

CHAPTER 5

Growth Inducement and Secondary Effects of Growth

5.1 Introduction

The California Environmental Quality Act (CEQA) Guidelines (§15126.2(d)) require that an Environmental Impact Report (EIR) evaluate the growth inducing impacts of a proposed action. The EIR should:

Discuss the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Under the National Environmental Policy Act (NEPA), it is U.S. Bureau of Reclamation (Reclamation) policy to encourage and facilitate the most efficient beneficial use of project water and thus, to encourage changes that implement these policies, consistent with the Reclamation water management mission. Proposals for changes in water use reflect ongoing trends of greater efficiencies in agricultural water use. A NEPA review is required to identify the likely environmental consequences of such proposals, and this information must be considered in Reclamation decision-making. In assessing the environmental impacts of changes in water use, numerous issues arise, including: What is the relationship of water supply and urban population growth? Is the change growth inducing, or are we simply accommodating unavoidable demographic trends by providing a relatively impact-free source of water? How far, and to what degree, do we follow the impacts that are associated with the newly approved water use?

According to the NEPA Handbook, one way to determine if the change in water use will cause growth is to prepare an Environmental Assessment to assist Reclamation in determining whether the urban growth is a consequence of the project water supply, or whether the growth would occur anyway, even in the absence of the project water. If comparable quantities of alternative water supplies are reasonably available (as supported by appropriate documentation), then the “future without” scenario is probably very similar to the proposed action with respect to

population growth issues. This can be documented in the “no action” (“future without”) alternative, eliminating the need for a detailed discussion of issues and impacts which are not a consequence of the Federal action at issue. In situations in which it is clear that growth is a result of the provision of project water (“but for” the provision of project water, this growth would not occur), and these impacts can be attributed to the Federal action, detailed descriptions of the impacts must be provided in the NEPA document.

A project can have direct and/or indirect growth inducement potential. Direct growth would result if a project involved construction of new housing. A project can have indirect growth inducement if it would establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. A project would also have an indirect growth inducement effect if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service.

Based on the CEQA and NEPA discussions above, assessing the growth-inducement potential of the North Bay Water Recycling Program (NBWRP or proposed project) involves answering the question: “Would implementation of the proposed project directly or indirectly support economic expansion, population growth, or residential construction?” Water supply is one of the chief, though not the only, public services needed to support urban development. A water service capacity deficiency could constrain future development, particularly if coupled with strong community policy. Adequate water supply, treatment, and conveyance would play a role in supporting additional growth in the project area, but it would not be the single impetus to such growth. Factors such as the General Plans and policies of the cities and counties and/or the availability of wastewater disposal capacity, public schools, and transportation services also influence business and residential or population growth in the planning area. Economic factors, in particular, greatly affect development rates and locations.

Growth induced from a project may result in adverse impacts if the growth is not consistent with the land use plans and growth management plans and policies for the area affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service and solid waste service. The urban development may have environmental impacts, as identified in CEQA documents prepared for adoption of local land use plans. A project that would induce “disorderly” growth that is in conflict with local land use plans could indirectly cause additional adverse environmental impacts and impacts to other public services. Thus, it is important to assess the degree to which the growth accommodated by a project would or would not be consistent with applicable land use plans.

5.2 Growth-Inducement Potential

5.2.1 Direct Growth-Inducement Potential

To determine direct growth inducement potential, the proposed project was evaluated to verify whether an increase in population or employment, or the construction of new housing would occur as a direct result of the project. Construction of the proposed project would involve short-term workers for the course of the construction activities. Operation of the proposed project would not involve a substantial change in the existing operation and maintenance activities of the existing wastewater treatment plants or other facilities of the Member Agencies. Therefore, the proposed project would not result in a direct increase in population or employment or new housing.

5.2.2 Indirect Growth-Inducement Potential

To determine indirect growth inducement potential, the proposed project was reviewed to ascertain whether it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service. Therefore, to assess whether the proposed project would induce growth indirectly, it must be determined whether the project frees up (i.e., increases the amount of) potable water that would be available for urban development, thus removing an obstacle for growth. To make this determination, this section studies the current and projected water demand in the individual Member Agency service areas, planned use of recycled water as a supply source to meet increasing water demands, and the role of the proposed project. In addition, projected growth and potential development that is planned under the local general plans are presented, as relevant.

5.3 Water Supply and Recycled Water Use

Table 5-1 presents a summary of projected urban water demands for 2030 within the NBRWP service areas, which include the urban areas of Novato, the City of Sonoma, and the Milliken-Sarco-Tulucay (MST) Area of Napa County. This information has been compiled from the water demand projections included in the Sonoma County Water Agency (SCWA) *Water Project EIR* (SCWA, 2008) and the *2050 Napa Valley Water Resources Study* (City of Napa 2007), and presents projected water demands, water supply, conservation, and recycled water levels that have been included in regional water supply planning. The total projected urban water use within the NBWRP Service Areas is estimated to be 23,099 AFY by 2030. Implementation of Phase 1 of the NBWRP would provide approximately 2,100 AFY of urban irrigation demand offset.

Table 5-2 provides a summary of agricultural demands broken down by use type for Marin, Sonoma, and Napa Counties. This information was compiled as part of the Phase 3 Engineering and Economic/Financial Analysis Report, and is calculated based on land use patterns and crop water needs. The California Department of Water Resources (DWR) provided land use data for Marin County; Napa SD and DWR provided land use data for Napa County; and SCWA provided land use data for Sonoma County. Land use maps indicate that agricultural and urban landscaping acreage within the NBWRP Service Areas totals about 40,500 acres. Out of this acreage, less than one percent is non-irrigated farmland (idle and dry farming lands).

**TABLE 5-1
RELATIONSHIP OF NBWRP PHASE 1 TO LONG-TERM URBAN WATER DEMANDS AND SUPPLY BY NBWRA SERVICE AREA**

	2030 Urban Demand ¹	Conservation ¹	Recycled Water ¹	Local ¹	Projected Supply	NBWRP Phase 1			Population		Source
						Urban	Agriculture	Total	2005	2030	
North Marin Water District	15,992 ¹	1,518	674	800	13,000 ¹	542	0	542	58,816	68,669	Marin Countywide General Plan
LGVSD ²						204	0	204	n/a	n/a	
Subtotal NMWD Service Area	15,992	1,518	674	800	13,000 ¹	744	0	744	58,816	68,669	Marin Countywide General Plan
Valley of the Moon	4,322 ¹	504	5	83	3,730 ¹	n/a	n/a	n/a	22,665	25,466	Sonoma County General Plan
City of Sonoma	3,397 ¹	326	50	21	3,000 ¹	874			10,733	12,984	City of Sonoma
Subtotal Sonoma Valley Service Area	7,719	830	55	104	6,730				33,398	38,450	
Napa MST Area	4,155 ³	N/A	420 ³	N/A	4,155	1,368	771	2,137	4,800	5,242	2050 Napa Valley Report
Total Urban vs. Agricultural (%)	23,544	1,844	1,144	821	20,155	2,112 56%	1,645 44%	3,757 100%	97,014	112,361	

N/A – Not Available

n/a – Not applicable. Under Phase 1 LGVSD supplies would be served in the NMWD service area; therefore, water supply and population information for the NMWD service area account for this water supply offset.

¹ SCWA, 2008.

² LGVSD would supply recycled water to NMWD service area under Phase 1. Therefore, water demands are included in totals for NMWD.

³ City of Napa, 2005. 2050 Napa Valley Resources Study. All 2030 year estimates based on mid-point of 2020 and 2050 projections provided by WYA Report.

⁴ Brown and Caldwell, 2007.

SOURCE: SCWA, 2008

**TABLE 5-2
ESTIMATED IRRIGATION WATER DEMANDS BY USE TYPE VERSUS RECYCLED WATER PROVIDED**

Estimated Irrigated Acreage and Water Use in the NBWRP				Recycled Water Provided by NBWRP			
Land Use Type	Water Use Rate (AF/acre)	Acres	Total Maximum Water Use (AFY)	Phase 1 (AFY)	Alternative 1: Basic System (AFY)	Alternative 2: Partially Connected System (AFY)	Alternative 3: Fully Connected System (AFY)
Urban Landscaping							
Marin County ¹	2.234	1,335	2,982	744	744	1,479	1,479
Napa County	2.801	644	1,804	1,364	1,364	1,978	1,978
Sonoma County	3.25	333	1,083	0	435	542	668
<i>Total</i>		2,312	5,868	2,110	2,545	4,201	4,127
Dairy & Pasture							
Marin County	2.502	0	0	0	0	554	647
Napa County		37	92	0	339	339	339
Sonoma County		4,721	11,811	0	249	342	249
<i>Total</i>		4,757	11,903	249	588	1,235	1,235
Orchard							
Marin County	2.971	0	0	0	0	0	0
Napa County		30	90	0	0	10	10
Sonoma County		0	0	0	0	0	0
<i>Total</i>		30	90	0	0	10	10
Irrigated Farm							
Marin County	1.339	0	0	0	0	69	94
Napa County		0	0	0	0	0	0
Sonoma County		2,924	3,915	8	16	41	280
<i>Total</i>		2,924	3,915	8	16	110	374
Vineyard							
Marin County	N/A	0	0	0	0	0	0
Napa County	0.25	10,289	2,572	771	1,487	2,093	2,093
Sonoma County	0.5	20,156	10,078	779	2,020	3,802	4,922
<i>Total</i>		30,445	12,650	1,550	3,507	5,895	7,015
Totals		40,469	34,428	3,468	6,440	11,051	12,561

N/A = Not applicable

¹ The Petaluma and MMWD service areas are included in this water use estimate.

SOURCE: CDM, 2008

Table 5-2 identifies the type of use category, the number of acres of that use category within the NBWRP service areas, broken down by Marin, Napa, and Sonoma Counties. Additionally, the amount of recycled water that would be available under Phase 1 and each of the Action Alternatives under consideration is provided.

5.3.1 LGVSD Service Area

Water Supply

LGVSD provides wastewater services in San Rafael and areas in the vicinity (within Marin County) that receive water supply from Marin Municipal Water District (MMWD). The sources of water supply for MMWD are the local watershed (surface water) and water from Sonoma County Water Agency (City of San Rafael, 2004). The total current water supply capacity of MMWD is approximately 80,000 acre-feet (AF). Approximately 72 percent of the water used within the MMWD service area is from local reservoirs, 26 percent of the water is from the Russian River in Sonoma County, and 2 percent is from recycled water (City of San Rafael, 2006). **Table 5-3** provides the water supply sources for MMWD.

**TABLE 5-3
WATER SUPPLY SOURCES FOR MMWD SERVICE AREA (AFY)**

Water Supply Source	2005	2010	2015	2020	2025	2030
Surface water*	20,500	20,500	20,500	20,500	20,500	20,500
Surface water (Imported from SCWA)	8,150	7,590	7,025	5,460	5,900	5,366
Recycled water	650	710	775	840	900	934
Total	29,300	28,800	28,300	27,800	27,300	26,800

* MMWD owns and operates 7 surface water reservoirs; 5 within the Mt. Tamalpais Watershed and 2 within West Marin.

SOURCE: Marin County, 2007b

The potable water available from the MMWD watershed is effectively defined by the capacity of its reservoirs and the operational yield. The watershed is currently managed for an operational early planning phase and cannot be relied upon for additional water supply. The current operational yield of the watershed is approximately 29,000 AFY, causing a current water supply deficit of 1,650 AF. This deficit is projected to increase to 7,900 AFY by 2020 (City of San Rafael, 2004).

MMWD has two contracts for water from the Russian River which could provide water supply of up to 14,300 AFY. However, use of additional Russian River water is limited by pipeline capacity and environmental concerns. To respond to the anticipated supply deficit, MMWD is continuing its efforts to increase water conservation, is exploring additional opportunities to partner on water recycling with LGVSD (City of San Rafael, 2006).

General Plan Policies

MMWD has implemented a recycled water program with LGVSD for water use for irrigation and toilet flushing (City of San Rafael, 2004). Usage of potable and recycled water within the MMWD service area in 2001 and 2002 totaled 31,338 AF.

One of the Marin County General Plan (2007a) policies calls for offsetting new water demand. The policy states that in water districts that provide insufficient water to serve new construction or uses requiring an additional water meter or increased water supply as determined by the district or Marin County, the County shall require new construction or uses to offset demand so that there is no net increase in demand. The County lists use of reclaimed water as one of the measures that would be required to achieve no net increase in demand in addition to water catchments and reuse on site and retrofits of existing uses in the district to offset increased demand. These measures shall be achieved in partnership with the applicable water district and shall serve as evidence that an adequate, long-term, and sustainable water supply is available to serve the project (Marin County, 2007a).

