CHAPTER 9 PUBLIC UTILITIES

This chapter evaluates potential impacts associated with the project's demand for potable water supply (Chapter 9A), wastewater treatment (Chapter 9B), and recycled water (Chapter 9C). Descriptions of existing conditions and regulatory setting for these topics is summarized from the Sierra Vista Specific Plan EIR (City of Roseville 2010) and the Creekview Specific Plan EIR (City of Roseville 2011), which are incorporated herein by reference, as provided under CEQA Guidelines Section 15150. The Sierra Vista Specific Plan EIR and the Creekview Specific Plan EIR are available for review at the City of Roseville website, www.roseville.ca.us, and at

City of Roseville Permit Center
311 Vernon Center
Roseville, California

As discussed in the Initial Study and summarized in **CHAPTER 1 INTRODUCTION** and below, the proposed project is not expected to increase the severity of impacts on other public utilities, such as stormwater/drainage and solid waste disposal. The Initial Study analysis demonstrates that while development of the project would increase the demand for solid waste disposal and for stormwater and drainage infrastructure, the project's impacts would be similar to those evaluated in the WRSP EIR and the project would not result in new impacts related to those services. Therefore, those utility services are not evaluated further in this Recirculated Draft Subsequent EIR.

SOLID WASTE

The Initial Study found that the proposed Fiddyment Ranch Specific Plan Amendment (SPA) 3 project would generate solid waste that would be disposed of at the Western Placer Sanitary Landfill and recyclable materials that would be processed at the Materials Recovery Facility (MRF). As identified in the Creekview Specific Plan EIR, The WRSL has a total capacity of 36,350,000 cubic yards. As of July 1, 2009, a total of 10,911,366 cubic yards had been disposed at the landfill, leaving a remaining capacity of 25,438,634 cubic yards. Under current projected development conditions, the landfill has a projected lifespan extending through 2041.

The Fiddyment Ranch SPA 3 project would implement mitigation measures identified in the WRSP EIR to reduce impacts to the landfill and MRF to the extent feasible. However, because there is uncertainty related to future expansion of the landfill and MRF, these impacts remain significant and unavoidable, as evaluated in the WRSP EIR, and the proposed project would not substantially increase the severity of these potential impacts. Impacts related to solid waste disposal are not evaluated further in this Recirculated Draft Subsequent EIR.

STORMWATER DRAINAGE

The Fiddyment Ranch SPA 3 project would increase the amount of impervious surfaces within the project area, which would increase the amount of stormwater runoff from the site. Under the approved WRSP, the Fiddyment Ranch project area would contribute 172.4 acre-feet per year to runoff volumes. Based on the proposed changes in the amount of land allocated to low, medium, and high density residential land uses and the findings of the drainage study for the WRSP correlating an average percent of impervious surfaces for each density class, associated

with 50 percent impervious surfaces, and HDR is associated with 65 percent impervious surfaces. The proposed reduction in LDR area and increase in MDR and HDR areas would result in an increase in impervious surfaces of 5.54 acres. Based on the Volumetric Impact Rates for a 100-year 8-day storm event established in the Pleasant Grove Watershed Mitigation Fee, this would increase the volume of stormwater runoff from the project site by 5.46 acre-feet per year.

The Fiddyment Ranch SPA 3 project would implement the WRSP EIR Mitigation Measure 4.12-2 which requires that all development within the WRSP contribute a proportionate amount to fund development of the regional retention basin at the time that building permits are issued. In addition, development in Fiddyment Ranch would be required to comply with the City's Improvement Standards and the Stormwater Management Manual (SWMM), as enforced through review and approval of storm drainage infrastructure plans by the City's Engineering Department. These requirements would ensure that impacts associated with changes in the rate and volume of stormwater runoff as a result of development of Fiddyment Ranch under the proposed SPA 3 project would be less than significant. These impacts are not evaluated further in this Recirculated Draft Subsequent EIR.

CHAPTER 9A POTABLE WATER SUPPLY

9A.1 INTRODUCTION

The proposed Fiddyment Ranch Specific Plan Amendment (SPA) 3 project would amend the existing West Roseville Specific Plan (WRSP) by changing the land use and zoning designations for some parcels and by changing development densities within the project area. The project area consists of ±805 acres primarily north of Pleasant Grove Creek and west of Fiddyment Road. The project would result in the development of 1,661 additional residential units and 7.3 additional acres of commercial land uses compared with the development evaluated in the WRSP EIR. Other changes proposed to the land uses within the Fiddyment Ranch project area include minor adjustments in acreage for parks, open space, public/quasi-public (elementary school), and roadway rights-of-way. While the water demands of the overall WRSP were evaluated in the WRSP EIR, the additional development proposed as part of the Fiddyment Ranch SPA 3 project would generate additional demand for potable water supply. In addition, other development has been approved in the City since the time the WRSP was approved. This Recirculated Draft Subsequent EIR chapter evaluates water supply within the City of Roseville and the availability of water supply to serve the proposed project.

