, therefore no additional impact would occur.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts associated with the Fully Connected System would be equivalent to the impacts discussed for the Partially Connected System. There would be no additional Census tracts affected by the Fully Connected System relative to the Partially Connected System, therefore no additional impacts would occur.

Impact 3.15.3: Increased water and sewer fees. The NBWRP would provide recycled water and could result in an increase water and sewer fees that would disproportionately affect minority and low-income populations. (No Impact)

The NBWRP would provide recycled water to the communities that can connect to the distribution pipelines in the action area including minority and non-minority population. Costs associated with the project are discussed in **Section 3.16, Socioeconomics**. The member agencies would likely increase customer water and sewer fees to repay a portion of the loans acquired through implementation of the NBWRP. A fee would also be charged for use of the recycled water generated by the NBWRP. As described in **Section 3.16, Socioeconomics**, the exact funding mechanisms for the NBWRP are yet to be determined, therefore potential changes in customers' sewer fees cannot be evaluated. The recycled water use fee and the level of increase in the water or sewer fees are not known at this time. The member agencies would apply the recycled water use fees to the users who would receive the recycled water in the action area. The fees or any increased water and sewer rates would be applied equally to all customers in the service areas (i.e., not only to minority and low-income populations). As discussed in **Impacts 3.15.1** and **3.15.2**, the action area does not include a high number of minority and low-income populations. Therefore, there would be no disproportionate increase in water and sewer fees on low-income populations.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impacts would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.15-1, No Action**).

Under future baseline (2020) conditions, the low-income and minority populations within the region are anticipated to change in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD and Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Novato SD/NMWD and SVCSD

The member agencies would construct portions of the recycled water projects proposed in the Marin and Sonoma counties under the No Action Alternative. The impact would be similar to that discussed above.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The cost impacts related to water and sewer fees under Phase 1 would be similar to the impacts discussed for the No Action Alternative, although incrementally greater in proportion to the facilities constructed under this alternative. Refer to **Section 3.16, Socioeconomics**, for implementations costs for Phase 1 and all the Alternatives. The impacts would be similar to those discussed above, although incrementally greater.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The cost impacts related to water and sewer fees under the Basic System would be similar to the impacts discussed for Phase 1, although incrementally greater in proportion to the facilities constructed under this alternative. Refer to **Section 3.16, Socioeconomics**, for implementations costs for Phase 1 and all the Alternatives. The impacts would be similar to those discussed above, although incrementally greater.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The cost impacts related to water and sewer fees under the Partially Connected System would be similar to the impacts discussed for the Basic System, although incrementally greater in proportion to the facilities constructed under this alternative. Refer to Section 3.16, Socioeconomics, for implementations costs for Phase 1 and all the Alternatives. The impacts would be similar to those discussed above, although incrementally greater.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The cost impacts related to water and sewer fees under the Fully Connected System would be similar to the impacts discussed for the Partially Connected System, although incrementally greater in proportion to the facilities constructed under this alternative. Refer to **Section 3.16, Socioeconomics**, for implementations costs for Phase 1 and all the Alternatives.

Impact 3.15.4: Impact on Farm Workers. The NBWRP would provide recycled water and could disproportionately affect minority populations. (No Impact)

Approximately 40 percent of all farm workers are foreign-born, which mostly originate in rural communities in Latin America, principally Mexico (USDA, 2008). The NBWRP would increase agricultural production, which would increase farm employment. The increase in farm jobs would affect both minority and non-minority populations and would not cause a disproportionate impact. The agricultural lands would be irrigated with recycled water instead of groundwater or surface water supplies (see **Section 3.4, Water Quality**, for public health issue related to recycled water use). Bilingual signage would be installed to indicate recycled water use. No disproportionate impact is expected.

No Project Alternative

No project would be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.15-1, No Action**).

Under future baseline (2020) conditions, the minority population within the region is anticipated to change in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

Some portions of the recycled water projects would be implemented under No Action Alternative and impacts would be associated with SVCSD and Napa SD as discussed below. **Table 3.15-10** provides the new acres of vineyard production under the No Action Alternative.

TABLE 3.15-10
NEW ACRES OF VINEYARD PRODUCTION

	No Action Alternative	Phase 1	Basic System	Partially Connected System	Fully Connected System
Novato SD					
New acres of vineyard production	-	-	-	841	3,564
Anticipated number of new farm jobs	-	-	-	<80	<240
SVCSD					
New acres of vineyard production	1,954	3,195	4,039	6,763	6,280
Anticipated number of new farm jobs	<160	<240	<320	<480	<480
Napa SD					
New acres agricultural production	417	3,085	5,947	8,370	8,370
Anticipated number of new farm jobs	<80	~240	<480	<640	<640

NOTE: There would be no new farm production for LGVSD, therefore is not listed in the table.

SOURCE: CDM, 2008; UCCE, 2008

LGVSD/NMWD and Novato SD/NMWD

Farm worker employment under the No Action Alternative would remain similar to existing conditions. Agricultural production would continue at existing levels and farmers would employ farm workers to meet labor demands. There would be no disproportionate impacts to minority farm workers.

SVCSD

As shown in Table 3.15-10, under the No Action Alternative, vineyard production would increase by 1,954 acres in Sonoma County. New production would require additional farm labor and provide employment to farm workers. Based on University of California Crop Extension estimates (2003), labor requirements for wine grapes production would be about 80 full time workers per 1,000 acres, therefore approximately 160 new farm worker jobs would be created. The increase in farm jobs would affect both minority and non-minority populations and would not cause a disproportionate impact to minority farm workers. The agricultural lands would be irrigated with recycled water instead of groundwater or surface water supplies (see **Section 3.4, Water Quality**, for public health issue related to recycled water use). Bilingual signage would be installed to indicate recycled water use. No disproportionate impact is expected.

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts related to farm workers under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD and Novato SD/NMWD

The NBWRP does not include any agricultural land in Marin County. Therefore, no impact would occur in Marin County.

SVCSD

Under Phase 1, the NBWRP would require greater than 240 farm employees (see Table 3.15-10). The change in the farm employment would be greater than that discussed under No Action Alternative; however there would be no disproportionate impacts to minority populations. No impact is expected.

Napa SD

The impacts under No Action Alternative for Napa SD would be similar to those discussed for SVCSD for approximately 80 new farm jobs that would be created. Please refer to Table 3.15-10. There would be no impact.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts related to farm workers under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD and Novato SD/NMWD

See discussion under Phase 1. No impact would occur.

SVCSD

Please refer to the discussion above. Under the Basic System, there would be 320 farm employees required; therefore the change in the farm worker employment would be greater under the Basic System as compared to the No Action Alternative. However, the change in the employment would not disproportionately affect minority populations (see discussion above). No impact would occur.

Napa SD

The impacts associated with the Basic System would be equivalent to the impacts discussed for Phase 1. Any additional vineyards served by the Basic System would require new farm employees as shown in Table 3.15-10 in addition to Phase 1. However, there would be no disproportionate effect on farm worker employment (see discussion under No Action Alternative and Phase 1).