LGVSD is participating in a regional NBWRA recycled water effort to take advantage of the potentially positive aspects related to utilizing reclaimed water in place of potable water to insure rate payers have a more sustainable water source. The LGVSD Strategic Plan lists the proposed project that LGVSD would participate in and receive federal and state funding that will expand the LGVSD's recycled water effort (LGVSD, 2008).

Recycled Water Use Under NBWRP

Partnering of LGVSD with other agencies under NBWRP would provide an opportunity for LGVSD to access federal funding for local recycled water use. As **Table 5-4** below indicates, implementation of Phase 1 would provide 202 AFY of recycled water supply to the Hamilton Field Area, in partnership with NMWD. This would provide offset of potable supplies currently provided by NMWD for landscape irrigation.

**TABLE 5-4
RECYCLED WATER USE UNDER THE PROPOSED PROJECT FOR LGVSD SERVICE AREA**

Project	No Project Alternative	No Action Alternative	Phase 1	Alternative 1: Basic System	Alternative 2: Partially Connected System	Alternative 3: Fully Connected System
New recycled water use (AFY)	0	0	202	202	409	409
Areas of recycled water use	--	--	Hamilton Field	Hamilton Field	Peacock Gap Golf Course	Peacock Gap Golf Course

SOURCE: CDM, 2009

Full build out of Alternative 1 would not increase recycled water use from LGVSD. Alternative 2 would include construction of facilities to serve Peacock Gap Golf course, with the MMWD service area. This project would be implemented in partnership with MMWD, and would provide an estimated potable supply offset of 202 AFY. No additional facilities would be constructed under Alternative 3.

The provision of recycled water at these levels is consistent with the levels of recycled water use identified in the Marin County General Plan (Table 5-3).

5.3.2 Novato SD Service Area

Water Supply

Novato SD provides wastewater services in Novato and areas in the vicinity (within Marin County) that receives water supply from NMWD. The sources of water supply for NMWD are the Stafford Lake¹ and imported water from SCWA. Recycled water is expected to become available as a third source of water in 2007 (Marin County, 2007b). **Table 5-5** shows the water supply sources for NMWD that serves the Novato SD service area.

**TABLE 5-5
WATER SUPPLY SOURCES FOR NMWD (AFY)**

Water Supply Source	2005	2010	2015	2020	2025	2030
Surface water (Stafford Lake)	0	1,700	1,700	1,700	1,700	1,700
Surface water (Imported from SCWA)	10,060	10,954	11,785	12,297	12,566	12,724
Recycled water (Tertiary treated)	0	430	69	800	910	1,020
Other (Raw water for irrigation) ¹	250	250	250	250	250	250
Total	10,310	13,334	14,425	15,047	15,426	15,694

¹ Untreated water pumped from Stafford Lake used for irrigation of Stafford Lake Park and Indian Valley Golf Course, value not included in 1,700 acre-feet safe yield. The table does not include the secondary-treated wastewater use for NMWD pastureland irrigation

SOURCE: Marin County, 2007b

Stafford Lake's historical annual yield is 2,000 acre-feet (AF) and the safe long-term annual yield has been determined to be 1,700 AF. As indicated in Table 5-5, the current and projected Stafford Lake water supply has been estimated at its safe long-term yield of 1,700 AFY. Most of NMWD's water supply (about 80 percent) is obtained through an agreement with SCWA that provides water principally from the Russian River.

¹ Stafford Lake, a reservoir on Novato Creek west of Novato.

General Plan Policies

As noted in the Marin County General Plan, the main constraints and limitations to the water supply in the NMWD service area include (Marin County, 2007b):

- Physical capacity of SCWA's transmission system;
- Water rights limitations of Novato Creek / Stafford Lake;
- Groundwater quality and quantity limitations;
- Drought impacts to SCWA supplies. An extended drought could result in a supply reduction of 30 percent or more; and
- Legal and environmental impacts to SCWA supplies. Anticipated future supply increases may be delayed due to approval of additional water rights and challenges to environmental documentation.

The water supply is adequate to meet the demand under Novato General Plan buildout. Water distribution facilities are developed on a site-by-site basis, financed by the developer through agreements with the water agency (City of Novato, 2003). As part of the Public Facilities policy of water conservation, Novato General Plan (2003) states two programs for the City: Use of treated wastewater for irrigation of City facilities and encourage wastewater irrigation at other public and private facilities, where practicable, and support and encourage reclamation of wastewater for reuse wherever possible in accordance with the regulations and ordinances of the NMWD and MMWD. A third program states considering developing a plan in conjunction with the Novato SD and water districts to promote and maximize to the extent feasible the reuse of treated wastewater and consider enacting an ordinance to have developments provide wastewater distribution facilities in conformance with the General Plan.

Novato SD is actively planning upgrades to water recycling facilities and expansion of recycled water use (Marin County, 2007b). Currently, the treated wastewater from the Novato SD WWTPs is used to irrigate 1,000 acres of district-owned or leased pasturelands during dry weather. The irrigation program, which has been operating since 1986, reclaims an average of over 40 percent of the average annual dry-weather flow and has proven to be a financial success for Novato SD. Novato SD is the largest recycled water producer in the MMWD service area. Recycled water use occurs mainly in central Marin County within NMWD's and MMWD's service areas. Secondary-treated water is used for pasture irrigation on NMWD's land and tertiary treated water is used for irrigation, toilet flushing, car washes, cooling towers, and laundries (Marin County, 2007b).

Recycled Water Use Under NBWRP

As shown in Table 5-5 above, the Marin County General Plan anticipates recycled water use to increase gradually over time. It is projected that by 2030 approximately 1,020 AF of tertiary treated effluent would be used for urban landscape irrigation (Marin County, 2007b). The SCWA Water Project EIR identifies 674 AFY of recycled water use in the NMWD service area.

Table 5-6 below summarizes the amount of recycled water and the service areas identified under each of the NBWRP Alternatives. Under Phase 1, approximately 542 AFY would be provided within the Novato SD/NMWD service area. Additionally, 202 AFY would be provided by LVGSD to the NMWD service area, resulting in a total recycled water supply of 744 AFY under Phase 1 for Marin County. This is consistent with recycled water and water supply planning within the region, although it is slightly higher than the amount of potable offset included in the SCWA Water Project EIR.

**TABLE 5-6
RECYCLED WATER USE UNDER THE PROPOSED PROJECT FOR NOVATO SD SERVICE AREA**

Project	No Action Alternative	No Action Alternative	Phase 1	Alternative 1: Basic System	Alternative 2: Partially Connected System	Alternative 3: Fully Connected System
New recycled water use (AFY)	0	193	542	542	2,038	3,971
Areas of recycled water use	--	North Novato UWMP Area	North and central Novato UWMP Area	North and central Novato UWMP Area	Full Novato UWMP and Sears Point	Sears Point, Southern Sonoma Valley area

SOURCE: CDM, 2008

Full buildout of Alternative 1 would be equivalent to Phase 1, as no additional supplies would be provided within the Novato SD/NMWD service areas. Alternative 2 would provide for increased urban uses within the City of Novato and provision of agricultural irrigation supplies to the Sears Point area. Under Alternative 3, supplies would also be provided to the Southern Sonoma Valley from Novato SD.

5.3.3 SVCSD Service Area

Water Supply

SVCSD provides wastewater services in the area (i.e., portions of city of Sonoma and unincorporated Sonoma County) that receives water supply from Sonoma County Water Agency (SCWA). Most water in the city is purchased from SCWA, with City wells augmenting that supply during periods of peak use. Even if residential construction continues to be limited by the Growth Management Ordinance, water supply and delivery capacity in Sonoma likely will need to be expanded by 2010 through activation of one of the dormant City wells, and again by 2015 through the planned construction of additional pipe by SCWA (City of Sonoma, 2006a). Policy 1.6 of the Sonoma General Plan (2006) limits growth in Sonoma to a rate that is based on the cost-effective provision of services within the sphere of influence. SVCSD upgraded the wastewater treatment plant to provide tertiary treatment and increase the amount of reclaimed wastewater use by pursuing additional reclaimed water user contracts to address potential impacts

resulting from projected growth within the city of Sonoma and the SVCSD as a whole (City of Sonoma, 2006b).

The Russian River and groundwater are the primary water supply sources for SCWA. In recent years, both water conservation and re-use programs have expanded considerably. As advanced treatment has become an increasingly standard practice, water reuse programs are becoming even more viable (Sonoma County, 2008). **Table 5-7** provides the water supply sources for SCWA and the projected demand under the 2005 Urban Water Management Plan (SCWA, 2006).

**TABLE 5-7
WATER SUPPLY SOURCES FOR SCWA (AFY)**

Water Supply Source	2010	2015	2020	2025	2030
Groundwater	3,870	3,870	3,870	3,870	3,870
Surface Water	75,000	75,000	101,000	101,000	101,000
Total Water Supplies	78,870	78,870	104,870	104,870	104,870
Projected Demand (2005)	73,642	74,983	85,717	96,574	101,000
<i>Difference (Supplies - Demand)</i>	<i>5,228</i>	<i>3,887</i>	<i>19,153</i>	<i>8,296</i>	<i>3,870</i>

SOURCE: Sonoma County, 2006 (uses 2000 Urban Water Management Plan)

General Plan Policies

The Sonoma County General Plan lists the following goals and policies that support recycled water use:

- ***GOAL WR-4:*** Increase the role of conservation and safe, beneficial reuse in meeting water supply needs of both urban and rural users.
- ***Objective WR-4.1:*** Increase the use of recycled water where it meets all applicable regulatory standards and is the appropriate quality and quantity for the intended use.
- ***Policy WR-4j:*** Ensure that public wastewater disposal systems are designed to reclaim and reuse recycled water for agriculture, geothermal facilities, landscaping, parks, public facilities, wildlife enhancement and other uses to the extent practicable, provided that the water meets the applicable water quality standards and is supplied in appropriate quantities for the intended uses.
- ***Policy WR-4k:*** Where consistent with water quality regulations, encourage graywater systems, roof catchment of rainwater and other methods of re-using water and minimizing the need to use potable surface water or groundwater.

SCWA is involved with coordinating several types of recycled water programs. SCWA works with a number of local authorities responsible for water supply and wastewater collection and distribution. SCWA and its contractors encourage recycled water use by collecting, as part of the water rates, funds to be held in special reserve for recycled water projects carried out by its water

contractors and other customers. Current and future recycled water projects have been developed within SCWA's service area to accommodate for additional flow from projected growth as indicated in the adopted general plans and stringent wastewater discharge regulations. SCWA also enters into recycled water use agreements with private individual water users near recycling facilities that it operates (SCWA, 2008).

Recycled Water Use Under NBWRP

As previously shown in Table 5-2 and Table 5-3, regional water supply planning anticipates recycled water use to increase gradually over time, and provision of recycled water has been included in long-term planning. The SCWA Water Project EIR (2008) identifies 50 AFY of recycled water use within the City of Sonoma, and 5 AFY within the Valley of the Moon service area. **Table 5-8** below shows the recycled water use under the NBWRP for SVCSD service area. The recycled water produced under the proposed project would offset equivalent amount of potable water use for both urban uses (111 AFY) served by SCWA via the Sonoma Aqueduct, and groundwater and surface water supplies used by agricultural irrigators (1,862 AFY). Provision of recycled water within Sonoma Valley would reduce peak demands on potable water supplies within urban areas, reduce groundwater pumpage, and reduce surface water diversions for irrigation.

**TABLE 5-8
RECYCLED WATER USE UNDER THE PROPOSED PROJECT FOR SVCSD SERVICE AREA**

Project	No Project Alternative	No Action Alternative	Phase 1	Alternative 1: Basic System	Alternative 2: Partially Connected System	Alternative 3: Fully Connected System
New recycled water use (AFY)	0	874	874	2,719	4,381	4,230 ¹
Areas of recycled water use	--	Portion of Existing SVCSD Recycled Water Project Area, Napa Salt Ponds.	Existing SVCSD Recycled Water Project Area, Napa Salt Ponds.	Existing SVCSD area (Carneros West), Napa Salt Ponds, additional portions of Sonoma Valley	Additional areas in the SVCSD southern Sonoma Valley	North of Sonoma Valley to Central Sonoma service area

¹ Reuse from SVCSD is reduced by 152 AFY under Alternative 3, as Southern Sonoma Valley is served by supplies from Novato SD, and SVCSD supplies are used to serve the Central Sonoma service area, located further north in the Sonoma Valley.