Information for the potable water supply analysis was based upon information within the following documents:

- *American River Pump Station EIR/EIS*, U.S. Bureau of Reclamation, 2002
- *City of Roseville 2005 Urban Water Management Plan,* Brown and Caldwell, 2006 (hereby incorporated by reference)
- *City of Roseville General Plan 2025,* City of Roseville, February 2013
- *Creekview Specific Plan Final EIR*, City of Roseville, April 2011 (hereby incorporated by reference)
- *Domestic Water Study Fiddyment Ranch SPA No. 3*, Wood Rodgers, August 2010
- *Groundwater Impact Analysis for Proposed Reasons Farms Land Retirement Plan*, MWH, June 2003
- *Integrated Water Resources Plan*, PCWA, 2006
- *Placer Groundwater Management Plan,* PCWA, 1998
- *Sierra Vista Specific Plan EIR Technical Memorandum: Effects of Changed Water Management Operations on Fisheries and Water Quality Impacts Previously Disclosed in the Water Form Agreement EIR,* Robertson-Bryan Inc. and HDR, October 2009
- *TM-1 – Unit Water Demand Factor Verification and Water Demand Evaluation and Update,* MWH, September 2006
- *Water Forum Agreement Final EIR* (SCH #950824041), City-County Office of Metropolitan Water Planning, November 1999 (hereby incorporated by reference)
- *Western Placer County Groundwater Management Plan,* MWH, August 2007
- *West Roseville Specific Plan FEIR,* City of Roseville, February 2004

- *Water Supply Assessment for Fiddyment Ranch Specific Plan Amendment 3 project,* City of Roseville, October 2013

All of the above listed documents are available for review during normal business hours at:

City of Roseville Permit Center
311 Vernon Center
Roseville, California

The 2013 Notice of Preparation (NOP) for this EIR, the Initial Study, comments received in response to the NOP and comments received at the 2013 Public Scoping Meeting are provided in Appendix A. As discussed in **CHAPTER 1 INTRODUCTION**, an NOP was circulated in 2010 and a Draft Subsequent EIR was circulated in 2011 for a previous Fiddyment Ranch SPA 3 proposal. The comments on the 2010 NOP and 2011 Draft Subsequent EIR are also included in Appendix A. One comment on the 2010 NOP requested that the EIR include analysis water supply. Many comments on the Draft Subsequent EIR stated concern that the EIR analysis of project impacts, including impacts to water supply, did not fully capture the significant impacts of the project; however no specific details regarding this concern were provided. The analysis in this chapter identifies the volume of water that would be required to serve the proposed project as well as other existing and planned development in the City of Roseville and compares those demands to the existing and projected water supply for the City.

9A.2 SETTING

The City of Roseville is the potable water purveyor for city residents. The City's primary water source is American River water diverted from Folsom Reservoir. The City obtains water through contracts with the U.S. Bureau of Reclamation (USBR), Placer County Water Agency (PCWA), and San Juan Water District (SJWD). The City occasionally uses groundwater as a backup water source; the last instance of groundwater use occurred in 1991 during a drought. The City also facilitates the use of recycled water throughout the City to reduce potable water demands. Recycled water use is discussed in this chapter as it relates to reductions in demand for surface water. Additional discussion of recycled water use in the City, including impacts associated with providing recycled water to the proposed project, is provided in Chapter 9C.

In addition to the water supplies identified above, supplemental water is available from other agencies through system interties. These water system interties are typically operated during treatment plant disruptions, such as are occasionally experienced during plant construction projects or other maintenance operations that require treatment plant or pump station shutdown. Water system interties are also used for equal trading of water supplies in two different service areas due to local operational needs.

Regional Surface Water Features

Table 9A-1 summarizes the existing conditions of the American River, which is the principal water source for the City of Roseville. The table also provides information on regional hydrologic features that rely on water from the American River. More detailed information on each water body is provided in the Creekview Specific Plan EIR, which is hereby incorporated by reference. The Creekview Specific Plan EIR (City of Roseville 2011) is available at the City of Roseville website:

http://www.roseville.ca.us/planning/planning_document_library/specific_plans/creekview_specific_plan.asp

Table 9A-1

Surface Water Sources

Water Source	Conditions
American River	The American River, from which the City of Roseville draws its surface water, is one of the major tributaries of the Sacramento River. The Feather River is the other. The American River basin encompasses about 1,936 square miles and ranges in elevation from 23 feet to more than 10,000 feet above mean sea level (msl). The average annual flow of the American River at Fair Oaks (U.S. Geological Service (USGS) Station No. 11446500) has been approximately 2.7 million acre-feet (MAF) per year from 1905 through 2003. The American River contributes about 15 percent of the total Sacramento River flow below its confluence in Sacramento. Significant reservoirs in the American River basin include Folsom Reservoir (discussed below), Union Valley Reservoir on Silver Creek, which is owned and operated by the Sacramento Municipal Utility District and provides storage capacity of 230 thousand acre-feet (TAF); PCWA's Hell Hole Reservoir on the Rubicon River (208 TAF); and French Meadows Reservoir on the Middle Fork American River (135 TAF). The American River has historically provided over 125 miles of riverine habitat to anadromous and resident fishes. Presently, use of the American River by anadromous fish is limited to the 23 miles of river below Nimbus Dam (the lower American River, discussed below).
Folsom Reservoir	Folsom Reservoir (or Folsom Lake) is the largest reservoir in the American River basin (977 TAF). It is owned and operated by the USBR for the California Central Valley Project (CVP). Folsom Reservoir has dedicated capacity to store flood flows, and has a maximum depth of approximately 266 feet. Folsom Reservoir is the most upstream CVP facility on the American River, and is located at an elevation of 466 feet above msl. **Recreation Use** Folsom Reservoir is part of the Folsom Lake State Recreation Area (SRA), an 18,000-acre area encompassing Folsom Lake and Lake Natoma managed by the California Department of Parks and Recreation (DPR). The Folsom Lake SRA is one of the most heavily used recreation areas in the California State Park System because of its proximity to large urban areas, the diminishing open space of the area, and high regional interest in recreation. When full, the reservoir has a surface area of approximately 11,900 acres and 75 miles of shoreline. The Folsom Lake SRA also has approximately 80 miles of trails available for hiking and horseback riding and approximately 30 miles of paved and unpaved bicycling trails. Folsom Lake accommodates a variety of water-dependent recreational activities. Boating is the most popular activity at the reservoir, followed by swimming and fishing (Sacramento Area Flood Control Agency and Reclamation 1994 as cited in Roseville 2011). Water-dependent activities account for nearly 85 percent of recreation use at Folsom Lake. The water level at Folsom Lake dictates the length of the recreation season. During years with normal precipitation, the main recreational season is May through Labor Day in September, when recreation is primarily focused on water-dependent activities. During the remaining months of the year, use consists of fishing and land-based recreation. (California State Parks 2001 as cited in