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts related to farm workers under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

Novato SD/NMWD

Under the Partially Connected System, 841 acres of new vineyard production would occur that would require less than 80 new farm employees (see Table 3.15-10). However, the increase in employment would affect both minority and non-minority populations. No disproportionate impact to minority population would occur. No impact is expected.

SVCSD and Napa SD

Please refer to the impact discussion under the Basic System and Table 3.15-10 for the new farm jobs required. The impact would be similar to that discussed above. No impact would occur.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts related to farm workers under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

Novato SD/ NMWD, SVCSD, Napa SD

Please refer to the discussed under the Partially Connected System and Table 3.15-10 for the new farm jobs required. The impact would be similar to that discussed above. No impact would occur.

3.15.4 Impact Summary by Service Area

Table 3.15-11 provides a summary of potential environmental justice impacts associated with implementation of the NBWRP.

TABLE 3.15-11
POTENTIAL IMPACTS AND SIGNIFICANCE – ENVIRONMENTAL JUSTICE

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.15.1: Disproportionate impacts to minority population from project construction.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	NI
Alternative 1: Basic System	NI	NI	NI	NI
Alternative 2: Partially Connected System	NI	NI	NI	NI
Alternative 3: Fully Connected System	NI	NI	NI	NI
Impact 3.15.2: Disproportionate impacts to low-income population from project construction.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	NI
Alternative 1: Basic System	NI	NI	NI	NI
Alternative 2: Partially Connected System	NI	NI	NI	NI
Alternative 3: Fully Connected System	NI	NI	NI	NI
Impact 3.15.3: Disproportionate impacts from increased water or sewer fees.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	NI
Alternative 1: Basic System	NI	NI	NI	NI
Alternative 2: Partially Connected System	NI	NI	NI	NI
Alternative 3: Fully Connected System	NI	NI	NI	NI

TABLE 3.15-11 (Continued)
POTENTIAL IMPACTS AND SIGNIFICANCE – ENVIRONMENTAL JUSTICE

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.15.4: Disproportionate impacts to farm workers.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	NI
Alternative 1: Basic System	NI	NI	NI	NI
Alternative 2: Partially Connected System	NI	NI	NI	NI
Alternative 3: Fully Connected System	NI	NI	NI	NI

NI = No (Environmental Justice) Impact

3.15.5 References

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3.16 Socioeconomics

This section presents the socioeconomic conditions in the action area and assesses effects on the economy from implementation of the North Bay Water Recycling Program (NBWRP), including project construction; operation and maintenance; increased vineyard production and costs; increased recreational expenditures; and potential changes in customer water and sewer fees. Economic indicators to assess effects include total output, jobs, and wages and salaries. The Impacts and Mitigation Measures section defines significance criteria used for the impact assessment and presents a discussion of potential project-related impacts. Determination of significance of impacts in this EIR/EIS apply only to CEQA, not to NEPA.

3.16.1 Affected Environment/Setting

Socioeconomic data is typically available at the county and city levels; therefore, Marin, Sonoma, and Napa County data are presented along with city level data for the Cities of Novato, San Rafael, Sonoma, and Napa. The most current data for the Counties are for year 2006, and the most current data for the Cities are for year 2000.

Population and Employment

LGVSD

Marin County

In 2006, Marin County had a population of approximately 246,000. Total personal income in Marin County was approximately $21 billion and per capita personal income was $86,062 (Bureau of Economic Analysis [BEA], 2007).[1]

Table 3.16-1 shows 2006 industry earnings in Marin County. Top earning industries include professional and technical services, finance and insurance, and health care and social assistance. Table 3.16-1 also shows industry employment in Marin County in 2006. In 2006, professional and technical services employed the most people, followed by retail trade, and health care and social assistance. The unemployment rate in Marin County in 2006 was 3.5 percent, well below the state average of 4.9 percent (Economic Development Department [EDD], 2008a).

Table 3.16-2 shows employment in Novato and San Rafael by industry from the 2000 U.S. Census. In 2000, the largest industries by employment in both Novato and San Rafael were education, health and social services; professional, scientific, management, administrative, and waste management; and retail trade.

[1] Personal income is the income received by persons from all sources. It is calculated as the sum of wage and salary disbursements, supplements to wages and salaries, proprietors' income with inventory valuation and capital consumption adjustments, rental income of persons with capital consumption adjustment, personal dividend income, personal interest income, and personal current transfer receipts, less contributions for government social insurance. Per capita personal income is calculated as the personal income of the residents of a given area divided by the resident population of the area. In computing per capita personal income, BEA uses the Census Bureau's annual midyear population estimates.

TABLE 3.16-1
INDUSTRY EARNINGS AND INDUSTRY EMPLOYMENT, MARIN COUNTY, 2006

Industry	Earnings (thousands $)	Employment (jobs)
Forestry, fishing, related activities, and other	(D)	(D)
Mining	(D)	(D)
Utilities	$27,345	251
Construction	$829,108	12,149
Manufacturing	$153,173	3,351
Wholesale trade	$289,828	4,322
Retail trade	$728,402	18,145
Transportation and warehousing	$76,635	1,546
Information	$364,999	3,973
Finance and insurance	$1,274,884	12,202
Real estate and rental and leasing	$512,873	14,634
Professional and technical services	$1,825,604	26,769
Management of companies and enterprises	$374,851	2,423
Administrative and waste services	$395,858	10,090
Educational services	$153,962	5,369
Health care and social assistance	$1,083,389	17,988
Arts, entertainment, and recreation	$178,918	7,469
Accommodation and food services	$277,147	11,598
Other services, except public administration	$358,139	12,904
Government and government enterprises	$971,066	14,412
Total	**$9,911,005**	**181,103**

(D) BEA Note - Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

SOURCE: BEA 2007, Regional Economic Information System

TABLE 3.16-2
SAN RAFAEL AND NOVATO EMPLOYMENT BY INDUSTRY, 2000

	Novato		San Rafael	
Industry	Number of Jobs	Percent of All Industries	Number of Jobs	Percent of All Industries
Agriculture, Forestry, Fisheries, and Mining	62	0.2	86	0.3
Construction	1,745	7.0	2,271	7.8
Manufacturing	1,122	4.5	1,427	4.9
Wholesale Trade	820	3.3	994	3.4
Retail trade	3,225	13.0	3,264	11.2
Transportation, warehousing, utilities	834	3.4	749	2.6
Information	1,067	4.3	1,391	4.8
Finance, Insurance, Real Estate	2,811	11.3	2,925	10.1
Professional, scientific, management, administrative, waste management	4,054	16.3	5,662	19.5
Education, health, and social services	4,471	18.0	4,993	17.2
Arts, entertainment, recreation, accommodation, and food service	1,994	8.0	2,624	9.0
Other services	1,510	6.1	1,835	6.3
Public administration	1,158	4.7	855	2.9
Total	**24,873**	**--**	**29,076**	**--**

SOURCE: U.S. Census Bureau 2000a, U.S. Census Bureau 2000b

SVCSD

Sonoma County

In 2006, Sonoma County had a population of approximately 463,000. Total personal income in Sonoma County was approximately $20 billion and per capita personal income was $43,318 (BEA, 2007).