SOURCE: CDM, 2008b.

Additionally, Phase 1 would include provision of recycled water to the Napa Salt Ponds from the SCVSD, providing environmental enhancement through the dilution of bittern within Pond 7 and 7A. Provision of these supplies for environmental enhancement would not affect growth trends within the Sonoma Valley.

Alternative 1 would include facilities necessary to provide additional supplies for both urban and agricultural irrigation, increases recycled water supplies to 2,719 AFY. Supplies would continue

to be served to the Napa Salt Ponds for enhancement purposes. Alternative 2 would increase recycled water supply to 4,381 AFY by extending facilities to serve irrigators in the Southern Sonoma Valley. Alternative 3 would direct recycled water generated at the SVCSWD WWTP to the Central Sonoma Valley, extending recycled water service further north up the Sonoma Valley. Supplies provided would be slightly reduce compared to Alternative 2, as slightly higher demands are present in the Southern Sonoma Valley, which would be served by supplies from Novato SD under Alternative 3.

5.3.4 Napa SD Service Area

Water Supply

Napa SD provides wastewater services to the city of Napa and other areas within Napa County that receive water supply from the Napa Water Division. The sources of Napa's water supply are Milliken Reservoir, Lake Hennessey, and water purchased under contract from the State Water Project. There is a need for additional water supply to accommodate projected growth in the city (City of Napa, 2007). **Table 5-9** provides the available water supplies for Napa for normal, multi-dry, and single-dry years under current, 2020, and 2050 conditions.

**TABLE 5-9
WATER SUPPLIES FOR NAPA WATER DIVISION (AFY)**

Water Source	Normal Year	Multi-Dry Years	Single-Dry Year	Water Demands
				Napa
Current				15,370
Total Local Storage	18,200	11,117	5,400	
Total Depletion of Storage	-	1,333	6,600	
Total SWP Water	10,336	5,440	2,720	
Total Water Supply	28,536	17,890	14,720	
2020				18,798
Total Local Storage	18,200	11,117	5,400	
Total Depletion of Storage	-	1,333	6,600	
Total SWP Water	14,972	7,880	3,940	
Total Water Supply	33,172	20,330	15,940	
2050				21,643
Total Local Storage	18,200	11,117	5,400	
Total Depletion of Storage	-	1,333	6,600	
Total SWP Water	15,048	7,920	3,960	
Total Water Supply	33,248	20,370	15,960	

SWP = State Water Project

SOURCE: West Yost & Associates, 2005

During multi-year droughts, the City's existing water supply is insufficient to meet the needs of the city in the event that there is a cutback in State Water Project allocation. The water deficit would become less problematic in the future because the City's water entitlements from the State Water Project would grow significantly faster than projected growth in water demand in the

City's water service area. Based on the City's current contract, the 1996 entitlement of 6,200 AF would increase to 18,800 AF by the year 2021 (its ultimate SWP entitlement). This will provide a surplus in most years and the ability to absorb large cutbacks in dry years. For the purposes of long range analysis, the *Water System Optimization and Master Plan*² assumes a 50 percent reduction in SWP deliveries and a reduction in water demand of 20 percent during dry years to reflect the City's drought demand management measures. At the current entitlement schedule, there will remain a remote possibility that a cutback in State Water Project allocations could result in a water deficit up until the year 2012. Based on past drought experience, the impact of this deficit is public inconvenience and minor loss of irrigated landscape. The City's water distribution system also has insufficient short-term storage capability to address current and projected needs (City of Napa, 2007).

The unincorporated areas of Napa County rely principally on groundwater resources and surface water collection. There are three main groundwater basins in Napa County: North Napa Valley, MST, and Carneros. According to the *2050 Napa Valley Water Resources Study*, during wet years, with ample rainfall, sufficient water supply would be available under current and future conditions, however storage capacity may be inadequate. Projections for dry years, however, show users in both Napa's incorporated and unincorporated areas may not have enough water to meet all their needs through the year 2050. Thus, both municipal water supplies and groundwater supplies may face challenges (County of Napa, 2008). **Table 5-10** provides water supplies and demand for the unincorporated areas (i.e., Main Basin, MST, and Carneros).

TABLE 5-10
WATER SUPPLIES AND DEMANDS IN UNINCORPORATED AREAS IN THE PROJECT AREA (AFY)

Water Sources	Groundwater	Surface Water	Recycled Water	Total Water Supply	Water Demands
Current					
Main Basin	28,000	7,900	900	36,800	33,656
MST	3,054	250	-	3,304	3,313
Carneros	1,347 to 1,747	800 to 1,200	-	2,147 to 2,947	2,547
Total	32,401 to 32,801	8,950 to 9,350	900	42,251 to 43,051	39,516
2020					
Main Basin	28,000	7,900	1,072	36,972	36,416
MST	3,040	250	420	3,710	3,710
Carneros	744 to 1,172	800 to 1,200	1,495 to 2,110	3,039 to 4,482	3,467
Total	31,784 to 32,212	8,950 to 9,350	2,987 to 3,602	43,721 to 45,164	41,593
2050					
Main Basin	28,000	7,900	1,500	37,400	41,148
MST	3,931	250	420	4,600	4,601
Carneros	2,409 to 3,424	800 to 1,200	1,495 to 2,110	4,704 to 6,734	5,719
Total	34,340 to 35,355	8,950 to 9,350	3,415 to 4,030	46,700 to 48,735	51,468

SOURCE: West Yost & Associates, 2005

² The City's 1996 *Water System Optimization and Master Plan* was prepared to address the current and long-term water supply needs of the community. The plan includes goals, policies and implementation measures, along with the environmental analysis, to address the current and long-term water system needs for the city (City of Napa, 2007).

While groundwater use is not a significant source for municipal uses, groundwater typically serves as the main water supply source to meet water demands in the unincorporated areas of the county. The water demand in the Napa River Watershed estimated at approximately 39,500 AFY in 2000 is projected to increase to approximately 51,500 AFY in 2050.³ The “2050 Study” identifies potential water supply projects that may be pursued to reliably meet existing and future demands. It also cautions municipalities considering groundwater use and urges aggressive pursuit of recycled water as a supply for non-potable (irrigation) water. Napa SD has initiated planning for provision of recycled water to the MST and Carneros areas (County of Napa, 2008), which is part of the proposed project (County of Napa, 2008). Table 5-10 shows water supply and demand in the Main Basin, MST and Carneros areas.

General Plan Policies

Measures explored jointly by the Napa Water Division and Napa SD to address increasing water demands include greater use of recycled water and incentive programs for use of water conservation measures within new developments above and beyond the currently mandated programs (City of Napa, 2007).

The 1998 Napa General Plan lists a policy to evaluate the feasibility of use of reclaimed wastewater in appropriate locations. In order to plan future and adequate water supply capacity and services to Napa, the General Plan calls for the implementation of the *1997 Water System Optimization and Master Plan* (City of Napa, 1998). The 1997 Master Plan identifies use of reclaimed wastewater to offset potable water supplies currently being used to irrigate parks, a golf course, and other landscaped areas in Napa and improvements to water supplies during drought years. The City would enter into an agreement with Napa SD to deliver recycled water to the current City customers. The areas proposed for recycled water use in the General Plan are area south of Imola Avenue, east of Napa River, and west of Highway 221 (including the Napa State Hospital property), the south Napa Market Place, the Stanly Ranch, and the property owned by Napa SD adjacent to Imola Avenue bordering Napa River. The water reuse in the proposed areas would offset potable water use for irrigation of turf at Kennedy Golf Course, Kennedy Park, and Napa Valley College. Recycled water use could offset 400 AF of water currently being used for landscaping irrigation and offset potable water use for landscape irrigation for future development (City of Napa, 1998).

Future growth projected in the Napa Valley is anticipated to exceed current and projected water supply sources under year 2020 and 2050 and would further exacerbate groundwater conditions for MST and Carneros basins. The Napa County General Plan (2008) lists conservation policies that include maintaining and improving slough and tidal mudflats habitat with appropriate measures such as utilizing reclaimed wastewater for salinity control and include promoting development of additional water resources to improve water supply reliability and sustainability in Napa County, including imported water supplies and recycled water projects. The County would promote and support the use of recycled water wherever feasible, including the use of tertiary treated water, to help improve supply reliability and enhance groundwater recharge.

³ This increase in demand is predominantly a result of existing vineyards ultimately being converted to denser plantings (i.e., increased vine density per unit area).

Recognizing that groundwater best supports agricultural and rural uses, the County discourages urbanization requiring net increases in groundwater use and discourages incorporated jurisdictions from using groundwater except in emergencies or as part of conjunctive-use programs that do not cause or exacerbate conditions of overdraft or otherwise adversely affect the County's groundwater resources (County of Napa, 2008).

As stated in Policy AG/LU-74, the County supports the extension of recycled water use to the Coombsville area to reduce reliance on groundwater in the MST groundwater basin and exploration of other alternatives. Also, the County shall identify and support ways to utilize recycled water for irrigation and non-potable uses to offset dependency on groundwater and surface waters and ensure adequate wastewater treatment capacity through measures such as using wastewater treatment and reuse facilities where feasible to reclaim, reuse, and deliver treated wastewater for irrigation and possible potable use depending on wastewater treatment standards and encouraging the use of non-potable/recycled water wherever recycled water is available and require the use of recycled water for golf courses where feasible (County of Napa, 2008).

Napa SD has an extensive Water Reuse program to promote the use of recycled water in the community. Napa SD has produced nearly 2,149 AFY of Title 22 unrestricted use water. The role of water reuse has been critical in the Napa Valley area, which has limited water supply and which relies on groundwater and imported water for potable water supply. The availability of recycled water has allowed the area to develop recreational facilities including the world famous Chardonnay Golf Course and Vineyards, and Eagle Vines Vineyards and Golf Course (Napa SD, 2008).

The goal of Napa SD is to double the recycled water use to 50% of all wastewater it collects and discharges. This would make approximately 3,500 AFY available for use in and around the city. Napa SD continues to seek users for recycled water (Kennedy Park Golf Course, public agencies and private entities by Imola Avenue, and Stanly Ranch property). Policy CA-10.2 states that the City of Napa shall support continued efforts by the Napa SD to promote the use of recycled water (City of Napa, 2007).

The 2050 Study⁴ identifies potential water supply projects that may be pursued to reliably meet existing and future demands. It also cautions municipalities considering groundwater use and urges aggressive pursuit of recycled water as a supply for non-potable (irrigation) water. Napa SD has initiated planning for provision of recycled water to the MST and Carneros areas. The Napa County General Plan contains a number of policies that address water supply, conservation, and reuse. The Plan contains policies supporting the protection of surface and groundwater resources, as well as policies that require the county to monitor groundwater supplies where publicly owned wells exist, and encourage voluntary private monitoring of the county's groundwater resources. The General Plan includes policies that reinforce the development and use of recycled water as a means of meeting future water supply demands (Napa County, 2008a).

⁴ The Napa County Flood Control and Water Conservation District recently conducted a study, the "2050 Napa Valley Water Resources Study," comparing available Napa Valley water supplies to existing and future water demands through the year 2050.

Recycled Water Use under NBWRP

Table 5-11 below shows the recycled water use under the NBWRP for Napa SD service area. The recycled water produced under the proposed project would offset equivalent amount of potable water use, which would provide for reliable water supply to meet the projected demands shown in Table 5-10 above.

**TABLE 5-11
RECYCLED WATER USE UNDER THE PROPOSED PROJECT FOR NAPA SD SERVICE AREA**

Project	No Project Alternative	No Action Alternative	Phase 1	Basic System	Partially Connected System	Fully Connected System
New recycled water use (AFY)	0	0	2,137	3,192	4,421	4,421
Areas of recycled water use	None	None	MST area	MST, East Carneros area	Southeast Napa, expanded Carneros east area	-

SOURCE: CDM, 2008

5.3.5 Summary of the Indirect Growth Inducement Potential

As discussed in **Sections 5.3.1 through 5.3.4**, the Member Agencies would experience water supply deficits in the face of new development in the service areas. Recycled water use under the NBWRP would offset potable water demand and make potable water available for new development. However, as discussed above, the new development is part of the planned growth and development of the individual General Plans. The NBWRP would not induce additional growth beyond that planned for in the LGVSD, Novato SD, SVCSD, Napa SD areas. The level of growth would be consistent with the extent planned and approved by the local General Plans in the area.