	Roseville 2011). **Habitat Values** With respect to its qualities as fish habitat, strong thermal stratification occurs within Folsom Reservoir annually between April and November. Thermal stratification establishes a warm surface water layer, a middle water layer characterized by decreasing temperature with increasing depth, and a bottom, coldwater layer within the reservoir. This means that Folsom Reservoir provides habitat for both warm-water and coldwater fishes throughout summer and fall. Native species that occur in the reservoir include hardhead and Sacramento pikeminnow. However, introduced species constitute the primary sport fisheries of Folsom Reservoir. Salmonids (both the native rainbow trout and introduced brown trout) only spawn in streams and, therefore, do not reproduce within the reservoir. However, some spawning by one or more of these species may occur in the American River upstream of Folsom Reservoir. Folsom Reservoir's coldwater pool is important not only to the reservoir's coldwater fish species, but also to lower American River fall-run Chinook salmon and steelhead. Seasonal releases from the reservoir's coldwater pool provide thermal conditions in the lower American River that support annual in-river production of these salmonid species. Folsom Reservoir's coldwater pool is limited in size and volume, and active management of the reservoir's coldwater pool is essential to providing maximum possible thermal benefits to fall-run Chinook salmon and steelhead.
Lower American River	The lower American River extends for 23 miles from Lake Natoma located immediately downstream of the Folsom Reservoir dam to its confluence with the Sacramento River. **Recreation Use** The river passes through the American River Parkway, a 6,000-acre open space corridor that includes a series of interconnected parks along the publicly owned lands of the river. The parkway has 14 county parks that provide user access and the 32-mile Jedediah Smith Memorial Trail provides bicycling, hiking, and horseback-riding opportunities from Discovery Park to the Folsom Lake SRA. The lower American River is a major site for water recreation. Parkway visitation in 1997 was estimated at 6 million visitor-days. Visitation is expected to increase to 9.6 million visitor-days by 2020, assuming river flows are stable. (County of Sacramento and USBR 1997 as cited in Roseville 2011). **Habitat Values** The lower American River provides a diversity of aquatic habitats, including shallow, fast-water riffles, glides, runs, pools, and off-channel backwater habitats. The lower American River from Nimbus Dam (river mile [RM] 23) to approximately Goethe Park (RM 14) is primarily unrestricted by levees, but is bordered by some developed areas. Natural bluffs contain this reach of the river. The river reach downstream of Goethe Park, and extending to its confluence with the Sacramento River (RM 0), is bordered by levees. The construction of levees changed the channel geomorphology, reduced river meanders, and increased depth. At least 43 species of fish have been reported to occur in the lower American River system, including numerous resident native and introduced species, as well as several anadromous species. Although each fish species fulfills an ecological niche, several species are of primary management concern either as a result of their declining status or their importance to recreational and/or commercial fisheries. Both steelhead, listed as "threatened" under the Federal ESA, and Sacramento splittail, a California species of special concern and, informally, a Federal species of concern, occur in the lower American River. Additionally, the lower American River from the outfall of the Natomas East Main Drainage Canal

	(NEMDC, and also known as Steelhead Creek) downstream to the confluence with the Sacramento River is designated as critical habitat for spring-run Chinook salmon (70 FR 52512). Current recreationally and/or commercially important anadromous species include fall-run Chinook salmon, steelhead, striped bass, and American shad.
Sacramento River	The Sacramento River is the largest river in California, providing water for municipal, agricultural, recreational, and environmental purposes throughout Northern and Southern California. Water originating from the upper Sacramento River drainages represents a significant component of the total CVP supply. The Sacramento River watershed is predominantly forestland (approximately 65 percent), with the balance of the land used for rangeland (approximately 20 percent), agriculture (approximately 10 percent), urban/residential (less than 2 percent), and wildlife habitat/other. The annual average Sacramento River flow at Verona (upstream of the confluence with the American River) is about 13.93 MAF per year, based on the 1930 through 2000 flow record maintained by the U.S Geological Survey (USGS) (Station No. 11425500). The Sacramento River enters the Delta at Freeport, downstream of its confluence with the American River, where its average annual flow is about 17 MAF. Most flood flows from the upper Sacramento River, Feather River, and Sutter Bypass are diverted west of Freeport and the Sacramento area into the Yolo Bypass through the Fremont Weir at Verona. During the highest flood flows, gates at the Sacramento Weir are opened to divert flow into the Yolo Bypass and provide an additional layer of flood protection for the Sacramento area. The Yolo Bypass discharges into the Delta. Property adjacent to the Sacramento River and its bypasses is protected from flood damage by an extensive levee system. Over 30 species of fish are known to use the Sacramento River. The Sacramento River is an important migration corridor for anadromous fishes moving between the Pacific Ocean or the Delta and upper river and tributary spawning and rearing habitats. The Sacramento River also supports a variety of resident species, which complete their lifecycles entirely within freshwater, often in a localized area. The Sacramento River Watershed Program has identified mercury, organophosphate pesticides, toxicity, and drinking water parameters as chemicals of concern in the Sacramento River watershed, which includes the Sacramento and Feather Rivers, and the Delta (Sacramento River Watershed Program 2001 as cited in Roseville 2011).
Upper Sacramento River	The upper Sacramento River is often defined as the portion of the river from Princeton (RM 163) - the downstream extent of salmonid spawning in the Sacramento River (Burmester, 1996 as cited in Water Forum 1999), to Keswick Dam - the upstream extent of anadromous fish migration and spawning. The upper Sacramento River is differentiated from the river's "headwaters" which lie upstream of Shasta Reservoir. The upper Sacramento River provides a diversity of aquatic habitats, including fast-water riffles and shallow glides, slow-water deep glides and pools, and off-channel backwater habitats. The upper Sacramento River is of primary importance to native anadromous species, and is presently utilized for spawning and early-life-stage rearing, to some degree, by all four runs of Chinook salmon (fall-, late fall-, winter-, and spring-runs) and steelhead. Streamflow is greatly influenced by managed releases from Shasta Reservoir and, during the rainy season, by stormwater runoff. The stream channel is in a natural state, with no artificial levees. The drainage basin area includes parts or all of the Great Basin, Middle Cascade Mountains, Klamath Mountains, Coast Ranges, and Sacramento Valley physiographic provinces. Land cover in the area is mainly