Table 3.16-3 shows 2006 industry earnings in Sonoma County. Top earning industries were manufacturing, government and government enterprises, and construction. Table 3.16-3 also shows industry employment in Sonoma County in 2006. In 2006, retail trade employed the most people, followed by government and government enterprises, health care and social assistance, and manufacturing. The unemployment rate in Sonoma County in 2006 was 4.0 percent, which was below the state average of 4.9 percent (EDD, 2008c).

TABLE 3.16-3
INDUSTRY EARNINGS AND INDUSTRY EMPLOYMENT, SONOMA COUNTY, 2006

Industry	Earnings (thousands $)	Employment (jobs)
Forestry, fishing, related activities, and other	$69,047	2,425
Mining	$28,392	383
Utilities	(D)	(D)
Construction	$1,452,024	22,754
Manufacturing	$1,789,701	25,629
Wholesale trade	$597,731	9,585
Retail trade	$992,482	30,366
Transportation and warehousing	(D)	(D)
Information	$283,817	4,672
Finance and insurance	$654,237	11,172
Real estate and rental and leasing	$413,931	15,931
Professional and technical services	$1,267,229	23,856
Management of companies and enterprises	$105,575	1,711
Administrative and waste services	$441,315	14,011
Educational services	$81,338	4,415
Health care and social assistance	$1,390,735	26,352
Arts, entertainment, and recreation	$124,223	7,675
Accommodation and food services	$398,326	19,481
Other services, except public administration	$413,000	16,187
Government and government enterprises	$1,752,390	29,644
Total	$12,664,838	277,955

(D) BEA Note - Not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

SOURCE: BEA, 2007

Table 3.16-4 shows City of Sonoma employment by industry from the 2000 U.S. Census. In 2000, the largest industries by employment in Sonoma were education, health and social services; retail trade; and professional, scientific, management, administrative, and waste management.

TABLE 3.16-4
CITY OF SONOMA EMPLOYMENT BY INDUSTRY, 2000

Industry	Sonoma	
	Number of Jobs	Percent of All Industries
Agriculture, Forestry, Fisheries, and Mining	36	0.8
Construction	258	6.0
Manufacturing	347	8.0
Wholesale Trade	190	4.4
Retail trade	577	13.4
Transportation, warehousing, utilities	240	5.6
Information	135	3.1
Finance, Insurance, Real Estate	358	8.3
Professional, scientific, management, administrative, waste management	487	11.3
Education, health, and social services	907	21.0
Arts, entertainment, recreation, accommodation, and food service	345	8.0
Other services	292	6.8
Public administration	145	3.4
Total	**4,317**	--

SOURCE: U.S. Census Bureau, 2000d

Napa SD

Napa County

In 2006, Napa County had a population of approximately 131,000. Total personal income in Napa County was approximately $6.2 billion and per capita personal income was $47,491 (BEA, 2007). **Table 3.16-5** shows 2006 industry earnings in Napa County. Top earning industries were manufacturing, government and government enterprises, and construction. Table 3.16-5 also shows industry employment in Napa County in 2006. In 2006, manufacturing employed the most people, followed by government and government enterprises, and accommodation and food services. The unemployment rate in Napa County in 2006 was 3.9 percent, which was below the state average of 4.9 percent (EDD, 2008b).

Table 3.16-6 shows city of Napa employment by industry from the 2000 U.S. Census. In 2000, the largest industries by employment in Napa were education, health and social services; manufacturing; and retail trade.

Agricultural Economy

This section describes the agricultural economy in Sonoma and Napa Counties. Marin County has limited agriculture, which would not be affected by the NBWRP; therefore, it is not further discussed in this section. The primary agricultural land uses in the action area in southern Sonoma and Napa Counties are vineyards and dairies.

TABLE 3.16-5
INDUSTRY EARNINGS AND INDUSTRY EMPLOYMENT, NAPA COUNTY, 2006

Industry	Earnings (thousands $)	Employment (jobs)
Forestry, fishing, related activities, and other (D)	$89,578	2,657
Mining	$7,877	127
Utilities	$14,916	170
Construction	$464,752	6,922
Manufacturing	$933,718	11,663
Wholesale trade	$119,278	2,039
Retail trade	$253,977	7,861
Transportation and warehousing	$94,428	1,575
Information	$66,510	944
Finance and insurance	$184,233	2,777
Real estate and rental and leasing	$116,446	5,322
Professional and technical services	$259,608	4,982
Management of companies and enterprises	$16,116	302
Administrative and waste services	$165,216	5,030
Educational services	$56,039	1,814
Health care and social assistance	$419,210	7,520
Arts, entertainment, and recreation	$30,782	1,743
Accommodation and food services	$233,848	8,345
Other services, except public administration	$121,021	4,560
Government and government enterprises	$616,592	9,941
Total	**$4,419,358**	**89,677**

(D) BEA Note - Some subcategories not shown to avoid disclosure of confidential information, but the estimates for this item are included in the totals.

SOURCE: BEA 2007, Regional Economic Information System

TABLE 3.16-6
CITY OF NAPA EMPLOYMENT BY INDUSTRY, 2000

Industry	Napa	
	Number of Jobs	Percent of All Industries
Agriculture, Forestry, Fisheries, and Mining	1,185	3.4
Construction	2,552	7.4
Manufacturing	4,882	14.2
Wholesale Trade	1,125	3.3
Retail trade	4,072	11.8
Transportation, warehousing, utilities	1,024	3.0
Information	723	2.1
Finance, Insurance, Real Estate	1,905	5.5
Professional, scientific, management, administrative, waste management	3,054	8.9
Education, health, and social services	6,977	20.3
Arts, entertainment, recreation, accommodation, and food service	3,559	10.4
Other services	1,683	4.9
Public administration	1,640	4.8
Total	**35,996**	**--**

SOURCE: U.S. Census Bureau 2000c

SVCSD and Napa SD

Total gross value of agricultural production in 2007 in Sonoma County was approximately $639.1 million, representing a 7.6 percent increase from the 2006 value of $593.9 million. Total gross value of production of wine grapes in 2007 was approximately $416.5 million in Sonoma County, which was the highest in crop and nursery value of production in the County. In 2007,total wine grape bearing acreage was 54,862 acres and non-bearing acreage was 6,030 acres. The weighted average production value for wine grapes was $2,081 per ton. Market milk had the second highest value of production in Sonoma County, at approximately $98.7 million. Oat hay was planted on 4,470 acres in 2007 and yielded approximately 11,440 tons. Total value of production for oat hay was approximately $1.5 million (Sonoma County, 2008a).

Total gross value of agricultural production in 2007 in Napa County was approximately $484.9 million, representing a 1.4 percent increase from the 2006 value of $477.9 million. Wine grapes had the highest gross value of production of all crops and livestock in Napa County, approximately $473.5 million. In 2007, total wine grape bearing acreage was 42,338 acres and non-bearing acreage was 2,820 acres. The weighted average production value per ton for wine grapes was $3,257 per ton. Livestock has the second highest value, at approximately $3.4 million in 2007 (Napa County, 2008a).