The provision of adequate water supply is an essential component for the preservation of agricultural practices within the region. There are local policies that preserve agricultural land uses in the region. The Napa General Plan for example, has policies for agricultural preservation because agricultural and related activities are the primary land uses in Napa County. Napa County's Measure J - the Agricultural Lands Preservation Initiative, was passed in 1990 and is intended to preserve the County's agricultural lands, which have a General Plan land use designation of Agricultural Resource or Agricultural, Watershed and Open Space. Measure J provides that, lands designated as "Agricultural Resource" or "Agriculture, Watershed and Open Space" may not be re-designated to another land use category except by a majority vote of the people; if the land is annexed to a city; or if it is re-designated by the Board of Supervisors pursuant to procedures set forth in the initiative, and only if certain findings can be made. The General Plan at the time of adoption of Measure J, provided for a minimum parcel size of 160 acres for lands designated as Agriculture, Watershed and Open Space; and a minimum parcel size of 40 acres for lands designated as Agricultural Resource.

The recycled water use is a part of the planned water supplies and would not provide new water supplies or remove obstacle to growth beyond that discussed in the General Plan EIRs. Effects resulting from growth anticipated in the individual service areas for the Member Agencies are discussed in **Section 5.4** below.

5.4 Secondary Effects of Growth

Impact 5.1: The NBWRP would provide recycled water for urban, agricultural, and environmental uses, and as such, would contribute to the provision of adequate water supply to support a level of growth that is consistent with the amount planned and approved within the General Plans of Marin, Sonoma and Napa Counties. No appreciable growth in population or employment would occur as a direct result of construction or operation of the proposed facilities. However, development under the General Plans accommodated by the proposed project would result in secondary environmental effects, which include effects that would be significant and unavoidable.

Implementation of the proposed project would allow the Member Agencies to provide the level of treatment, conveyance, storage, and pumping capacity for production and distribution of recycled water. As discussed, the proposed project would not result in a direct increase in population or employment, however the project would offset potable water demand and assist in providing water supply that is planned under the local General Plans as discussed above in **Section 5.3**, and that could provide for new use and development that is projected to occur and is consistent with the local General Plans. Potentially adverse secondary effects could result from development of planned land uses in the project area. Because the proposed project would not induce growth beyond that discussed in the local General Plans and General Plan EIRs, the secondary effects of growth would be consistent with those discussed in the General Plans and General Plan EIRs. Secondary effects of growth identified in the local General Plan EIRs as well as the policies and mitigation measures established to minimize the effects, are summarized in the tables and discussion below for each Member Agency.

Buildout under the General Plan requires several types of infrastructure, including an adequate water supply; the proposed action would contribute to the provision of adequate water supplies, both urban and agricultural, within the service areas of the Member Agencies. The secondary impacts related to buildout under the approved General Plans within the service areas of the NBWRA Member Agencies are disclosed in the General Plan EIRs for Cities of San Rafael, Novato, Sonoma, and Napa, and the Counties of Marin, Sonoma, and Napa. A summary of impacts from the General Plan EIRs and mitigation measures that would reduce the impacts to less-than-significant levels is discussed below.

The NBWRA Member Agencies do not have the authority to control land use and growth within the recycled water service areas identified under the NBWRP, or to mitigate for the secondary effects of those land use decisions. Marin, Sonoma and Napa Counties, and the incorporated cities of San Rafael, Novato, Sonoma and Napa, have primary land use jurisdiction and responsibility to regulate growth through the land use planning and development approval

process. Other agencies, which have decision-making authority to implement mitigation measures related to secondary impacts of growth in the project area are shown in **Table 5-12**.

**TABLE 5-12
AGENCIES HAVING PLANNING AND MITIGATION AUTHORITY**

Agency	Authority
Marin, Sonoma and Napa County	Responsible for planning, land use, and environmental protection of unincorporated areas. Of particular importance are development of presently undeveloped lands, provision of regional solid waste management facilities, and regional transportation, air quality and flood control improvement programs.
Cities of Novato, Sonoma and Napa	Responsible for adoption of the General Plan and various planning elements and local land use regulations. Adopts and implement local ordinances for control of noise and other environmental concerns. Participates in regional air quality maintenance planning through adoption of local programs to control emissions via transportation improvements. Responsible for enforcing adopted energy efficiency standards in new construction.
Local Agency Formation Commission	Empowered to approve or disapprove all proposals to incorporate cities to form special districts or to annex territories to cities or special districts. Also empowered to guide growth of governmental service responsibilities.
Regional Water Quality Control Board, San Francisco Bay Region	Shares responsibility with State Water Resources Control Board (SWRCB) to coordinate and control water quality. Formulates and adopts water quality control plans. Implements portions of the Clean Water Act when the U.S. EPA and SWRCB delegate authority, as is the case with issuance of National Pollutant Discharge Elimination System (NPDES) permits for waste discharge, reclamation, and storm water drainage.
State Department of Health	Responsible for the purity and potability of domestic water supplies for the state. Assists SWRCB and Regional Water Quality Control Boards (RWQCBs) in setting quality standards.
California Air Resources Board	Responsible for adopting and enforcing standards, rules, and regulations for the control of air pollution from mobile sources throughout the state.
Bay Area Air Quality Management District	Adopts and enforces local regulations governing stationary sources of air pollutants. Issues Authority to Construct Permits and Permits to Operate. Provides compliance inspections of facilities and monitors regional air quality. Developed the Clean Air Plan in compliance with the Clean Air Act.
U.S. Fish and Wildlife Service	Requires consultation under Section 7/10 of the Endangered Species Act for projects which could potentially impact endangered or threatened species. Prepares biological opinions on the status of species in specific areas and potential effects of proposed projects. Approves mitigation measures to reduce impacts and establishes Habitat Conservation Plans (HCPs).
U.S. Army Corps of Engineers	Issues permits to place fill in waterways pursuant to Section 404/408 of the Clean Water Act.
California Department of Fish and Game	Issues Stream Bed Alteration Agreements for projects potentially impacting waterways.

SOURCE: ESA

Local land use plans and specific development plans have been adopted and approved, with the local lead agency adopting a statement of overriding consideration for these significant unavoidable effects. The Proposed Project would not increase the nature, number or severity of significant effects associated with planned development.

5.4.1 No Project Alternative

Under the No Project Alternative, project implementation would not occur. There would be no change from existing conditions. No alteration of the location, rate, or timing of growth within the project area would occur, and no secondary effects related to that growth would occur. For discussion of the No Project Alternative, future conditions, please refer to the No Action Alternative below.

5.4.2 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. These projects would provide an estimated 1,067 AFY of recycled water supply.

Future baseline conditions (2020) would include continued development under the Marin, Sonoma, and Napa General Plans, as well as the General Plans for each of the municipalities served by the Member Agencies. Development of both urban and agricultural uses would continue to place pressure on surface and groundwater resources within the region, particularly during high demand summer months, when the reliability of supplies is reduced. Population within the region is anticipated to increase by approximately 4 percent by 2010 and 2015 and by 2 percent through 2030, as shown in **Table 5-13**. **Tables 5-14** and **5-15** show the total projected water use in the individual service areas and total water use by agency contractors and customers.

**TABLE 5-13
CURRENT AND PROJECTED POPULATION IN THE SERVICE AREAS**

	2005	2010	2015	2020	2025	2030
NMWD	58,816	60,676	64,072	66,271	67,569	68,669
City of Sonoma	10,733	12,348	12,642	12,740	12,838	12,984
Rural Sonoma Valley	30,100	30,900	30,900	30,900	31,100	31,200
City of Napa*	76,400	79,000	82,000	84,100	85,600	87,300
Total	176,049	182,924	189,614	194,011	197,107	200,153

* - City of Napa includes population for the MST area.

SOURCE: SCWA 2005; ABAG 2005; ABAG, 2007

**TABLE 5-14
TOTAL PROJECTED WATER USE IN THE PROJECT AREA (AFY)**

	2005	2010	2015	2020	2025	2030
Surface Water Supplies						
North Marin Water District		12,648	13,484	13,930	14,244	14,473
MMWD ¹		6,915	6,790	11,300	12,800	14,300
City of Sonoma		2,783	2,817	2,806	2,813	3,071
Valley of the Moon		3,748	3,751	3,787	3,798	3,817
City of Napa ²		17,370	18,084	18,798	19,272	19,746
Groundwater Supplies						
Sonoma Valley						
MST Area ²	3,313		3,710			4,601
Carneros ²	2,547		3,467			5,719
Total			52,103			65,727

¹ Value does not represent total water use, but only that amount supplied by SCWA.

² West Yost & Associates, 2005.

SOURCE: SCWA, 2005; Napa County, 2008a.

**TABLE 5-15
TOTAL WATER USE BY SONOMA COUNTY WATER AGENCY CONTRACTORS AND CUSTOMERS
(AFY)**

	Volume (AFY)				
	2010	2015	2020	2025	2030
Water Contractors					
City of Cotati	1,323	1,380	1,511	1,552	1,612
North Marin Water District	12,648	13,484	13,930	14,244	14,473
City of Petaluma	12,848	13,803	14,114	14,732	14,660
City of Rohnert Park	7,116	7,380	7,662	7,767	7,831
City of Santa Rosa	27,884	29,456	30,957	32,633	33,820
City of Sonoma	2,783	2,817	2,806	2,813	3,071
Valley of the Moon Water District	3,748	3,751	3,787	3,798	3,817
Town of Windsor	5,075	5,550	6,120	6,354	6,523
Other Customers					
California American Water Company	1,326	1,368	1,409	1,429	1,451
Forestville Water District	552	563	575	588	602
Kenwood	175	181	186	190	193
Lawndale	66	70	74	83	86
Penngrove	400	457	532	569	604
Marin Municipal Water District	6,915	6,790	11,300	12,800	14,300
Direct Diverters	0	0	2,448	3,671	4,895
Total	82,859	87,050	97,411	103,223	107,939

SOURCE: SCWA, 2005

5.4.3 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 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. There would be no additional storage required.

The secondary effects of growth associated with the proposed facilities under Phase 1 would be similar to the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative.

LGVSD

Under Phase 1, LGVSD would provide 202 AFY of recycled water to Hamilton Field, located within unincorporated Marin County. This area is served by NMWD, and provision of recycled water would be implemented in partnership with that agency. Between 2005 and 2030, water supplies for NMWD are anticipated to increase from 10,310 AFY to 15,694 AFY, or approximately 5,384 AFY. This includes development of approximately 1,020 AFY of recycled water.

Phase 1 would provide 202 AFY of recycled water from LGVSD within the NMWD service area. This represents approximately 3 percent of the projected 5,384 AFY of additional water supply projected by NMWD as necessary to meet demands associated with buildout under the approved General Plans within its service area. Phase 1 would provide approximately 20 percent of the 1,020 AFY of recycled water identified as part of this identified water supply. Because recycled water is included within the water supply planning of NMWD and SCWA, and Phase 1 is consistent with the amount of recycled water identified, provision of recycled water is not anticipated to affect the rate, timing, or distribution of urban growth within Marin County.

While project implementation would not induce or alter growth trends in Marin County, it would, as part of the overall water supply conditions, enable secondary effects associated with development under the approved General Plans to occur. **Table 5-16** summarizes the secondary effects of growth identified under the Marin County General Plan. A discussion of mitigation measures and policies identified to reduce potential impacts to the degree feasible is also provided.

Mitigation Measures (Marin County)

Mitigation measures proposed in the Marin County General Plan EIR (2007b) include the following measures:

- ***Traffic***: Include new establishing policies that would require new transit nodes near new residential areas to reduce vehicle miles traveled, improved operational conditions at specific intersections, and road improvements or additions including reconfiguring or widening some roadways to accommodate more lanes.