	forestland; cropland, pastures, and rangeland cover most of the remaining land area. Water quality effects from past and present mining activities in the Klamath Mountains are likely to be detected within portions of the upper Sacramento River (USGS 2002 as cited in Roseville 2011).
Lower Sacramento River	The lower Sacramento River is generally defined as that portion of the river from Princeton to the Delta, at approximately Chipps Island (near Pittsburg). The lower Sacramento River is predominantly channelized, leveed and bordered by agricultural lands. Aquatic habitat in the lower Sacramento River is characterized primarily by slow-water glides and pools, is depositional in nature, and has reduced water clarity and channel habitat diversity compared to the upper portion of the river. Many of the fish species utilizing the upper Sacramento River also use the lower river to some degree, even if only as a migratory pathway to and from upstream spawning and rearing grounds. For example, adult Chinook salmon and steelhead primarily use the lower Sacramento River as an immigration route to upstream spawning habitats and an emigration route to the Delta. The lower river is also used by other fish species (e.g., Sacramento splittail and striped bass) that make little to no use of the upper river. Overall, fish species composition in the lower portion of the Sacramento River is quite similar to that of the upper Sacramento River and includes resident and anadromous cold- and warmwater species. Many fish species that spawn in the Sacramento River and its tributaries depend on river flows to carry their larval and juvenile life stages to downstream nursery habitats. Native and introduced warmwater fish species primarily use the lower river for spawning and rearing, with juvenile anadromous fish species also using the lower river and non-natal tributaries, to some degree, for rearing.
Sacramento – San Joaquin Delta Estuary	Below its confluence with the American River at Sacramento, the Sacramento River enters the Delta at Freeport, merges with the San Joaquin River, and then flows through San Francisco Bay to the Pacific Ocean. The Delta is defined as the most upstream portion of the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Estuary or Estuary), and consists of a triangle-shaped area composed of islands, river channels, and sloughs at the confluence of the Sacramento and San Joaquin rivers. The Delta forms the lowest part of the Central Valley, bordering and lying between the Sacramento and San Joaquin rivers, and extending inland from the confluence of these rivers as far as Sacramento and Stockton. The Delta is the source of drinking water for more than 23 million Californians in the San Francisco Bay Area, Central Valley, and Southern California. The Delta is also an important agricultural area for corn, grain, hay, rice, and pasture. Although much of the Delta is used for agriculture, the land also provides habitat for wildlife. Many agricultural fields are flooded in the winter, providing foraging and roosting sites for migratory waterfowl. In addition to lands that are used seasonally, CDFG manages thousands of acres specifically for wildlife. On average, about 21 MAF of water reach the Delta annually. About 62 percent of total Delta inflow is from the Sacramento River, including additional CVP and SWP releases under the 1995 Water Quality Control Plan (WQCP) for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan) (SWRCB 1995 as cited in Roseville 2011). Actual Delta inflow varies widely from year to year. In 1977, a critically dry year, Delta inflow totaled only 5.9 MAF, while in 1983, a wet year, the total was about 70 MAF. Property adjacent to the Delta is protected by an extensive levee system. The San Francisco Bay (Bay) and the Delta (together Bay-Delta) make up the largest estuary on the west coast (U.S. Environmental Protection Agency 1992 as cited in Roseville 2011). The northern Delta is dominated by the waters of the Sacramento River, which are of relatively low salinity; whereas the relatively