The costs to establish and produce wine grapes for Chardonnay in Sonoma County in 2004 ranged from $1,440 per ton to $4,302 per ton depending on the yield per acre. Yields can range from 3 to 9 tons per acre (UCCE, 2004). The average value of wine grapes for white varietals in Sonoma County was $1,679 per ton in 2006 and $1,805 per ton in 2007 (Sonoma County, 2008a).

The costs to establish and produce wine grapes for Cabernet Sauvignon in Napa County in 2003 ranged from $2,648 per ton to $4,797 per ton depending on the yield per acre. Yields can range from 3.5 to 6.5 tons per acre (UCCE, 2003). The average value of wine grapes for red varietals in Napa County was $3,451 per ton in 2006 and $3,640 per ton in 2007 (Napa County, 2008a).

In addition to contributing to the counties' agricultural economies, wine grape production attracts a significant number of visitors to Napa and Sonoma Counties to support the tourism industry, which provide major revenues and jobs to the counties. A 2007 visitor survey indicated that winery visits were the main motivation for approximately 90 percent of hotel guests to visit Sonoma County and wine country maps ranked second as an influence for the decision to visit Sonoma County. The total amount spent by visitors to Sonoma County in 2006 was $1.32 billion (Sonoma County Economic Development Board, 2008).

The amount spent by visitors to Napa County in 2005 reached almost $1 billion. Most visitors cited wineries as their primary reason to visit and 77 percent of all visitors surveyed visited a winery on their trip (Leadership Napa Valley Class XVII Tourism Practicum Group, 2006).

3.16.2 Regulatory Framework

The policies and regulations associated with impacts to socioeconomics within the affected jurisdictions are presented in **Appendix 3.16** of this EIR/EIS.

3.16.3 Environmental Consequences/ Impacts Analysis

NEPA Analysis

Under NEPA, economic or social effects must be discussed if they are inter-related to the natural or physical environmental effects of a project. NEPA states the following with regard to analysis of economic effects (Title 40, Code of Federal Regulations, Section 1508.14):

> "…economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment."

Since economic effects of the project are related to physical environmental effects, a NEPA economic analysis is required. However, NEPA does not require that economic impacts be judged for significance.

Significance Criteria under CEQA

CEQA does not consider economic or social changes resulting from a project as adverse effects on the environment. If a physical change in the environment is caused by economic or social effects, the physical change may be regarded as an adverse effect. Specifically, under the CEQA guidelines (Section 15358[b]), an EIR must analyze impacts "related to physical changes" in the environment. CEQA guidelines Section 15131(a) states that "economic or social effects of a project shall not be treated as significant effects on the environment" unless the economic effects results in physical effects.

The guidelines also state that "An EIR may trace a chain of cause and effect from a proposed decision on a project through anticipated economic or social changes resulting from the project to physical changes caused in turn by economic or social changes. The intermediate economic or social changes caused need not be analyzed in any detail greater than necessary to trace the chain of cause and effect. The focus of the analysis should be on physical changes."

In other words, the economic or social effect of a project may be used to determine the significance of physical changes caused by the project. However, analyses of other environmental resources in this document rely on resource specific tools or qualitative discussions to determine environmental effects. Therefore, economic effects are not needed to judge the significance of changes to other environmental resources.

Physical effects of the project alternatives are evaluated separately and do not require economic analysis; therefore, this section does not provide a CEQA analysis and associated significance

criteria. However, this section does provide an analysis of economic effects for NEPA compliance. NEPA economic impacts are typically derived by comparing the No Action Alternative to the action alternatives.

Environmental Consequences/Impact Analysis

Impact 3.16.1: Output in Regional Economy. Project construction and operation would increase jobs, wages and salaries, and output in the regional economy. (Less than Significant)

For the purpose of this analysis, the regional economy includes Marin, Napa, and Sonoma Counties.

Construction activities would create jobs and generate additional economic activity within the region during the period of construction. Regional economic effects are generally characterized as direct effects and secondary effects and occur because of linkages between industries. Any given industry typically purchases goods and services from, and sells goods and services to, another industry within a given geographic area, which in turn, sells to or buys from other industries or supplies final consumers. Direct effects represent the changes in final demand in a single sector, or, in this case, the purchase of materials to construct pipelines, pump stations, treatment plant upgrades, and storage reservoirs. Secondary effects are the changes in demand in industries supplying goods and services and changes in expenditures of household income.

These industry linkages are estimated by economic multipliers (e.g., a multiplier of 2.0 indicates that each dollar of direct sale generates another dollar of secondary sales in the regional economy; a multiplier of 3.0 indicates that each dollar of direct sale generates an additional $2 of secondary sales in the regional economy, and so on). The analysis uses multipliers from IMPLAN (Impact Planning and Analysis), an input-output database and modeling software commonly used to estimate regional effects.

No Project Alternative

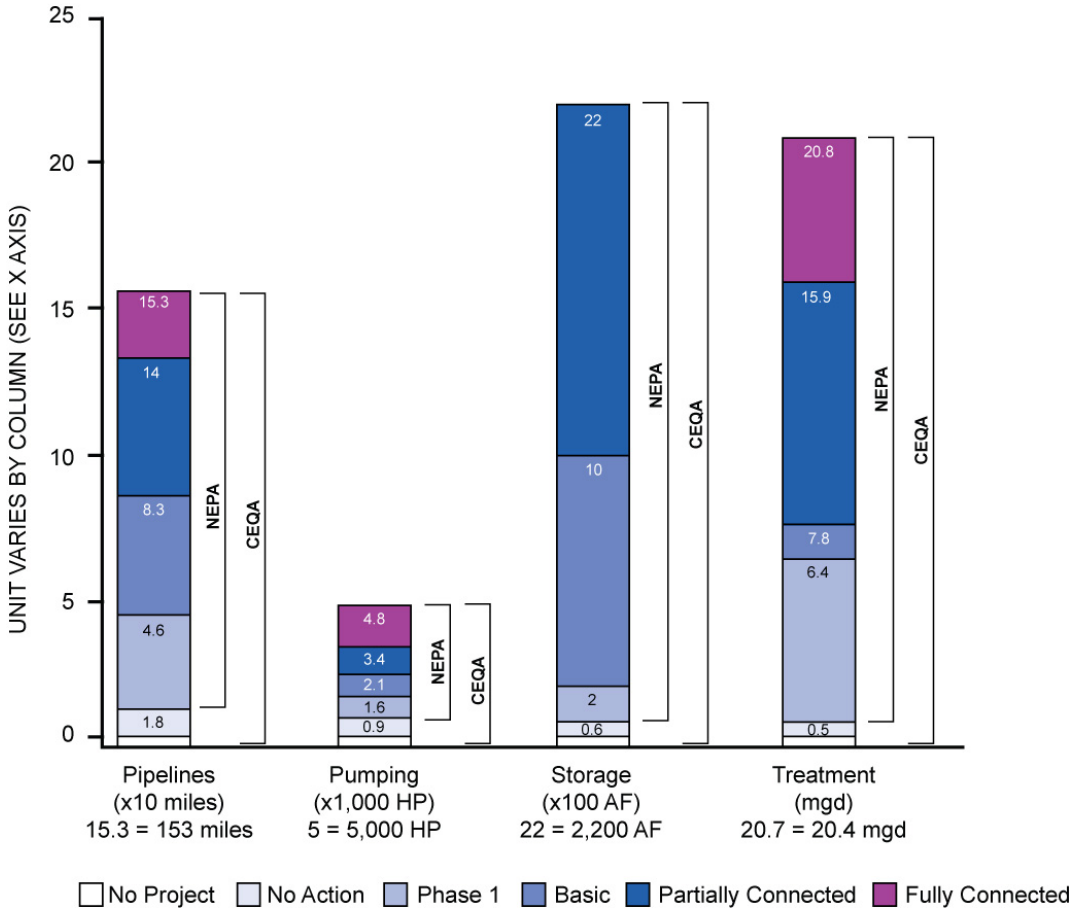
No project facilities would be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding. Relative to existing conditions, construction under the No Action Alternative would generate some economic activity by creating temporary construction jobs and increased spending on project materials. Since no costs have been developed for this alternative, the economic effects were not quantified in dollars through use of IMPLAN multipliers. Implementation of this alternative would result in beneficial, but minor, impacts to the regional economy relative to the existing conditions.

In comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.16-1, No Action**).

CHART 3.16-1
COMPARISON OF NEPA AND CEQA BASELINES FOR PROPOSED FACILITIES, BY ALTERNATIVE



SOURCE: CDM, 2009

Under future baseline (2020) conditions, the socioeconomic conditions are anticipated to change in accordance with anticipated development allowed under the approved General Plans within the region.

Phase 1 (Project level)

Compared to the No Project Alternative (CEQA Baseline) Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline),

Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts on the regional economy related to project construction and operation under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative.

Phase 1 includes construction of treatment plant upgrades, pipelines, pump stations, and storage reservoirs, which requires the purchase of construction materials and employment of engineers, construction supervisors, and general construction laborers. These activities would result in economic effects, or increases in jobs, wages and salaries, and economic output in the regional economy. **Table 3.16-7** summarizes preliminary capital costs for the NBWRP. If materials are purchased within the action area, economic output would increase. Materials purchased outside the action area would not result in economic benefits to the action area.

TABLE 3.16-7
OPINION OF PROBABLE TOTAL PROJECT CAPITAL COSTS
FOR IMPLEMENTATION PHASE 1

Major Project Component	Cost ($ million)
Pipelines	$89.3
Treatment Improvements	$14.9
Storage Facilities	$8.3
Pumping Facilities	$8.5
Probable Total Project Capital Costs	***$121.0***

SOURCE: CDM, 2008

The IMPLAN multiplier for total output in the water, sewer, and pipeline construction sector for the three counties was approximately 1.6 (MIG, Inc., 2002). Therefore, for every dollar spent in the sector, $0.60 would be gained in the total regional economy in secondary effects. The Marin, Sonoma, and Napa Counties do not have large wholesale trade sectors relative to nearby counties, including Alameda, Contra Costa, Sacramento, and San Francisco Counties, which could result in more material purchases outside of the region. For example, if 60 percent of materials are purchased outside the region, direct effects to the region would be approximately $48.4 million and secondary effects would be approximately $29.0 million.

The workers employed by the project would earn wages and salaries and would likely spend a portion of wages and salaries within the action area. Workers employed within the action area would generate greater regional economic benefits than workers from outside the action area because these “outside” workers would take their incomes out of the action area and likely increase spending in a different region. Marin, Napa, and Sonoma Counties would likely supply a portion of the workers for the project and others would originate in the greater Bay Area region or Sacramento region. **Table 3.16-8** summarizes hourly wages for employment for construction laborers and supervisors in Marin, Napa, and Sonoma Counties. Construction details for the

TABLE 3.16-8
CONSTRUCTION LABORERS AND SUPERVISORS HOURLY WAGES

	Construction Laborers ($/hour)	Construction Trades Supervisors ($/hour)
Marin County (San Francisco – San Mateo – Redwood City Metro MSA)	$23.24	$41.08
Napa County (Napa MSA)	$19.07	$34.04
Sonoma County (Santa Rosa – Petaluma MSA)	$20.56	$36.71

MSA = Metropolitan Statistic Areas

SOURCE: EDD, 2008d

NBWRP, including number of workers needed and construction schedule, have not been identified; therefore, the direct economic effects of project construction cannot be calculated for this analysis. In a 40-hour work week, construction laborers would earn between $762 and $929 and supervisors would earn between $1,361 and $1,643, depending on the MSA. Construction details for the NBWRP, including number of workers needed and construction schedule, have not been identified; therefore, the direct economic effects of project construction cannot be calculated for this analysis. It can be assumed that a portion of these weekly wages would be spent on goods and services in the action area, which would result in regional economic benefits.

The regional economic effects, using existing conditions as a baseline, would represent a temporary economic benefit to the region and would end when construction is complete. Beneficial impacts would be lower relative to the No Action Alternative because some level of construction would occur under the No Action Alternative, which would result in some regional economic effects.

Similar to the construction activities, project operation would result in regional economic effects. These effects would be long-term, but much smaller in magnitude than the economic effects from construction. Total annual operation and maintenance costs under Phase 1 are estimated at approximately $1.3 million, which would primarily be associated with power requirements. Current employees would be involved in operation and maintenance, therefore the expenditures would likely not create additional jobs in the region. The regional economic effects from operational expenditures would be beneficial, but minor.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to the regional economy related to project construction and operation under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion

to the facilities constructed under this alternative. However, the regional benefits from construction of the Basic System would be greater than under Phase 1 because the Basic System includes additional recycled water use beyond that proposed under Phase 1. The Basic System would likely require additional construction workers and involve a longer construction schedule. **Table 3.16-9** shows the capital costs of the Basic System. Regional economic impacts would benefit the local region and would only occur during the construction period. (e.g., if 60 percent of materials are purchased outside the region, direct effects to the region would be approximately $84.0 million and secondary effects would be approximately $50.4 million). The economic effects of additional construction workers or worker days relative to Phase 1 would likely be low.

TABLE 3.16-9
PROBABLE TOTAL PROJECT CAPITAL COSTS
FOR THE BASIC SYSTEM

Major Project Component	Cost ($ Million)
Pipelines	$129.6
Treatment Improvements	$29.6
Storage Facilities	$40.6
Pumping Facilities	$10.1
Probable Total Project Capital Costs	***$209.9***

SOURCE: CDM, 2008

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to the regional economy related to project construction and operation under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. However, the regional benefits would be greater than the Basic System. Therefore, it would likely require more construction workers and/or a longer construction schedule. Regional economic impacts would benefit the local region and would only occur during the construction period. **Table 3.16-10** shows the capital costs of the Partially Connected System. If 60 percent of materials are purchased outside the region, direct effects to the region would be approximately $151 million and secondary effects would be approximately $90.6 million. This alternative may employ more workers relative to the Basic System; however, the economic benefits of additional construction workers or worker days would likely be minor.