TABLE 5-16
IMPACTS ASSOCIATED WITH MARIN COUNTY GENERAL PLAN IMPLEMENTATION

Marin County

Significant and Mitigable Impacts

- Addition of new/ expanded agricultural processing, retail sales, and visitor-serving uses on agricultural land, which conflicts with agricultural land use.
 - Development of residential land uses is incompatible with established land use.
 - Conversion of undeveloped, agricultural or open space lands to urban uses.
 - Compatibility of land uses with existing adjacent communities.
 - Increased pollutants and sedimentation reduction in water quality.
 - Reduction in groundwater recharge.
 - Alteration of drainage patterns.
 - Increased exposure of structures to subsidence and settlement.
 - Structural damage from soil properties.
 - Impacts to water supply from septic systems.
 - Permanent direct habitat loss and accompanying reduction or elimination of dependent wildlife, including some special status species.
 - Permanent loss of sensitive natural communities (creeks, vernal pools, swales, riparian habitat, freshwater marshes, native grasslands, significant trees, etc).
-

Significant and Unavoidable Impacts

- Growth within unincorporated areas.
 - Convert farmland/prime agricultural soils to urban uses.
 - Increase in vehicle miles traveled.
 - Impacts to local roadways and intersections which would result in unacceptable LOS.
 - Increased volumes on local roadways.
 - Inconsistent with Clean Air Plan Transportation Control.
 - Buffer zones for potential source of odor/toxics.
 - Increase in greenhouse gas emissions
 - Temporary significant increase in noise from construction activities.
 - Potential for structural damage and injury or loss of life due to impacts from strong groundshaking, including liquefaction.
 - Increased risk from seismic related ground failure.
 - Increased exposure of people and structures to landsliding.
 - Cumulative direct and permanent loss, fragmentation of existing wildlife habitat, and obstruction of movement between habitats.
-

SOURCE: Marin County, 2007b

- *Air Quality*: Revise General Plan policies to consider odors and toxic air contaminants during siting of facilities; Bay Area Air Quality Management District standards; and a Climate Change Planning Process to implement the Greenhouse Gas Reduction Plan.
- *Noise*: Requiring noise studies prior to approval of any discretionary project involving a potentially significant new noise source or a noise sensitive land use in a noise-impacted area, and providing setbacks, sound attenuation barriers and appropriate building designs.
- *Groundwater*: Implement ordinances that maintain groundwater recharge and surface water runoff management, establishing a Septic Inspection, Monitoring, and Maintenance District, and implementing ordinances that address non-point source pollution, erosion, sediment control, floodplain development, and groundwater supplies.
- *Biological Resources*: Require new development to compensate for the loss of habitat through offsite mitigation and extension of wildlife corridors and actively restore aquatic habitats for listed anadromous fish. The County would also develop Habitat Monitoring Programs and ensure that future development applicants consider overall habitat values.
- *Geology*: Prepare a geotechnical report, incorporate engineering specifications to address susceptibility of a project site to liquefaction, compliance with the Alquist-Priolo Earthquake Fault Zoning Act, enforce state seismic safety standards and a limitation on the location and intensity of development in areas with significant geologic hazards, and revise policies related to seismic safety, retrofit, and location of emergency services to ensure seismic safety of new structures. This would also require the necessary retrofit of critical facilities and proper location of new emergency facilities. The County would continue to implement ordinances to ensure that new construction utilizes seismic safety design requirements, seismic shut off devices, etc.

Novato SD

Under Phase 1, Novato SD would provide 542 AFY of recycled water to the north/central NMWD service area, in partnership with NMWD. Between 2005 and 2030, water supplies for NMWD are anticipated to increase from 10,310 AFY to 15,694 AFY, or approximately 5,384 AFY. This includes development of approximately 1,020 AFY of recycled water.

Phase 1 would provide 542 AFY of recycled water from Novato SD within the NMWD service area. This represents approximately 10 percent of the projected 5,384 AFY of additional water supply projected by NMWD as necessary to meet demands associated with buildout under the approved General Plans within its service area. Phase 1 would provide approximately 57 percent of the 1,020 AFY of recycled water identified as part of this identified water supply. Taking the recycled water provided by LGVSD under Phase 1 into consideration (202 AFY), Phase 1 would provide approximately 72 percent of the 1,020 AFY of recycled water identified by NMWD. Because recycled water is included within the water supply planning of NMWD and SCWA, and Phase 1 would be consistent with the amount of recycled water identified, provision of recycled water is not anticipated to affect the rate, timing, or distribution of urban growth within Marin County.

While project implementation would not induce or alter growth trends in Marin County, it would, as part of the overall water supply picture, enable secondary effects associated with development under the approved General Plans to occur. **Table 5-17** summarizes the secondary effects of

TABLE 5-17
IMPACTS ASSOCIATED WITH CITY OF NOVATO GENERAL PLAN IMPLEMENTATION

City of Novato

Significant But Mitigable Impacts

- Increased risk to people and structures during seismic events.
- Increased risk to new development from tsunamis.
- Increased risk of Stafford Dam failure.
- Exposure to slope failure hazard.
- Construction impacts to streams from erosion and sedimentation.
- Impacts to mineral resources.
- Permanent changes in topography from earthmoving and grading activities.
- Increased exposure of people and structures to flood hazards.
- Impacts to drainage and increased flooding due to impervious surface cover.
- Impacts to streams and stream habitat from runoff and creek bank slumping
- Impacts from runoff could increase the transport of oils, greases and other residues to receiving waterways.
- Potential risk of flood from predicted sea level rise.
- Reduction of the number of trees in the City (especially Oak).
- Loss of wildlife movement or migratory corridors, and plant dispersal opportunities.
- Introduction of invasive or exotic species.
- Displacement of populations of plants and wildlife
- Adverse effects on areas of archaeological and historic importance.
- Impacts to traffic safety and residential neighborhoods from increased volumes of traffic.
- Reduced bicycle and pedestrian safety on roads, and increased demand for bikeways and pedestrian paths.
- Increased traffic congestion on City streets.
- Traffic compliance with the Congestion Management Plan.
- Substantial increase in noise levels along certain roadways.
- Compatibility of new development and surrounding noise environment.
- Consistency of new development with scale, style, and character of existing development.
- Alteration of views along designated corridors and entry points to the city.
- Increase in daytime glare and nighttime lighting.
- Construction of future sound walls will alter existing views.
- Increased amount of wastewater to be treated at existing treatment facilities.
- Inability of existing sewer collectors to collect wastewater.
- Increased demand for public water.
- Need to construct or replace water mains, storage facilities, treatment facilities, and pump stations.
- Increased demand for fire protection services.
- Need for new water mains to ensure adequate fireflows.
- Expanded use, storage, and transport of hazardous materials.
- Increased demand for recreational facilities.
- Additional amounts of solid waste.
- Exposure to electromagnetic fields.
- Conversion of agricultural land to non-agricultural uses.
- Conversion of potential open space to developed land.
- Risk to people and structures at Gness Field airport from surrounding development.
- Conflict between land use designation under the Sphere of Influence and land use designations under the Marin Countywide Plan
- Compatibility of residential development n areas currently used for commercial uses.
- Conversion of vacant land to housing and commercial development.

TABLE 5-17 (Continued)
IMPACTS ASSOCIATED WITH CITY OF NOVATO GENERAL PLAN IMPLEMENTATION

City of Novato

Significant and Unavoidable Impacts

- Displacement of wetlands.*
- Buildout traffic will cause portions of Highway 101 and Highway 37 to operate at unacceptable levels of service.**
- Increased number of calls for emergency medical response.
- Increased need for police protection.

Less Than Significant Impacts

- Altered traffic volumes could cause concentrations of localized air pollutants such as carbon monoxide near streets and intersections.
- Increased wastewater could exceed capacity of Novato SD facilities.
- Increased demand for fuel and energy.
- Alteration of the character of the area by implementation of the Downtown Specific Plan.
- Expansion of the City's Sphere of Influence.
- Increase in project-generated noise sources
- Increase in project-generated construction noise
- Carbon monoxide concentration along roadways.
- Impacts from transport of hazardous materials

* Mitigation measures have been established to protect wetlands, but the EIR identifies the loss of some wetlands as significant and unavoidable.

** The traffic on the highways that cause an unacceptable level of service originates from outside of Novato. Even if the City were to limit growth within its jurisdiction, the level of service along these highways would still deteriorate.

SOURCE: Leonard Charles and Associates, 1995.

growth identified under the City of Novato General Plan. A discussion of mitigation measures and policies identified to reduce potential impacts to the degree feasible is also provided.

Mitigation Measures (Novato)

Mitigation measures proposed in the Novato General Plan EIR (1995) are described below:

- ***Geology***: Include policies that require geotechnical and engineering reports, professional inspection of foundation, monitor existing high priority buildings to ensure structural compliance with seismic safety standards, and provide public information on building safety. To protect new development, require proper siting of projects, setbacks from active faults, restricted development in low lying areas by the Bay, and setbacks from the Stafford Dam.
- ***Cultural Resources***: Implement archaeological resources protection through a program that requires that all major development applications be reviewed for potential archaeological resources and that protection measures would be determined by a professional archaeologist.
- ***Traffic***: Evaluate level of service on streets, reduce through-traffic on residential streets, and adopt and enforce a truck route to limit truck presence on residential streets. Investigate mitigation measures for projects that would cause a substantial increase in traffic noise to adjacent residential areas.

- ***Aesthetics:*** Prohibit development within 100 vertical feet of a designated ridgeline within a scenic area, and require development to be clustered below the ridge in areas of open or grassy hillsides. All development along the west side of the freeway from the northern edge of Novato to Atherton Avenue and from the southern edge of Novato to Ignacio Boulevard would be subject to prepare a Constraints Analysis. Implement Lighting Design Guidelines, which incorporate design guidelines for exterior lighting and recommend types of lights and lighting that address security, appearance, and intensity while protecting City views. Caltrans will perform a visual analysis for all new sound walls to show the existing and future views at critical points in order to make a determination. Adopt the Scenic Resources Overlay Zone which establishes criteria to protect ridgelines, hillsides, and other scenic resources and review development proposals on an individual basis to determine the scenic value of visual resources specific to the site. Other measures include landscaping, discouraging repetition and using traditional site design, and evaluating the compatibility with surrounding development.
- ***Fire Hazards:*** Continue to require all new development to meet adopted fire safety regulations (Fire Code appendix), require all development that includes private access roads to provide access to the Novato Fire Protection District, and implement the Fire Hazard on Public Lands Policy to manage public lands to minimize chances of wildfire.
- ***Biological Resources:*** To mitigate the impact from introduced exotic or invasive species, one measure includes implementing constraints via the Land Use Chapter Constraints Analysis to ensure pampas grass, acacia, and broom will not be planted as part of new development projects. A new policy will protect ridgelines as critical wildlife corridors to enhance biological resources. Implement Bayfront Overlay Zone in addition to a 100-foot buffer between wetlands and new development to mitigate impacts to habitat, a U.S. Army Corps of Engineers Determination of Wetlands Statement, and new programs for determining, regulating, and permitting wetlands.
- ***Air Quality:*** Enforce U.S. Environmental Protection Agency standards for particulate emissions when wood-burning fireplaces or stoves are installed, review all industrial development for potential impact to sensitive receptors, and require buffer zones between industrial development and sensitive receptor.

SVCS D

Under Phase 1, SVCS D would provide 874 AFY of recycled water to the city of Sonoma and surrounding areas for urban and agricultural use. Between 2010 and 2030, surface water supplies to the city of Sonoma are anticipated to increase from 2,783 AFY to 3,071 AFY, or approximately 288 AFY. Supplies to the Valley of the Moon Water District are anticipated to increase by 69 AFY from 3,748 AFY to 3,817 AFY. Under Phase 1, recycled water would be available to offset 111 AFY of urban demands in the city of Sonoma, or approximately 31% of this projected potable demand increase within the Sonoma Valley. As previously noted in Table 5-1, Sonoma County Water Agency has included provision of recycled water to the Sonoma Valley within its regional water supply projections.

Additionally, recycled water would be available to offset 1,862 AFY of agricultural groundwater pumpage. As noted in **Section 3.2, Groundwater Resources**, service to these existing agricultural users would be anticipated to offset current groundwater pumping, with some offset of local surface water diversions were present.

Because the provision of recycled water has been included within the water supply planning of SCWA for urban uses, and Phase 1 is consistent with the amount of recycled water identified, provision of recycled water is not anticipated to affect the rate, timing, or distribution of urban or agricultural growth within the City of Sonoma or Sonoma Valley.

While project implementation would not induce or alter growth trends in the Sonoma Valley, it would, as part of the overall water supply picture, enable secondary effects associated with development under the approved General Plans to occur. **Table 5-18** summarizes the secondary effects of growth identified under the City of Sonoma General Plan. **Table 5-19** summarizes the secondary effects of growth identified under the Sonoma County General Plan. A discussion of mitigation measures and policies identified to reduce potential impacts to the degree feasible is also provided.