	higher salinity waters of the San Joaquin River dominate the southern Delta. The central Delta includes many channels where waters from the Sacramento and San Joaquin rivers and their tributaries converge. The Delta's tidal-influenced channels and sloughs cover a surface area of approximately 75 square miles. These waters support a number of resident freshwater fish and invertebrate species. The waters are also used as migration corridors and rearing areas for anadromous fish species and as spawning and rearing grounds for many estuarine species. The Bay-Delta estuary provides habitat for a diverse assemblage of fish and macroinvertebrates. Many of the fish and macroinvertebrate species inhabit the estuary year-round, while other species inhabit the system on a seasonal basis as a migratory corridor between upstream freshwater riverine habitat and coastal marine waters, as seasonal foraging habitat, or for reproduction and juvenile rearing.
Central Valley Project	The Central Valley Project (CVP) provides water supply to meet in-basin needs and exports for areas south of the Delta. The CVP is a multipurpose project operated by USBR that stores and transfers water from the Sacramento River, San Joaquin River, and Trinity River basins to the Sacramento, San Joaquin, and Santa Clara valleys. The CVP was authorized by Congress in 1937, and operates as an integrated system to serve water supply, hydropower generation, flood control, navigation, fish and wildlife, recreation, and water quality control purposes. The CVP service area extends about 430 miles through much of California's Central Valley. CVP major storage reservoirs include Shasta Lake with 4,552 TAF in the Sacramento River basin, Whiskeytown Lake (241 TAF) and Trinity Lake (2,448 TAF) in the Trinity River basin, and Black Butte Reservoir (136 TAF) in the Stony Creek basin. The CVP also includes the San Felipe Unit, which delivers water to the Santa Clara Valley. In 2001, CVP deliveries totaled about 5.7 MAF, or about 80 percent of its total contracted deliveries of 7.1 MAF (USBR 2003 as cited in Roseville 2011). These deliveries included approximately 2.9 MAF to the Sacramento River Service Area, 192 TAF to the American River Service Area, and 2.6 MAF to the Delta Export Service Area. As noted earlier, the City of Roseville has a contract with USBR for up to 32,000 acre-feet-per-year (AFY) of CVP water diverted from Folsom Reservoir.

City of Roseville Surface Water Supply

The City's current surface water supply is American River water diverted from Folsom Reservoir. Surface water is delivered from Folsom Reservoir through the USBR's pumping plant and parallel 48-inch and 60-inch transmission lines to the City's water treatment plant, located on Barton Road in Granite Bay. The City's plant has a treatment capacity of 100-million gallons per day (mgd). Water is treated through conventional treatment processes of flocculation/sedimentation, filtration, and disinfection. Treated water is fluoridated for consumer health, and pH is adjusted for corrosion protection of the distribution system.

The City is contracted to receive up to 66,000 AFY of surface water from the USBR, PCWA and SJWD, as summarized in Table 9A-2 below. One acre-foot of water is the volume of water that can cover an acre of land at a depth of one foot and equals 325,828 gallons.

While the City has contracts for up to 66,000 AFY, the City's participation in the Water Forum, discussed below, limits the City's diversions from Folsom Reservoir to a maximum of 58,900

AFY in normal and wet years (54,900 from the American River through USBR and PCWA plus 4,000 from the Middle Fork Project through SJWD) and to a minimum of 39,800 AFY in critically dry years.

Table 9A-2
City of Roseville Surface Water Contracts

Contracted Water Supply Source	Contract Amount (AFY)
USBR – American River	32,000
PCWA – American River	30,000
SJWD (normal/wet year only) – Middle Fork Project	4,000
Total Contracted Supplies	**66,000**
Available Supplies: Normal/Wet Years (a)	58,900
Available Supplies: Driest/Critically Dry Years (a)	39,800

(a) As a result of City commitments made under the Water Forum.

Water Forum Agreement

The City participated in the Water Forum, a regional stakeholder effort concerned with protecting the environmental, aesthetic, and recreational values of the Lower American River as well as ensuring reliable water supplies for the region through the year 2030. The Water Forum process began in the early 1990s and a comprehensive Water Forum Agreement (WFA) was adopted by the Water Forum participants in 2000. In addition, purveyor-specific agreements (PSAs) for each water purveyor based on the commitments made in the WFA were signed in 2000.

Water Forum stakeholders developed the WFA as an integrated package of actions that will meet the two primary objectives of the Water Forum. Each element of the WFA is necessary for a regional solution to work. These elements are:

- Increase surface water divisions;
- Actions to meet customers' needs while reducing diversion impacts on the lower American River in drier years;
- An improved pattern of fishery flow releases from Folsom Reservoir;
- Lower American River Habitat Management, which also addresses recreation in the lower American River;
- Water conservation;
- Groundwater management; and
- Water Forum successor efforts.

An EIR was prepared for the WFA, which established 1995 as the baseline year from which water diversions from the American River and associated impacts were evaluated. In 1995, the City diverted 19,800 AFY from the American River.

The Water Forum resulted in the development of a PSA for each regional water agency. The PSAs outline how suppliers will meet commitments agreed to as part of the Water Forum efforts. In return for signing PSAs, water purveyors receive regional support for water supply projects, including site-specific infrastructure development. The City of Roseville's PSA included a limitation on the City's diversion of water from the American River in both wet and dry years. In wet years, the City agreed to limit diversions from its American River supply contracts to no more than 54,900 AFY in normal/wet years (increased to 58,900 AFY with subsequent water supply contracts with SJWD for 4,000 AFY), and to no less than 39,800 AFY in driest years (critically dry).

Re-Operation Plan

Under the City's purveyor-specific WFA, the City has an agreement with PCWA on a re-operation plan for PCWA's Middle Fork Project (MFP). The re-operation plan would be implemented in driest years to release up to 20,000 AFY of raw water down the American River. The 20,000 AFY amount reflects the increase in the amount of water diverted by the City since 1995. As noted above, the City diverted 19,800 AFY in 1995, and under the Water Forum, the City can divert a maximum of 39,800 AFY in drier and driest years. The increased releases would come either entirely from Middle Fork Project storage or from a combination of PCWA contract water and Middle Fork Project storage. Implementation of the re-operation plan would replace the additional water diverted (compared to 1995 levels) and ensure the environmental effects from the City's reliance on American River water are consistent with the impact analysis provided in the WFA EIR.