TABLE 3.16-10
PROBABLE TOTAL PROJECT CAPITAL COSTS
FOR THE PARTIALLY CONNECTED SYSTEM

Major Project Component	Cost ($ million)
Pipelines	$198.0
Treatment Improvements	$64.7
Storage Facilities	$98.6
Pumping Facilities	$16.2
Probable Total Project Capital Costs	***$377.5***

SOURCE: CDM, 2008

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts related to project construction and operation under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative except for the additional regional benefits from construction of the additional recycled water facilities beyond those under the Partially Connected System. The Fully Connected System would likely require more construction workers and/or a longer construction schedule. Regional economic impacts would benefit the local region and would only occur during the construction period. **Table 3.16-11** shows the capital costs of the Fully Connected System. If 60 percent of materials are purchased outside the region, direct effects to the region would be approximately $165.6 million and secondary effects would be approximately $99.3 million. This alternative may employ more workers relative to the Partially Connected System; however, the economic benefits of additional construction workers or worker days would likely be small.

TABLE 3.16-11
PROBABLE TOTAL PROJECT CAPITAL COSTS
FOR THE FULLY CONNECTED SYSTEM

Major Project Component	Cost ($ millions)
Pipelines	$216.7
Treatment Improvements	$85.2
Storage Facilities	$90.7
Pumping Facilities	$21.4
Probable Total Project Capital Costs	***$414.0***

SOURCE: CDM, 2008

Impact 3.16.2: Effect on Agricultural Economy. Project implementation could affect the agricultural economy. (Beneficial)

The NBWRP could affect the agricultural economy by changing production costs or irrigated acreages. The effects would be long term in nature. The greater costs associated with the recycled water could decrease net farm incomes and would have an adverse effect to the farmers. Establishment and production of new vineyards would result in beneficial regional economic effects. Businesses trade with farmers; farmers buy goods and services from farm stores, equipment supply stores, custom operators, and other farmers; other regional businesses earn their income by transporting, storing, marketing, and processing agricultural products. Increased vineyards would increase the volume of sales for the businesses.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.16-1, No Action**).

Under the No Action Alternative, agricultural production would remain the same as existing conditions. Farmers would continue following similar cropping patterns and irrigating with groundwater or surface water supplies. Under the No Action Alternative, farmers would potentially utilize the recycled water provided by the local recycled water projects in Novato, Sonoma, and Napa. As a result, agricultural production costs for the farmers could increase. Participation of the farmers in local recycled water projects would be voluntary; farmers would only likely participate if recycled water use were cost-effective. Recycled water would be a more reliable water supply than existing groundwater or surface water supplies, which may make increased production costs more cost effective in the long-term. The agricultural economy under the No Action Alternative would be similar to existing conditions.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects

would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts on the agricultural economy under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative.

Under Phase 1, farmers would use recycled water instead of groundwater or surface water for irrigation purposes. Recycled water supplies may be more expensive to farmers than existing groundwater or surface water supplies; however, recycled water supplies would be more reliable and could support long-term agricultural production and farm income.

It generally takes vineyards approximately 3 years to bear fruit and 5 years to reach maturity; however, costs are incurred in the first year (UCCE, 2003). Farmers may not make a profit until the vines reach maturity in five to six years. If water costs increase, farmers producing marginal vineyards may not make a profit if other conditions (i.e., sale price) remain the same. This would be an adverse effect to the agricultural economy. However, participation by farmers in the recycled water program would be voluntary. It can be assumed that farmers would not participate if use of recycled water would not be cost-effective for them in the long-term.

Irrigated acreage of vineyards could increase under the NBWRP as a result of providing recycled water supply. Based on the existing nature and location of land uses in the action area within Sonoma County and the assumed use of recycled water, it is not expected that recycled water deliveries would change acreages of vineyards in Sonoma County relative to the No Project Alternative. Farmers would continue to plant the same acreage under the No Action Alternative. However, in Napa County, recycled water deliveries to the MST area would increase vineyard production relative to the No Project/No Action Alternative. In light of the existing nature and location of land uses in the action area within Napa County, and the assumed use of recycled water, it is estimated that approximately 2,086 acres of new vineyards would be planted as a result of the NBWRP.[2] This would increase spending in the agricultural economy and increase farm incomes (Please refer to Chapter 5, for impacts related to growth**)**.

Establishing vineyards requires farmers to spend money on vines, trellis and irrigation systems, fertilizer, and other production inputs and hire workers for site preparation, planting, and pruning vines. The three-year establishment cost for Cabernet Sauvignon vineyards in Napa County was $26,579 per acre, including labor, fuel, materials, and overhead costs (UCCE, 2003). When the vines begin to produce fruits, farmers would continue expenses on production inputs and employing workers, which would increase regional economic benefits. The total production costs ranged from $4,797 to $2,648 per ton based on increasing crop yields from 3.5 to 6.5 tons. Labor requirements were approximately 80 full time workers per 1,000 acres (UCCE, 2003). Establishment and production of vineyards would benefit the regional economy by increasing sales for agricultural support industries and increasing employment for farm workers.

[2] It is assumed that this land is currently idle. If the land is producing another crop, economic benefits would be the net farm income.

Farmers would receive revenues from the sale of the crop. Sale prices vary based on market conditions. In 2007, Napa County reported average sales for red grape varietals of $3,640 per ton. Based on this price and UCCE cost estimates, profits would range from $1,188 per ton for a yield of 5 tons per acre to $6,434 per tons for a yield of 6.5 tons per acre. The economic benefits would occur at a regional level as farmers spend a portion of increased net household income in the local economy.

Increased spending, employment, and farm incomes relative to the No Action Alternative would be a beneficial impact to the agricultural economy.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts on the agricultural economy under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. The Basic System would serve only existing vineyards and there would be no new vineyard production above that identified for Phase 1 (i.e., it is anticipated that existing opportunities for the planting of new vineyards based on the availability of recycled water would be largely, if not fully, realized under Phase 1; additional recycled water deliveries above and beyond Phase 1 are not expected to result in further establishment of new vineyards to any notable degree).

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts on the agricultural community under the Partially Connected System would be equivalent the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. Any additional vineyards served by the Partially Connected System would be existing vineyards and there would be no new vineyard production above that identified for Phase 1.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully

Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts on the agricultural community under the Fully Connected System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. Any additional vineyards served by the Fully Connected System 3 would be existing vineyards and there would be no new vineyard production above that identified for Phase 1.

Impact 3.16.3: Impact to Winery-related Industry. Recycled water deliveries to vineyards would support the winery-related tourism industry. (Beneficial)

No Project Alternative

No new vineyard production would occur under the No Project Alternative. The winery-related tourism industry would continue to attract a similar number of visitors and generated similar economic activity as existing conditions. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.16-1, No Action**).

Under future baseline (2020) conditions, recycled water use within the region is anticipated to increase, in accordance with local water supply or management plans and anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

No new vineyard production would occur under the No Action Alternative. The winery-related tourism industry would continue to attract a similar number of visitors and generated similar economic activity as existing conditions.

Phase 1 (Project level)

Compared to the CEQA Baseline Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would

provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to the winery-related tourism industry under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative.