Mitigation Measures (City of Sonoma)

Mitigation measures identified in the EIR to minimize or reduce the impacts caused by implementation of the City of Sonoma General Plan are described below:

- ***Visual Resources:*** Utilize high quality architectural designs in new development, preserving scenic vistas and corridors, retaining prominent natural features on project sites, and encouraging architectural designs that are consistent with the historic character of the community.
- ***Land Use:*** Maintain an Urban Growth Boundary to limit urban expansion, develop new General Plan policies and Specific Plan features, and contract the city's Sphere of influence.
- ***Traffic:*** Install road improvements along certain roads and specific intersections.
- ***Noise:*** Implement setbacks, sound barriers, and noise-reducing construction practices.
- ***Public Services and Utilities:*** Evaluate and adjust allocation to police and fire protection, and emergency medical services. Contract negotiations with SCWA to increase the City's entitlement, promotion of water conservation and recycling, and provision of maintenance and upgrading of the municipal water system to mitigate water supply demands. Increase in conservation, reclaimed water use, additional treatment facilities, and compliance with upgraded NPDES permits to mitigate wastewater service impacts.
- ***Cultural Resources:*** Conduct archaeological field surveys and evaluate sites containing historic structures.
- ***Geology/Hydrology:*** Prepare a grading and design plan that includes erosion control and rehabilitation phases. Incorporate specific design criteria to correct for soil properties like shrink-swell to mitigate structural damage from soil properties. Implement SCWA Flood Control Design Criteria, best management practices, and provisions for permanent surface maintenance for all new development.
- ***Biological Resources:*** Implement offsite mitigation to compensate losses, riparian habitat restoration activities, proper siting and placement of projects and bikeways, and City cooperation with local farmers to increase habitat protection.

**TABLE 5-18
SIGNIFICANT IMPACTS OF GENERAL PLAN DEVELOPMENT
ASSOCIATED WITH THE CITY OF SONOMA**

City of Sonoma

Significant But Mitigable Impacts

- Increased short-term and long-term erosion potential.
-

Significant and Unavoidable Impacts

- Conversion of undeveloped, agricultural, or open space lands to urban uses or changes in land use type.
- Compatibility of land uses with adjacent communities.
- Conversion of farmland/ prime agricultural soils to urban uses.
- Impacts to local roadways and intersections which would result in unacceptable LOS.
- Increased volumes on local roadways.
- Public transit capacities would be inadequate to meet increased traffic demand and transit demand.
- Compliance with regional air quality plan and federal air quality standards.
- New emissions generated by new development would increase air pollution and cause deterioration in regional air quality.
- Significant increase in noise for some existing residents from increased traffic, recreational activities, and commercial and industrial uses.
- Development would require additional law enforcement officers, equipment & facilities.
- Development in rural/hilly areas would increase the potential risk for wildland fires.
- Need for additional emergency medical services, fire fighters, equipment & facilities.
- Demand for school facilities may exceed available capacity, and facilities may be degraded.
- Increased need for library facilities.
- Need for new parks & recreational facilities and/or managed open space.
- Increased demand for, water supply & water service extensions.
- Increased demand for supply, treatment and distribution facilities for wastewater.
- Generation of significant amounts of solid waste, including demand for a new County landfill site.
- Growth in population and employment could lead to possible damage, destruction, or removal of recorded and unrecorded cultural resources.
- Future development has the potential to adversely affect historic resources.
- Residential, commercial and industrial growth under the plan would increase energy consumption.
- The impacts of increased population and jobs occur as secondary impacts.
- Increased need for housing units, particularly affordable housing units, as population increases.
- Substantial alteration of Valley's visual character.
- Potential for structural damage and injury or loss of life due to impacts from strong groundshaking, including liquefaction.
- Grading and excavation will permanently change the ground surface relief.
- Increased risk of pollution from the use, storage, and treatment of hazardous materials.
- Increased demand for hardrock and aggregate resources.
- Short-term erosion and associated sedimentation potentials, with impacts to water quality.
- Impacts to groundwater by reducing supply due to interruptions of recharge and upstream retention of surface flow.
- Increase of urban runoff pollutants and degradation of existing water quality.
- Increase in quantity of runoff, leading to increased flooding hazards.
- Permanent direct habitat loss and accompanying reduction or elimination of dependent wildlife, including some special status species.
- Permanent loss of significant habitat (creeks, vernal pools, swales, riparian habitat, freshwater marshes, native grasslands, significant trees, etc).
- Cumulative direct loss of wildlife habitat.

TABLE 5-18 (Continued)
SIGNIFICANT IMPACTS OF GENERAL PLAN DEVELOPMENT
ASSOCIATED WITH THE CITY OF SONOMA

City of Sonoma

Less than Significant Impacts

- Changes to Land Use Designation, map, and policies.
- Impacts on land use character and existing pattern of development.
- Impacts to agriculture.
- Compatibility with existing land uses.
- Growth inducing impacts on land use or visual resources.
- Impacts to population based on ABAG's growth projections.
- Impacts on housing, employment, and jobs/ housing balance.
- Impacts on pedestrian and bicycle paths, lanes, and routes.
- Increased demand for schools parks, or other public facilities.
- Impacts from groundshaking on new development.
- Increased vehicular noise, and traffic noise level compatibility with future development of adjacent land.
- Increases in stationary noise.
- Consistency with applicable air quality plans and air Quality standards.
- Consistency with population increases and VMT projections.
- Increased risk of earthquake hazards for new development.
- Impacts from hazardous materials and waste.

SOURCE: City of Sonoma, 2006b

Mitigation Measures (Sonoma County)

Mitigation is identified in the EIR to minimize or reduce the impacts cause by implementation of the Sonoma County General Plan. As shown in **Table 5-19**, some impacts can be mitigated to a less than significant level, while others, despite mitigation, will remain significant or significant and unavoidable. The environmental effects of growth most commonly identified as significant and unavoidable in the service area are land use conflicts, increased traffic impacts, impacts to public utilities and services, including water supply, wastewater capabilities, and solid waste disposal. The mitigation provided for these impacts include a series of efforts and policies to be implemented.

For Sonoma County, increased short-term and long-term erosion potential can be mitigated to less than significant levels by preparing a grading and design plan that includes an erosion control and rehabilitation plan, restricting location of projects to slopes of 30 percent or more, and maintaining the natural topography of the project site.

For example, the impacts to agricultural resources are targeted by maintaining an Urban Growth Boundary to limit urban expansion, establishing agricultural zoning districts, and establishing densities and parcel sizes to protect soils for continued agricultural use. Compatibility of land uses with adjacent communities is implemented through new policies in the General Plan.

**TABLE 5-19
SIGNIFICANT IMPACTS FROM GENERAL PLAN DEVELOPMENT
ASSOCIATED WITH SONOMA COUNTY**

Sonoma County

Significant But Mitigable Impacts

- Convert farmland/prime agricultural soils to urban uses.
- Impacts to local roadways and intersections which would result in unacceptable LOS.
- Increased volumes on local roadways.
- Development would require additional law enforcement officers, equipment & facilities.
- Need for additional emergency medical services, fire fighters, equipment & facilities.
- Water demand from urban development could exceed the existing SCWA entitlement.
- Increased demand for, water supply & water service extensions.
- Increased demand for supply, treatment and distribution facilities for wastewater.
- Growth in population and employment could lead to possible damage, destruction, or removal of recorded and unrecorded cultural resources.
- Future development has the potential to adversely affect historic resources.
- Increased short-term and long-term erosion potential.
- Structural damage from soil properties.
- Short-term erosion and associated sedimentation potentials, with impacts to water quality.
- Increase of urban runoff pollutants and degradation of existing water quality.
- Increase in quantity of runoff, leading to increased flooding hazards.
- Increased sedimentation and runoff from construction activities
- Permanent direct habitat loss and accompanying reduction or elimination of dependent wildlife, including some special status species.
- Permanent loss of significant habitat (creeks, vernal pools, swales, riparian habitat, freshwater marshes, native grasslands, significant trees, etc).
- Development could preclude future restoration of special habitats (native grasslands, oak savannas, wet meadows, vernal swales, and vernal pools).
- Cumulative direct loss of wildlife habitat.

Significant and Unavoidable Impacts

- Substantial alteration of Valley's visual character.

Less than Significant Impacts

- Impacts from growth and concentration of populations
- Increased demand for transit services.
- Impacts to air traffic safety.
- Conflict with alternative transportation.
- Decreased parking capacity or emergency access.
- Safety risk from transportation system design.
- Impacts to noise sensitive development from roadway noise, airport noise, or stationary noise.
- Impacts to water quality as a result of new development.
- Increased soil erosion and sedimentation as a result of construction activities for new development.
- Increase sewer- and septic- related water quality problems.
- Increased flood risk as a result of storm drainage alteration.
- Placement of housing within 100-year flood hazard areas.
- Impacts on jurisdictional wetlands.
- Conflict with local biological resource protection ordinances.
- Conflict with HCP or NCCP.
- Exposure of new development to expansive soils or soils unsuitable to support septic systems.

TABLE 5-19 (Continued)
SIGNIFICANT IMPACTS FROM GENERAL PLAN DEVELOPMENT
ASSOCIATED WITH SONOMA COUNTY

Sonoma County

Less than Significant Impacts (cont.)

- Conflict with HCP or NCCP.
- Loss of availability of known mineral resources.
- Conversion of agricultural land to non-agricultural uses.
- Impacts to agricultural processing and support uses.
- Impacts as a result of land conversion to support agricultural tourism.
- Conversion of timberland to non-timber uses.
- impacts to community separators, scenic landscape units, scenic corridors, and scenic highways.
- Visual impacts in other urban or rural areas.
- Increased energy consumption for new land uses or development patterns.
- Increased energy consumption from building construction and retrofit.
- Exposure to population from release of hazardous materials, including areas near airports.

SOURCE: Sonoma County, 2006

Measures to mitigate some other impacts include the following:

- *Traffic*: Install road improvements along certain roads and specific intersections and integrate bicycle and pedestrian corridors with local and county-wide transit systems.
- *Traffic and Air Quality*: Identify and implement new transit opportunities, mixed-use development, and foster interagency cooperation to integrate air quality planning efforts with transportation planning. Install buffer zones and setbacks to reduce the impacts from air quality and noise on sensitive receptors.
- *Public Services and Utilities*: Expand the law enforcement staff, facilities, and equipment, and continue to prioritize efforts; evaluate fire and emergency services, incorporate California Department of Forestry safety standards, and prepare a countywide fire services master plan. Require new development to pay a fair share of new facilities and expanding existing facilities. Promote water conservation and recycling, and verify the ability of water supplies to serve new development. Increase reclaimed water use and implement programs identified in the Solid Waste Management Program.
- *Cultural Resources*: Conduct archaeological field surveys, evaluate sites containing historic structures, and County Landmarks Commissions.
- *Visual Resources*: Preserve scenic vistas, retain prominent features on project sites, and eliminate commercial and industrial uses in community separators.
- *Hazardous Materials*: Prepare and implement Hazardous Materials Management Plan and conduct proper siting of hazardous facilities.

- *Mineral Resources*: Maintain an Aggregate Resources Management Plan and prioritize production sites to minimize adverse impacts from increased demand for aggregate resources.
- *Hydrology*: Implement best management practices, and Master Drainage and Flood Control Plan, and groundwater well monitoring activities.
- *Biological Resources*: Install setbacks for structures from the edge of marshes or wetlands, offsite mitigation, design criteria, and stream conservation area.

Napa SD

Under Phase 1, Napa SD would provide 2,137 AFY of recycled water to the MST Area for agricultural, golf course, and residential landscaping uses which would include approximately 521 AFY beyond the irrigation demands of existing vineyard uses in the MST area. This additional recycled water would be available to serve varying types of land uses within the MST area. Because this recycled water is above the amount needed to offset existing groundwater pumpage, it would be available to support irrigation of various land uses (e.g., agriculture, dairy, or residential uses), and could contribute to currently un-irrigated lands within the MST area converting to irrigated agriculture uses consistent with their General Plan designations.

Water supply within the MST area is primarily limited to groundwater pumpage, with a small amount of local surface diversions. Due to declining groundwater levels in the MST area, the County Board of Supervisors adopted the Napa County Groundwater Ordinance in 1996. The ordinance requires a groundwater permit for new water supply uses on properties, including residential development and agricultural development. The ordinance requires property owners to demonstrate no net increase in groundwater use onsite, and the ability to comply with application limits, established at 0.3 AF per acre per year for new residential and vineyard development. Existing vineyard developments that intend to re-plant or re-develop would be limited to an average 0.3 AF per acre of water per year, averaged over a three year period with no annual use exceeding the total average allotment by more than 15 percent. Introduction of recycled water could affect both agricultural and residential (second unit) development trends within the MST area, which have historically been limited due to groundwater supply issues.