Regional Groundwater Conditions

Roseville is located in the North American River Groundwater Sub-basin which underlies north Sacramento, south Sutter, and west Placer counties. The Sub-basin encompasses approximately 351,000 acres and is a component of the larger Sacramento Valley Groundwater Basin. The Sub-basin is defined by the Bear River on the north, the Feather and Sacramento rivers on the west, the American River on the south and the Sierra Nevada range on the east.

As reported in the California Department of Water Resources (DWR) Bulletin 118-3, Evaluation of Ground Water Resources: Sacramento County (1974), geologic formations which comprise the water-bearing deposits include an upper aquifer (Aquifer 1) and a lower aquifer system (Aquifer 2). Aquifer 1 consists of the Victor, Fair Oaks and Laguna Formations. Aquifer 2 consists primarily of the Mehrten Formation. Groundwater within Aquifer 1 is typically unconfined, while in Aquifer 2 it is semiconfined. In Bulletin 118, DWR estimates the storage capacity of the North American Sub-basin to be approximately 4.9 MAF.

DWR has not identified the basin as being in an overdraft condition. For several decades, DWR has used three groundwater wells in the project vicinity to monitor groundwater elevations within and around the project area. The groundwater levels at the southern end of the basin have been stable since about 1982 and the levels have risen slightly at the northern end of the basin. These stable groundwater levels indicate that groundwater pumping is currently in balance with the natural groundwater recharge rate.

The PCWA Integrated Water Resources Plan (IWRP) indicates a potential safe yield of approximately 95,000 AFY for the basin. The safe yield is defined as the amount of

groundwater that can be continuously withdrawn from a basin without adverse impact. The IWRP also estimated that average annual agricultural and urban demands in western Placer County have been about 97,000 AFY. Based on the stable groundwater levels in the basin, 97,000 AFY appears to be within the safe yield for the basin. Further, the IWRP projects regional groundwater demands will decrease as agricultural production, particularly heavy groundwater uses like rice farming, is replaced with urban development. Specifically, the IWRP projects a 20,000 AFY reduction in groundwater pumping within the Placer Vineyards, Curry Creek, and West of Lincoln study areas.

The City of Roseville, along with the City of Lincoln, PCWA and California American Water have jointly produced the Western Placer County Groundwater Management Plan (WPCGMP). As a part of the WPCGMP, the partners are currently finalizing a study that evaluates the water balance and estimates sustainable yield for the basin. Initial indications from the report are the sustainable yield values previously generated are still reasonable and appropriate for use.

Aquifer 1 has historically been pumped for agricultural use and Aquifer 2 has been used for urban water purveyors. As agricultural lands are converted to developed lands, pumping demands have decreased, especially when heavy pumping uses such as rice farming have been taken out of production. It is expected that basin pumping demands will continue to decrease over time as more lands are removed from active agricultural use. If the agricultural pumping demands are not replaced by other equivalent pumping demands, it is expected to result in improvements to the condition of the basin. There are no existing legal constraints that limit groundwater pumping.

City of Roseville Groundwater Supply

The City uses groundwater to supplement surface water supplies for backup and dry year needs. To further support groundwater basin sustainability, the City has developed an aquifer storage and recovery (ASR) program. This program was approved in March 2012, after completion of an EIR. The ASR program allows the City to inject potable water (treated drinking water) into the aquifer during wet times (wet years or during the rainy season) and to pump groundwater when backup supplies are needed. This would bolster the basin's reliability and ensure that potential groundwater use does not adversely affect the aquifer. The City is continuing to work with the Central Valley Regional Water Quality Control Board and other state agencies to refine the ASR program. The City currently operates four groundwater wells, and has plans to construct more. There are 12 groundwater well sites available for construction of new wells. The existing wells are capable of delivering a total of approximately 12,000 AFY of water supply if run full-time, or approximately 33 AF per day. With construction of new wells, which will be designed as part of the ASR program, the City's sixteen groundwater facilities would allow for delivery of up to 112 AF per day or 41,000 AFY if run on a continuous basis. Additional information on the location of each well is provided in the Creekview Specific Plan EIR and the ASR EIR (City of Roseville 2012). The City's groundwater wells are maintained primarily for backup water supply and to improve water supply reliability during drought and emergency conditions. The wells are generally used intermittently during high water use months in drought conditions. For example, prior to the testing program for ASR, the last time the City relied on groundwater was during drought conditions experienced in 1991.

According to the IWRP, it is anticipated that groundwater pumping exceeding the safe yield during dry periods is feasible as long as the long term (multi-year) average does not exceed the safe yield of 95,000 AFY.

Regional Groundwater Recharge

Under natural conditions, groundwater recharge results from infiltration of precipitation (rain and snow). The rate and quantity of water reaching the saturation zone depends on several factors, including the amount and duration of precipitation, soil type, moisture content of the soil, and vertical permeability of the unsaturated zone.

Soils containing hardpan occupy over half the valley on the east side of the Sacramento River (which includes the project area) and these hardpans severely restrict downward movement of water. Soil Group D (poor infiltration) accounts for the majority of soil cover in the project area. The abundance of Group D soils limits percolation and groundwater recharge under existing conditions. The U.S. Geologic Survey (USGS) estimates that only 1.6 percent of the total natural recharge in the Sacramento Valley basin can be attributed to the Placer County sub-basin area. Consequently, the project area is not considered a significant recharge source in the regional context.