The NBWRP would result in approximately 2,086 acres of new vineyards in Napa County. Increased grape production would support the winery-related tourism industry in Napa County, which generates over a $1 billion a year. The increased acreage may not have a direct effect on tourism by attracting visitors to the new vineyards, however it would help maintain vineyards in Napa County and continue to attract visitors to the region. This impact would be minor, but beneficial (Please refer to Chapter 5, for impacts related to growth**)**.

Recycled water deliveries would provide a more reliable water supply for irrigation of existing vineyards in both Napa and Sonoma Counties. A reliable water supply helps maintain vineyard production in the long-term, which would also provide long-term support for the tourism industry.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to the winery-related tourism industry under the Basic System would be equivalent to the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. The Basic System would serve only existing vineyards and there would be no new vineyard production above that identified for Phase 1.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to the winery-related tourist industry under the Partially Connected System would be equivalent to the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. The Partially Connected System would extend service only to existing vineyards and there would be no new vineyard production above that identified for Phase 1.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts associated with the Fully Connected System would be equivalent to the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. The Partially Connected System would extend service only to existing vineyards and there would be no new vineyard production above that identified for Phase 1.

Impact 3.16.4: Increase in water/sewer charges. Project implementation could increase municipal and industrial customer water or sewer charges. (Less than Significant)

The funding mechanisms for the project that are being considered by the member agencies include applying for state and federal loans and/or grants. The NBWRA would repay any loans acquired through charging a fee to users for recycled water supply. The project costs would thus affect the user fees, however the extent of increase is not known at this time. It is assumed that customer fees would increase as the project costs increase.

No Project Alternative

Under the No Project Alterative, the existing water and sewer fees would likely remain the same as under existing conditions. No impact is expected. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.16-1, No Action**).

Under future baseline (2020) conditions, municipal and industrial customer water/sewer charges within the region are anticipated to increase and would occur in accordance with anticipated development allowed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

Under the No Action Alternative, the existing water and sewer fees would likely increase as Novato SD, SVCSD, and Napa SD would implement local recycling projects and need to finance debts.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts on water and sewer fees under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. Table 3.16-10 shows the potential costs for the member agencies for construction and operation of the project. A firm plan for funding the of Phase 1 construction costs has not yet been developed among the four wastewater districts and their potential partners. **Table 3.16-12** shows the anticipated costs (life cycle costs)[3] analysis for Phase 1 for each Member Agency.

TABLE 3.16-12
ANTICIPATED COSTS FOR PHASE 1 BY MEMBER AGENCIES

	LGVSD	Novato SD	SVCSD	Napa SD	Total
Total Capital Costs	$7,941,000	$20,041,000	$56,213,000	$36,806,000	$121,000,000
Annual Capital Costs	$308,631	$778,903	$2,184,746	$1,430,483	$4,702,725
Annual O&M Costs	$114,000	$345,000	$346,000	$576,000	$1,381,000
Total Annual Costs	$422,631	$1,123,903	$2,530,746	$2,006,483	$6,083,725

SOURCE: CDM, 2008

Total annual costs of implementing Phase 1 would be approximately $6.1 million, based on a 50-year period of analysis and 3 percent real discount rate. As discussed in Chapter 2, Project Description, NBWRA is in the process of applying for federal funding through the Bureau of Reclamation's Title XVI Water Reclamation and Reuse Program for $25 million. Each individual agency would be responsible for their non-federal share. NMWD is a potential partner for sharing in costs allocated to LGVSD and Novato SD. Costs allocated to SVCSD could be shared by SCWA, the City of Sonoma, and Valley of the Moon Water District. Napa SD costs may be shared by Napa County. There are several possible funding sources being considered by the wastewater districts and potable water agencies for their non-federal share of construction costs. Funding sources include user funding for capital improvements, contribution from agency reserves, state or local grants,

[3] The life cycle costs analysis calculates annual capital costs of implementation over a 50-year period of analysis using a 3 percent real discount rate and adds annual operation and maintenance costs. All facilities are expected to have a service life of at least 50 years with proper maintenance; costs incurred after 50 years would be significantly discounted and were not considered in this analysis. Use of a real (inflation–adjusted) discount rate alleviates the need to project future cost levels.

loans in the form of Certificates of Participation or the State Revolving Fund. Any construction funds not covered by user funding, district reserves, grants, or loans would probably be raised through issuance of revenue bonds. For some Member Agencies and/ or Participating Agencies, it is possible that the final funding plan would include some combination of the above measures.

It is expected that any debt instruments (e.g., loans and bonds) acquired to fund construction would be repaid primarily through user fees, both for wastewater service and for recycled water supply deliveries. For some Member Agencies and/ or Participating Agencies, it is possible that the rates for all users in the wastewater and water agency service areas, not just the users receiving the recycled water supply, could be raised for debt service for this project. In addition, tax assessments could be used by some Member Agencies and/ or Participating Agencies, to retire project debt, although assessments are not now a large portion of agency revenues. The annual operational expenses for Phase 1 may be collected in the same manner as the annual debt service.

Because the exact funding mechanisms are not known, it is difficult to evaluate potential changes in customers' water and sewer fees. While it can be generally concluded that increased water and sewer fees would have an adverse effect to disposable personal income of customers in the three counties relative to the No Project/No Action Alternative, it would be speculative at this time to assess the extent to which customers may be financially affected. However, the use of recycled water may have a beneficial effect on future water and sewer fees by postponing fee increases for development of other water sources. The agencies are continuing to pursue additional outside funding mechanisms, and the portion of total project cost to be borne by rate payers is unknown at this time. Any potential environmental justice effects on low-income populations are discussed in **Section 3.15, Environmental Justice**.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts on water and sewer fees under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative. **Table 3.16-13** shows the total costs analysis for the Basic System.

TABLE 3.16-13
ANTICIPATED TOTAL COSTS FOR THE BASIC SYSTEM

Total Capital Costs	$210,000,000
Annual Capital Costs	$8,161,754
Annual O&M Costs	$1,824,000
Total Annual Costs	$9,985,754

SOURCE: CDM, 2008

Potential cost shares for the member agencies have not been developed at the project-level. The options available for funding the Basic System are the same as described in Phase 1. Based on a 50-year period of analysis and 3 percent real discount rate, the total annual implementation costs including capital and operation and maintenance would be approximately $10 million. Depending on how the project is funded, water and sewer fees may increase even more than identified above, relative to the No Project and No Action Alternatives and Phase 1 because the Basic System would be comparatively more expensive to implement. As described above, it can be generally concluded that any increase in water and sewer fees would have an adverse impact on the disposable income of customers, but it is speculative at this time to estimate the extent of such an impact. However, the use of recycled water may have a beneficial effect on future water and sewer fees by postponing fee increases for development of other water sources.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.5 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts on water and sewer fees under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. **Table 3.16-14** shows the life cycle costs analysis for the Partially Connected System.