Agricultural Development

Assuming a use rate of 0.25 AF per acre for vineyards in Napa, the 521 AFY of recycled water beyond current irrigation demands could be capable of supporting approximately 2,086 acres of vineyards in the MST area. The Napa County General Plan (2008) provides an estimate of approximately 10,000 to 12,500 acres of new vineyard development planned in Napa County. However, due to the limits on groundwater pumping in the MST Area, the General Plan assumed that the MST area would remain consistent with existing agricultural conditions.

Therefore, provision of recycled water at the levels identified in Phase 1 would have the potential to support 2,086 acres of vineyard in the MST area. This would represent a potential 20 percent increase in vineyard acreage beyond that considered by the Napa County Board of Supervisors in approving the General Plan. It should be noted that the existing un-irrigated parcels within the MST

area are not restricted from agricultural uses that are consistent with their General Plan and Zoning designations, and that are in conformance with the Napa County Groundwater Ordinance, which provides for a usage rate of 0.3 AF per acre per year, and requires land owners to demonstrate no-net increase and fair-share practices. Therefore, the availability of an alternative supply to groundwater could be one of several contributing factors that would allow lands that are currently un-irrigated to be placed in irrigated agriculture, consistent with their General Plan land use designations.

Actual development of vineyards within the MST area would be subject to a number of requirements and ordinances established under the Napa County General Plan, including the restriction of vineyard development on slopes in excess of 30 percent. These requirements and ordinances are identified below.

- County Code Section 18.108.060 states that no construction, improvement, grading, earthmoving activity or vegetation removal associated with the development or use of land shall take place on those parcels or portions thereof having a slope of 30 percent or greater (i.e., approximately 325.5 acres in the MST area) are prohibited without an exemption or exception.
- Vineyards are allowed in all zoning districts within the MST area except within all Residential Single (RS) districts (RS:UR, RS:B-1, RS:B-2, and RS:B-5) (approximately 290.1 acres) and areas zoned Planned Development (PD) (approximately 761.8 acres).
- New vineyards that involve conversion of any drainage by 5.5 percent or greater (Hardman Creek and Tulucay Creek in the MST area) or are located on slopes averaging more than 15 percent, requiring submittal of an erosion control plan application which is subject to environmental review.
- In addition to any floodway and floodplain regulations, construction of structures, accessory structures, earthmoving, grading or removal of vegetation or agricultural uses of land are prohibited within stream setbacks pursuant to County Conservation Code Section 18.108.025.
- The County requires that all vineyard projects demonstrate that there is adequate water available prior to approval.
- Additional constraints may be identified by County required technical reports/surveys, including geotechnical reports, biological reconnaissance and floristic surveys, archaeological study, and Phase I water availability studies.

It is likely that these requirements, as well as others, would reduce potential secondary impacts related to vineyard development in the MST area to a less than significant level. Secondary effects related to development under the Napa County General Plan, including development of vineyards, are summarized in **Table 5-20**. A discussion of mitigation measures and policies identified to reduce potential impacts to the degree feasible is also provided. Potential secondary effects relating to vineyard development within the MST area would be consistent with those identified in the Napa County General Plan EIR, and may include, but not be limited to: loss of sensitive biotic communities, disturbance or loss of special status plant and animal species, obstruction to wildlife movement, migratory corridors or plant dispersal opportunities, water

TABLE 5-20
IMPACTS ASSOCIATED WITH NAPA COUNTY GENERAL PLAN IMPLEMENTATION

Napa County

Significant But Mitigable Impacts

- Conversion of State designated Important Farmland.
- Loss of County designated agricultural land*
- Impacts to roadway safety and emergency access.
- Conflicts with existing alternative transportation policies and programs, and increased demand on transit services.
- Additional demand for parking facilities due to new development and reduction of parking from roadway changes.
- Disturbance or loss of special status plant and animal species.
- Obstruction to or loss of wildlife movement, migratory corridors, and plant dispersal opportunities.
- Conflict with Conservation regulations, ordinances and policies.
- Impacts from soil erosion, sedimentation on water quality, and hydrologic alteration to fisheries.
- Groundwater interactions with surface water flows.
- Direct and indirect impacts to wildlife habitat.
- Compatibility between noise and land use.
- New development exposure to groundborne vibration.
- Compatibility of aircraft noise and land use.
- Short-term emissions from grading, construction, and operation.
- Impacts from equipment related to construction and agricultural odors
- Impacts from release and exposure to hazardous materials
- Airport hazards.
- Interference with an adopted Emergency Response of Evacuation Plan.
- Disturbance or loss of sensitive biotic communities
- Impacts of development on water quality associated with proposed ministerial projects.
- Well competition and adverse well interference.
- Structural damage from expansive soils.
- Changes to drainage patterns leading to increased runoff, streambank erosion, hillside erosions, and flood risk.
- 100-year flooding risks.
- Impacts to archeological and paleontological resources.
- Increased wastewater and need for sewer treatment and conveyance.

Significant and Unavoidable Impacts

- Conflicts with agricultural zoning and Williamson Act Contracts.
- Population, housing, and employment increases exceed ABAG projections.
- Increased travel demand, insufficient level of road service, regional traffic growth.
- Loss of sensitive biotic communities.
- Increased volume of project-generated traffic noise.
- Impacts from roadway improvements on noise-sensitive uses.
- Consistency with air quality regulations.
- Conflicts with particulate matter attainment efforts.
- Exposure to air toxic contaminants.
- Increase in long-term atmospheric greenhouse gas emissions.
- Impacts from seismic groundshaking on infrastructure
- Impacts from seismic related ground failure.
- Landslide damage to roadway infrastructure.
- Subsidence and settling.
- Reduction in groundwater supply and increased overdraft conditions.

TABLE 5-20 (Continued)
IMPACTS ASSOCIATED WITH NAPA COUNTY GENERAL PLAN IMPLEMENTATION

Napa County

Significant and Unavoidable Impacts (cont.)

- Impacts to historic architectural resources.
 - Need for fire protection and emergency services.
 - Need for additional law enforcement officers and facilities.
 - Impacts to water supply and water quality.
 - Increased demand for park and recreational facilities.
 - Degradation of scenic resources and the visual character of the area.
 - Increase in daytime glare and nighttime lighting.
-

Less Than Significant Impacts

- Agricultural and urban interface conflicts.
 - Division of established communities and land use conflicts.
 - Conflicts with relevant land use plans, policies or regulations.
 - Job Housing Balance.
 - Displacement of a substantial number of persons or housing.
 - Increase in project-generated noise sources
 - Increase in project-generated construction noise
 - Carbon monoxide concentration along roadways.
 - Impacts from transport of hazardous materials
 - Wildland fire.
 - Structural damage from expansive soils.
 - Septic system capacity.
 - Increased mineral extraction.
 - Increased non-point source pollution from urban runoff.
 - 100 year flood hazard areas
 - Need for solid waste services.
 - Impacts to electric and natural gas resources.
 - Need for social services.
 - Structural damage from expansive soils.
-

* Impact to County designated agricultural land would be considered Significant and Unavoidable if Measure J for the new growth boundary for American Canyon and redesignation of lands near Angwin is successful.

SOURCE: Napa County, 2008a

quality impacts from sedimentation, direct impacts to habitat, short-term emissions from grading and construction, potential increases in soil erosion and sedimentation due to construction, water quality impacts associated with proposed discretionary processes for vineyard development projects, changes to drainage patterns, and 100-year flooding risks.

However, because the potential for vineyard development in the MST area was not considered as part of the General Plan approval, the secondary effects could be beyond those considered by the Napa County Board of Supervisors in approving the General Plan.

Implementation of **Mitigation Measure 5-1a**, identified at the end of this section, would condition Napa SD and Napa County to implement the reduced **MST Local Option**, rather than the larger Phase 1 MST Project. This would ensure that recycled water is provided at levels that are consistent with current agricultural practices, and that recycled water is used to offset existing groundwater pumpage. Facilities would be sized to serve up to 1,400 AFY to existing uses within the MST area. Additional service to parcels not currently under agricultural production would be subject to approval by the County Conservation, Development and Planning Department and the Board of Supervisors.

Residential Development

Within the context of the Groundwater Ordinance, provision of recycled water to the MST area would provide an alternate water supply to groundwater pumping. This alternate supply could be used by parcel owners to offset current groundwater pumpage for irrigation, and could result in an increase in applications for additional groundwater permits under the Groundwater Ordinance.

Second dwelling units are allowed within the Agricultural Watershed (AW), Residential County (RC), and Residential Single (RS) zoning districts. Currently, there are 1,917 parcels within the MST Area that carry these zoning designations, and therefore allow for construction of second units. Analysis of existing units per parcel by Napa County Planning Department indicates that 406 parcels within the MST would have the potential to construct a second unit (maximum 1,200 square feet). Under a worst case scenario, provision of recycled water to the MST Area could result in applications to develop 406 parcels with second units, based on the use of recycled water as a groundwater offset to demonstrate no net increase in groundwater use. This is not considered significant in the context of the current zoning for these properties, which provides for second units in conformance with the Napa County Zoning Ordinance. Development of second units would be subject to the requirements of the Napa County General Plan and Zoning Ordinance.

While project implementation would not induce or alter growth trends in the MST Area, it would, as part of the overall water supply picture, enable secondary effects associated with urban and agricultural development under the approved General Plans to occur. Tables 5-20 summarize the secondary effects of growth identified under the Napa County General Plan. A discussion of mitigation measures and policies identified to reduce potential impacts to the degree feasible is also provided.

Mitigation Measures (Napa County)

The environmental effects of growth most commonly identified as significant and unavoidable in the service area are land use conflicts, increased traffic impacts, impacts to public utilities and services, including water supply, and fire and law enforcement services. The mitigation provided for these impacts include a series of efforts and policies to be implemented.

- ***Land Use:*** Evaluate rezoning and development to avoid conversion where feasible. Where conversion is unavoidable long-term preservation of equal acreage of other farmland must be designated. To mitigate the need for more housing units, an approval process for multi-

family residential projects will be established to allow development based on criteria. Land use conflicts with the airport and surrounding areas will be mitigated by prohibiting incompatible uses in the ALUC “D” Zone.

- ***Biological Resources:*** Conduct biological resources evaluation, preserve habitat and connectivity of habitat, provide replacement habitat, restore and replant native plant species, and implement a Noxious Weed Ordinance. Require fencing standards for vineyard developments. Establish a Fisheries monitoring Program, a policy that requires erosion control and restoration of impacted areas, and prohibits stream bed and streambank alteration or removal of riparian vegetation.
- ***Noise:*** Establish noise-related compatibility criteria, notify residents of agricultural-related noises, evaluate the potential for noise related conflict, reduce vibration sensitive development, and establish buffers for Syar Quarry. Conduct noise analysis when road improvements may cause impacts to sensitive receptors to prescribe barrier features. Acceptable noise levels will be established for sensitive receptors (schools, hospitals).
- ***Public Services:*** Implement policies that require new facilities and adequate access to facilities, consultation with emergency agencies, compliance with fire safety standards and evacuation plans, and availability of alternate power sources to be used during emergencies. Require new development to verify access to wastewater services prior to approval of the project. Require dedication of more open space and trails, and require fees from new developments.
- ***Traffic:*** Establish standards for adequate level of service on roads, prepare traffic analyses prior to approving projects, require new development to pay a fair share for road improvements, encourage alternative forms of transportation, provide transit facilities for future development, and provide bicycle lanes during road improvements. The General Plan will require that new development be concentrated so densities can support development of transit services and pedestrian facilities. Parking is also identified as a significant impact, but mitigation that requires adequate parking to meet demand and replacement parking will minimize the impact.
- ***Air Quality:*** Include provision of incentives energy efficient forms of transportation, enforcement tailpipe emissions standards, evaluation of project-specific air quality impacts, and establishment of emission standards for county vehicles. Other measures include dust control, demolition requirements for lead and asbestos, construction emission control measures, and buffer and control requirements for odor and Toxic Air Contaminants.
- ***Visual resources:*** Continue the Napa County Viewshed Protection Program, retention of trees along public roadways, implement the standards for transmission lines, and requirements for new development to be compatible with visual standards. Landscape improvements along roadways, limited street lighting, reduce use of reflective building materials mitigate the impacts from glare and night lighting.
- ***Cultural resources:*** Conduct onsite cultural resource investigations by qualified archaeologists, followed by immediate notification to the County Planning Department.
- ***Hydrology:*** Implement the Napa County Conservation Regulations and a Stormwater Management and Discharge Control Ordinance, develop an erosion control plan, establish water quality monitoring, enforce stream setbacks, and implement best management practices for agricultural and resources practices (i.e. forestry practices, etc.). To reduce competition of groundwater well use, hydrogeologic studies must be conducted for all new

wells to determine effect on adjacent wells. No new wells will be drilled in areas that experience saltwater intrusion. Expansion of land uses that could result in drainage impacts and runoff require mitigation measures like a policy that requires post-development conditions not to increase flood events, comply with the Basin Plan, and include drainage improvements to prevent increased flooding impacts.