Recycled Water Supply

Recycled water refers to wastewater treatment plant effluent that has received a level of treatment that meets the State requirements (Title 22) for direct non-potable reuse (for example, landscape irrigation). Recycled water is part of the City's water supply portfolio and is available from Roseville's two wastewater treatment plants, the Dry Creek WWTP and the Pleasant Grove WWTP. Both plants produce Title 22-quality effluent that is available for recycled water applications. The system currently delivers nearly 2,040 AFY of recycled water to City parks, streetscapes, and golf courses and an additional 960 AFY to other water system customers. System expansion is planned for more intensive use of recycled water in the western portion of the City as new development is built. The City's recycled water system and anticipated demands are described in Chapter 9C of this EIR.

Water Supply Reliability

The City of Roseville currently supplies surface water for municipal and industrial uses. This requires firm surface water contract amounts to ensure that proper supplies are maintained for the residences and businesses relying on the water supply. The City estimates that during normal/wet years, the City has sufficient surface water to meet its customers' needs through buildout of the current General Plan. This is based on a continued commitment to regional planning for water supplies, ongoing conservation efforts, implementation of water conservation strategies during drier and driest years (as required by Roseville Municipal Code), and increased use of recycled water for landscaping. It is expected that if surface water supply is reduced during times of drought, consistent with reductions identified in the WFA, existing supply coupled with conservation and groundwater use will be sufficient to meet Citywide demands. This is further explained in Impact 9A.1.

Water Demand

The City calculates anticipated water demand for new development using the City's unit demand factors, which are based upon actual customer water meter usage data. The current demand factors were developed in 2002 as part of the WRSP process. The City conducted additional studies in 2006 and 2008 to confirm the unit demand factors using a longer history of available water meter data from City customers. These additional studies confirmed the validity of the City's unit demand factors.

Water demands are divided into potable water demands and recycled water demands. Potable water demands are that component of the total water demand that will be used for public health related activities such as drinking water and indoor domestic use. In Roseville potable water demand needs are typically met by surface water supplies and supplemented by groundwater supplies for backup during emergency and drought conditions. Recycled water demand is that component of the overall water demand that can be used for outside irrigation use. Potable water demand is calculated by subtracting estimated recycled water demands from the total water demand. Anticipated recycled water demand is calculated based upon a set of formulas as described in Chapter 9C.

The City's current water demand is 30,432 AFY. Of this demand approximately 1,709 AFY was met through recycled water supplies. At buildout of the City's General Plan including the recently approved projects, such as the Creekview Specific Plan, and previous amendments to the Sierra Vista Specific Plan and WRSP, water demands are estimated to reach approximately 63,033 AFY of which 4,478 AFY will be met through recycled water supplies.

Potable Water Treatment

The City of Roseville operates a 100-million-gallon-per day (mgd) water treatment plant (WTP) located on Barton Road in the Granite Bay community of Placer County. Raw (untreated) surface water from Folsom Reservoir is conveyed from the USBR facilities to the City's WTP. USBR raw water delivery facilities are described in the Water Distribution section below. Raw water treatment consists of these primary processes: flocculation/sedimentation, clarification, filtration and disinfection. Following these processes the treated water is fluoridated prior to distribution to City water customers. Peak demands of 58 mgd were experienced at the WTP in July of 2006.

Water Distribution

The City's water distribution system includes raw water facilities to deliver surface water supplies to the City's water treatment plant and the potable water facilities that deliver potable water to City water customers. In addition to the potable water system, the City also operates a recycled water distribution system. This system is described in Chapter 9C of this Draft EIR.

Raw Water Facilities

The raw water facilities consist of both infrastructure owned and operated by the USBR and infrastructure owned and operated by the City of Roseville. USBR facilities include an 84-inch intake pipeline and pumping plant. The pumping plant has sufficient capacity for SJWD, Roseville and portions of the City of Folsom. Roseville pumping capacity limits are 150 cubic feet per second (96.9 mgd). Once through the pumping station, water is conveyed through an

84-inch pipeline to the "Hinkel Y" where the flows to SJWD and Roseville are split. Raw water for Roseville then flows through parallel raw water pipelines to the City's WTP. These pipelines consist of a short segment of 60-inch pipeline followed by parallel 60-inch and 48-inch pipelines. The raw water is then introduced at the influent portion of the Barton Road plant for treatment.

Potable Water Facilities

The City's potable water supply system is comprised of pipes, storage facilities, booster pumping stations, groundwater wells and pressure regulating stations. Distribution piping in the City ranges from as large as 66-inch diameter to as small as 4-inch diameter. The City designs its distribution system to meet various pressure and velocity criteria under average day, maximum day and peak hour delivery scenarios. In general, the City's system meets the maximum day demand criterion of 6 feet per second (fps) for transmission main velocity (i.e., the rate at which water flows through the pipelines) and the water pressure criterion of 50 pounds per square inch (psi). There are a few locations where these criteria are not met, but these discrepancies are minimal and do not adversely affect water service to customers.

The City has six storage tanks with a combined total storage capacity of 32 million gallons (mg). Water storage is necessary in order to manage flow fluctuations on a daily basis, and to maintain sufficient storage to address emergency needs such as water main breaks and high water needs such as firefighting activities.

The City currently has two pumping stations in the City, with plans for two more. The existing stations are the Dual Purpose Pump Station (DPPS) and the Highland Reserve North Pump Station (HRNPS). As the name implies, the DPPS provides two distinct functions. The first is that it provides the ability to fill the City's North East Storage Reservoirs during off-peak demand periods and the second is that it boosts water pressures into higher elevation areas in and adjacent to the Stoneridge Specific Plan area of the City. Similarly, the HRNPS allows the City to boost water pressures into higher elevation portions of the Highland Reserve North Specific Plan area. Future water storage tanks and pump stations are planned for construction within the WRSP and the Sierra Vista Specific Plan areas to service customers in the western portion of the City.