TABLE 3.16-14
ANTICIPATED TOTAL COSTS FOR THE PARTIALLY CONNECTED SYSTEM

Total Capital Costs	$377,500,000
Annual Costs	$14,671,724
Annual O&M Costs	$2,789,000
Total Annual Costs	$17,460,724

SOURCE: CDM, 2008

Potential cost shares for the member agencies have not been developed at the project-level. The options available for funding the Partially Connected System are the same as described in Phase 1. Based on a 50-year period of analysis and 3 percent real discount rate, the total annual implementation costs would be approximately $17.5 million. Depending on how the project is funded, water and sewer fees may increase even more than under the No Project/No Action Alternative, Phase 1 and the Basic System because Partially Connected System would be comparatively more expensive to implement. As described above, it can be generally concluded that any increase in water and sewer fees would have an adverse impact on the disposable income of customers, but it is speculative at this time to estimate the extent of such an impact. However, the use of recycled water may have a beneficial effect on future water and sewer fees by postponing fee increases for development of other water sources.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts on water and sewer fees under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. **Table 3.16-15** shows the life cycle costs analysis for the Fully Connected System.

TABLE 3.16-15
LIFE CYCLE COST ANALYSIS FOR THE FULLY CONNECTED SYSTEM

Total Capital Costs	$414,000,000
Annual Costs	$16,090,315
Annual O&M Costs	$3,067,000
Total Annual Costs	$19,157,315

SOURCE: SCWA and Reclamation 2008

Potential cost shares for the member agencies have not been developed at the project-level. The options available for funding the Fully Connected System are the same as described in Phase 1. Based on a 50-year period of analysis and 3 percent real discount rate, the total annual implementation costs would be approximately $19.2 million. Depending on how the project is funded, water and sewer fees may increase even more than under Phase 1, the Basic System, and the Partially Recycled System because the Fully Connected System would be comparatively more expensive to implement. As described above, it can be generally concluded that any increase in water and sewer fees would have an adverse impact on the disposable income of customers, but it is speculative at this time to estimate the extent of such an impact. As a basis of comparison between alternatives, notwithstanding that funding plans have not been formulated for any of the alternatives, the Fully Connected System has the potential for the greatest adverse impact to disposable incomes because it is the most expensive of all the alternatives. However, the use of recycled water may have a beneficial effect on future water and sewer fees by postponing fee increases for development of other water sources.

Impact 3.16.5: Impact on Recreational Spending. Recycled water deliveries to the Napa Salt Mash Restoration Area could increase recreational spending in the region. (Beneficial)

No Project Alternative

No project would be implemented under the No Project Alternative, therefore no impact is expected. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.16-1, No Action**).

Under future baseline (2020) conditions, recreational spending within the region could increase, in accordance with anticipated development allowed or recreational resources developed under the approved General Plans within the region. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD, Novato SD/NMWD, and Napa SD

Recreational spending within the LGVSD, Novato SD, and the SVCSD would not likely change under the No Action Alternative.

SVCSD

Recreation at the Napa Salt Marsh would not likely change under the No Action Alternative. Recreation activities at the Napa Salt Marsh include hiking, bird watching, fishing, and hunting. The site receives approximately 1,000 visitors annually, of which approximately 60 percent visit for hunting and fishing and 40 percent visit for other nature-related recreation activities (JSA, 2003). Two duck clubs also operate at the Napa Salt Marsh (USACE, 2003). There would be no impact to recreational spending under the No Action Alternative.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to recreational spending under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative.

The project would deliver a reliable, water supply to the Napa Salt Marsh for restoration purposes via new pipelines from the SVCSD WWTP. During non-peak periods, SVCSD could potentially provide up to 2,362 acre-feet of recycled water to the Napa Salt Marsh. The amount of water required at the Napa Salt Marsh would be determined by SVCSD and appropriate regulatory agencies.

Recycled water deliveries would enhance wildlife and estuarine habitat, which could improve recreational opportunities and attract more visitors to the site. More visitors to the site would likely increase recreation-related spending in the region because visitors may stop to purchase food, picnic supplies, gasoline, or other recreation goods. A U.S. Army Corps Engineers (USACE) study (2003) estimated that visitors within 30 miles of the site spend $11.89 per person on day use, non-boating recreation (USACE, 2003). This increased spending within the regional economy would boost sales and output for local recreation-related businesses, which would be a beneficial impact. This impact would only be an overall increase to the regional economy if visitors from outside the region traveled into the region to visit the site and purchased goods and services within the region. Otherwise, it is assumed that new local visitors are already spending their money elsewhere in the region on other goods and services, which would not result in a net increase in economic output. This analysis does not assume that many new visitors from outside the action area would visit the Napa Salt Marsh as a result of this project. Therefore, this impact would be minor, however beneficial, relative to the No Project/No Action Alternatives.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to recreational spending associated with the Basic System would be generally similar to the impacts discussed above for Phase 1, to the extent that additional recycled water supplies would further enhance wildlife and estuarine habitat and improve recreational and visitor opportunities.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to recreational spending associated with the Partially Connected System would be generally similar to the impacts discussed above for Phase 1, to the extent that additional recycled water supplies would further enhance wildlife and estuarine habitat and improve recreational and visitor opportunities.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully

Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to recreational spending associated with the Fully Connected System would be generally similar to the impacts discussed above for Phase 1, to the extent that additional recycled water supplies would further enhance wildlife and estuarine habitat and improve recreational and visitor opportunities.

3.16.4 Impact Summary by Service Area

Table 3.16-16 provides a summary of potential socioeconomic impacts relative to NEPA associated with implementation of the alternatives.

TABLE 3.16-16
POTENTIAL IMPACTS AND SIGNIFICANCE – SOCIOECONOMICS

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.16.1: Effect on the regional economy.				
No Action Alternative	LTS	LTS	LTS	LTS
Phase 1	BI	BI	BI	BI
Alternative 1: Basic System	BI	BI	BI	BI
Alternative 2: Partially Connected System	BI	BI	BI	BI
Alternative 3: Fully Connected System	BI	BI	BI	BI
Impact 3.16.2: Effect on the agricultural economy.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	BI
Alternative 1: Basic System	NI	NI	NI	BI
Alternative 2: Partially Connected System	NI	NI	NI	BI
Alternative 3: Fully Connected System	NI	NI	NI	BI
Impact 3.16.3: Impact on winery-related industry.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	BI
Alternative 1: Basic System	NI	NI	NI	BI
Alternative 2: Partially Connected System	NI	NI	NI	BI
Alternative 3: Fully Connected System	NI	NI	NI	BI
Impact 3.16.4: Increase in water/sewer charges.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	LTS	LTS	LTS	LTS

TABLE 3.16-16 (Continued)
POTENTIAL IMPACTS AND SIGNIFICANCE – SOCIOECONOMICS

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.16.4: Increase in water/sewer charges. (cont.)				
Alternative 1: Basic System	LTS	LTS	LTS	LTS
Alternative 2: Partially Connected System	LTS	LTS	LTS	LTS
Alternative 3: Fully Connected System	LTS	LTS	LTS	LTS
Impact 3.16.5: Impact on Recreational Spending.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	BI	BI	BI	BI
Alternative 1: Basic System	BI	BI	BI	BI
Alternative 2: Partially Connected System	BI	BI	BI	BI
Alternative 3: Fully Connected System	BI	BI	BI	BI

NI = No Impact
BI = Beneficial Impact
LTS = Less Than Significant

3.16.5 References

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