- *Geology*: Require seismic, geologic evaluations for all projects. Projects that are located in susceptible areas will not be approved. Measures to prevent damage from landslides include planting on slopes, grading requirements for slopes over 15 percent, hillside lot requirements.
- *Utilities*: Impacts to water supply would also be significant and unavoidable despite requiring new projects to demonstrate adequate water supply availability. Since the General Plan does not prohibit continued vineyard development, standards for mitigation of impacts to biotic communities and oak woodlands should be established, impacts to wetlands should be avoided, and stream setbacks will be required

5.4.4 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 7.5 mgd of tertiary capacity, and 1,020 AF of storage. This would make available 6,455 AFY of recycled water for urban, agricultural, and environmental uses. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,243 HP of pumping capacity, treatment facilities providing 7 mgd of tertiary capacity, and 955 AF of storage and would provide 6,655 AFY of additional recycled water for use.

LGVSD

No additional facilities or service beyond those identified in Phase 1 would be provided by LGVSD under the Basic System. Therefore, impacts would be equivalent to those identified under Phase 1.

Novato SD

The Basic System would include construction of an additional 2.6 miles of pipeline to the Petaluma River. No additional service is provided by this pipeline. Therefore, impacts would be equivalent to those identified under Phase 1.

SVCS

The Basic System would increase service to the Sonoma Valley service area. Impacts would be contained within and consistent with those identified for Phase 1. Therefore, impacts would be equivalent to those identified under Phase 1.

Napa SD

The Basic System would include facilities to provide 1,055 AFY to the Carneros East service area. Recycled water supplies would be used to offset existing groundwater and local surface water uses for irrigation, as the Carneros East area has not been officially identified as a groundwater deficient area and therefore is subject to less restrictive requirements than the parcels in the MST area under the Napa County Groundwater Ordinance. As such, the provision of recycled water is not anticipated to affect the rate, level, or distribution of agricultural production in the Carneros East area.

5.4.5 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. This would make available 11,250 AFY of recycled water for urban, agricultural and environmental uses.

The secondary impacts of growth associated with the proposed 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 Member Agency service areas is provided below.

LGVSD

The Partially Connected System would extend service from LGVSD to the Peacock Gap Golf Course in San Rafael, making approximately 409 AFY of recycled water available for irrigation uses. **Table 5-21** summarizes the secondary effects of growth identified under the San Rafael County General Plan. A discussion of mitigation measures and policies identified to reduce potential impacts to the degree feasible is also provided.

Mitigation Measures (San Rafael)

The EIR lists the following measures to mitigate impacts that are identified as significant. The mitigation measures are described according to the resource areas.

- ***Air Quality:*** Create a setback for projects proposed within 500 feet of large highways and include a health analysis and modeling to minimize impacts to sensitive receptors from emission of odors and toxic contaminants.
- ***Hazardous Materials:*** Implement a new program to require the City of San Rafael to survey existing industrial facilities within quarter-mile of schools to determine the presence of hazardous materials and risk of a release to mitigate impacts from hazardous materials or waste near schools. Restrict siting of facilities that could increase risk of release in close vicinity of schools.

TABLE 5-21
IMPACTS ASSOCIATED WITH SAN RAFAEL GENERAL PLAN IMPLEMENTATION

City of San Rafael

Significant and Mitigable Impacts

- Impacts from odors and toxics.
 - Impacts from nighttime lighting and glare.
 - Impacts to special status plant and animal species.
 - Direct and indirect impacts to sensitive natural communities.
 - Exposure of people and structures to potential adverse seismic effects (groundshaking).
 - Exposure of people or structures to seismic related ground failure.
 - Impacts to property and structures from ground subsidence hazards.
 - Impacts from construction of septic tanks on soils incapable of supporting these systems.
-

Less Than Significant Impacts

- Conflict with applicable land use or other plans.
- Incompatible land uses and changes to neighborhood character.
- Growth and concentration of population.
- Employment growth rate.
- Jobs-to-housing ratio.
- Increased demand for bicycle routes, pedestrian facilities, and transit services.
- Consistency with the Clean Air Plan.
- Consistency with the Clean Air Plan Transportation Control Measures.
- Increased traffic noise.
- Increased exposure from stationary noise sources.
- Increase airport noise.
- Impacts to future noise sensitive development.
- Demand for fire and emergency services.
- Increased potential for wildland fires.
- Exposure to underground hazardous wastes.
- Demand for school services.
- Wastewater treatment capacity- north of Puerto Suello Hill.
- Potential to exceed landfill capacity.
- Increased demand for electricity, natural gas, and gasoline.
- Impacts on archaeological and prehistoric resources.
- Impacts on historic or cultural resources.
- Impacts to scenic vistas and visual resources.
- Alteration of the visual setting and character of the City.
- Conflicts with adjoining development relative to height.
- Impacts to federally protected wetlands.
- Restriction of movement of native wildlife.
- Loss of habitat and invasive plant species introduction.
- Adverse effects from expansive soils.
- Increase in loading of petrochemical contaminants, heavy metals, and pesticides into drainageways.
- Increases in impervious surface cover and impact to groundwater resources.
- Incremental increase in project-induced erosions and sedimentation.
- Increases in peak flow rates on flooding and/or stormwater drainage system capacity.
- Exposure of new development to levee failure.
- Need for expanded stormwater drainage system.

TABLE 5-21 (Continued)
IMPACTS ASSOCIATED WITH SAN RAFAEL GENERAL PLAN IMPLEMENTATION

City of San Rafael

Less Than Significant Impacts (cont.)

- Exposure of people or structures to flooding hazards.
- Risk of inundation by seiche, tsunami, or mudflow.
- Conversion of farmland to non-agriculture use.

Significant and Unavoidable Impacts

- Level of service at various intersections.
- Impacts to on-street parking along various streets.
- Increased rail noise.
- Release of hazardous materials.
- Exacerbation of deficiency in park facilities.
- Demand for police services that exceeds existing capacity.
- Demand for library services.
- Wastewater Treatment capacity- south of Puerto Suello Hill.
- Potential for demand to exceed water supplies.
- Exposure of people or structures to landslide events.

SOURCE: City of San Rafael, 2004.

- *Aesthetics*: Prepare a lighting plan for parking lots to minimize impacts from new sources of light or glare and nighttime lighting. A lighting plan would include provisions to shield light sources from off-site view, downcast lights, prevent light from escaping, use low intensity, indirect light sources, and restricting mercury, metal halide, and other intense bright lights.
- *Biological Resources*: Implement programs that require surveying of vacant sites to determine presence or absence of species, on-site preservation or off-site compensation for lost habitat (i.e., easements), and restoration efforts to mitigate impacts to biological resources. The Oak Savanna and Woodland Habitat Protection Program would mitigate the loss of sensitive natural communities by requiring compensation.
- *Geology*: Implement the following measures:
 - A General Plan policy that would require building inspections, inspections of other facilities, storm drains, levees, freeways, and other infrastructure, and require the Community Development Department to develop a list that identifies and prioritizes hazardous facilities;
 - A policy that directs the City to coordinate with the Intergovernmental Panel on Climate Change to determine sea level rise and needs for levee improvements;
 - A program for levee upgrading;
 - An amendment to the shoreline embankments policy that includes rip-rap inspection and erosion protection; and

- A General Plan policy to discourage the use of septic systems unless there is no other alternative, in which case additional requirements would need to be met.
- Mitigation Measures identified for impacts that would remain significant and unavoidable: SMART shall conduct a detailed noise assessment and implement mitigation to reduce noise impacts to an acceptable level for any rail project within its right-of-way.

A new policy that requires remediation and cleanup in order to develop on sites where hazardous materials have impacted soil or groundwater will be required to mitigate releases of hazardous materials.

- Public Services: Police: Determine the existing and projected facility needs of the police departments, obtain funding for improvements, and construct additional facilities. Additional facilities that would need to be constructed are specified in other mitigation measures to improve drainage, sediment control, and particulate matter reduction.
- Parks: Construct recreational facilities, establish creek and drainageway setbacks, and reduce runoff.
- Library Services: Implement policies that would limit the impacts from new library facility construction, like setbacks, runoff reduction, and sediment control.
- Water Services: To meet projected water demand, MMWD will implement measures to promote conservation, research new water supplies (like desalination), and construct necessary infrastructure.
- Wastewater Services: Determine the need and cost of improvements, analyze storage alternatives, increase facilities, and assess collection systems.⁵
- Construction Impacts: Implement creek and drainageway setbacks, reducing runoff and sedimentation, and controlling particulate matter pollution.

The Partially Connected System would also include provision of supplies from LGVSD north to the Sears Point area via an approximately 6.5 mile pipeline connection to Novato SD facilities. Please refer to the discussion of growth issues in the Sears Point area in the Novato SD discussion, below.

Novato SD

The Partially Connected System would include provision of 968 AFY of recycled water to the Sears Point area from Novato SD. These supplies would be used to offset existing potable water use in the area. As discussed above in Section 5.3.1, Novato SD plans for expanded recycled water use in the area. Potential recycled water users include development on Hamilton Air Force Base and other users along Highway 101. Sears Point area under the proposed project could be a potential user area. The impacts would be equivalent to those identified under the Basic System.

⁵ Although wastewater flows would not exceed the treatment capacity of the LGVSD facilities, wastewater flows generated south of Puerto Suello Hill will exceed the capacity of Central Marin Sanitation District facilities.

SVCS D

The Partially Connected System would include provision of recycled water to the Southern Sonoma Valley service area, providing approximately 1,662 AFY of recycled water to existing agricultural users for groundwater and surface water offset. Impacts would be contained within and consistent with those previously identified in the Sonoma County General Plan in Table 5-19. Therefore, impacts would be equivalent to those identified under the Basic System.

Napa SD

The Partially Connected System would include extension of service north in MST area, north in the Carneros East area, and east of the Napa SD Soscot WWTP, providing approximately 4,221 AFY of recycled water. Impacts would be contained within and consistent with those previously identified in the Napa County General Plan in Table 5-20. Therefore, impacts would be equivalent to those identified under the Basic System.

5.4.6 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.

LGVSD

No additional facilities or service beyond those identified in the Partially Connected System would be provided by LGVSD under the Fully Connected System. Therefore, impacts would be equivalent to those identified under the Partially Connected System.

Novato SD

Under the Fully Connected System, the service identified in the Partially Connected System to the Southern Sonoma Valley would be provided by Novato SD instead of SVCS D. The amount of recycled water would be 1,587 AFY and would allow SVCS D to provide service north to the Central Sonoma Valley. Impacts would be contained within and consistent with those previously identified in the Novato General Plan in Table 5-17. Therefore, impacts would be equivalent to those identified under the Partially Connected System.

SVCS D

Under the Fully Connected System, SVCS D would extend service north to users in the Central Sonoma Valley service area. This would provide an additional 1,511 AFY to offset existing groundwater and local surface water uses. Impacts would be contained within and consistent with those previously identified in the Sonoma County General Plan in Table 5-19. Therefore, impacts would be equivalent to those identified under the Partially Connected System.

Napa SD

No additional facilities or service beyond those identified in the Partially Connected System would be provided by Napa SD under the Fully Connected System. Therefore, impacts would be equivalent to those identified under the Partially Connected System.

Mitigation Measures

Mitigation Measure 5-1a: In order to maintain consistency with the Napa County General Plan, Napa County and Napa SD will approve the MST Local Options 1 and/or 2. This will provide approximately 530 AFY of recycled water that would be available for the existing users in the MST area. Trunk facilities may be sized to accommodate service of up to 1,400 AFY to existing agricultural irrigators only. Any expansion of service beyond the 1,400 AFY or provision of service to new land uses would be subject to approval by the County Planning Department and the Napa County Board of Supervisors.

Impact Significance after Mitigation: Implementation of Measure 5-1a would avoid the potential for direct impacts relating to growth inducement in the MST area. However, provision of recycled water within each of the NBWRP services would contribute to secondary effects of growth associated with buildout under approved General Plans within each service area. Mitigation programs have been established for these impacts, however, some of these impacts may remain significant and unavoidable.

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