9A.3 REGULATORY SETTING

Federal Regulations

Central Valley Project

Folsom Reservoir on the American River, from which the City of Roseville draws its surface water supplies, is managed by the USBR as part of the CVP. The CVP was first authorized under the Rivers and Harbors Act of 1935. This act and two additional authorizations established allowable uses of dams and reservoirs to include river regulation, improvement of navigation, flood control, irrigation and domestic uses, and power. Since the original authorization, numerous laws, directives, opinions, and orders have affected or influenced management of the CVP. More recently, the 1992 Central Valley Project Improvement Act (CVPIA) reauthorized the CVP for a wider range of beneficial uses and interests than originally mandated. The USBR prepared a Programmatic EIS for the CVPIA programs. The CVPIA

allocates 800,000 AFY of CVP yield to meet new beneficial uses defined under CVPIA Section 3406(b)(2). The CVPIA establishes the following objectives:

- protecting and restoring fisheries and wildlife in the Central Valley;
- addressing impacts of the CVP on fish and wildlife;
- enhancing the operational flexibility of the CVP;
- expanding the use of water transfers;
- improving water conservation; and
- addressing the requirements of fish, wildlife, agricultural, municipal, industrial, and power generation water users.

Central Valley Project and State Water Project Coordinated Operations

The CVP operated by the USBR and the State Water Project (SWP) operated by the California Department of Water Resources (DWR), rely on the Sacramento River and the Delta as common conveyance facilities. DWR's primary storage facility is Oroville Reservoir on the Feather River. Reservoir releases and Delta exports must be coordinated so that both the CVP and SWP are able to retain their portion of the shared water and also jointly share in the obligations to protect beneficial uses. A Coordinated Operations Agreement (COA) between the CVP and SWP was developed and became effective in November 1986. The COA defines the rights and responsibilities of the CVP and SWP regarding water needs of the Sacramento River system and Delta and includes obligations for in-basin uses, accounting, and real-time coordination of water obligations of the two projects. A CVP/SWP apportionment of 75/25 is implemented to meet in-basin needs under balanced Delta conditions, and a 55/45 CVP/SWP ratio is in effect for excess flow conditions. The COA contains considerable flexibility with regard to the manner with which Delta conditions- in the form of flow standards, water quality standards, and export restrictions- are met.

Operation of the CVP and SWP is described in a document known as the Operations Criteria and Plan (OCAP). As updated in 2004, the OCAP provides a detailed description of the coordinated operations of the CVP and SWP based on historical data and serves as a starting point for planning future operation.

The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS) have each issued Biological Opinions on the OCAP, that include Reasonable and Prudent Alternative (RPA) actions designed to alleviate jeopardy to listed species and adverse modification of critical habitat. The USFWS RPA, released in 2008, restricts Delta pumping operations and thus limits deliveries of water to CVP/SWP contractors south of the Delta. The NMFS RPA, released in 2009, restricts Delta pumping operations, imposes Shasta Reservoir storage targets to achieve water temperature requirements in the Sacramento River below Keswick Dam, imposes lower American River flow standards, requires modified Delta Cross Channel operations, and limits reverse Old and Middle River flows. It also requires the USBR and NMFS to host annual workshops to review the prior water year's operations and determine whether alternations to the RPA measures are warranted for the current year. The Biological Opinions were invalidated by a federal court in December 2010. As such, an updated OCAP has yet to be finalized. Although final effects of the

OCAP on the City's water supply are not certain, it is expected that the final OCAP may result in additional reductions of American River diversions during drier and driest years.

State Regulations

Senate Bills 610 and 221

In the year 2001, the California Legislature enacted two pieces of legislation relevant to environmental review focused on the water consumption associated with large development projects. Senate Bill (SB) 610 (Chapter 643, Statutes of 2001; Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" (WSAs) for large developments (i.e., more than 500 dwelling units or nonresidential equivalent), such as the Fiddyment Ranch SPA 3 project, unless the project's water demand was included in the most recently adopted Urban Water Management Plan (UWMP).

The City of Roseville is the public water purveyor for the proposed project. The City's UWMP was updated in 2011 and included an estimate of water demands for the 2009 Fiddyment Ranch SPA 3 project proposal. The currently proposed project slightly reduces development compared to the 2009 project proposal and results in slightly decreased overall water demands. However, the current project results in an increased overall water demand when compared to currently planned land uses.

The City prepared a WSA for this project, which is provided in Appendix E1 of this Draft EIR. In compliance with SB 610, the WSA:

- identifies the existing and future water supplies available during normal, single-dry, and multiple-dry water years over a 20-year projection period; and
- addresses whether existing and projected water supplies are adequate to serve the project while also meeting existing urban, agricultural, and manufacturing demands and the needs of other anticipated development in the service area.

If the proposed project is approved, additional complementary statutory requirements, created by 2001 legislation known as SB 221 (Government Code Section 66473.7), would apply to the approval of tentative subdivision maps for more than 500 residential dwelling units. This statute requires cities and counties to include, as a condition of approval of such tentative maps, the preparation of a water supply verification. The verification, which must be completed no later than the time of approval of final maps, is intended to demonstrate that there is a sufficient water supply for the newly created residential lots. The statute defines sufficient water supply as:

> *... the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection period that would meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to, agricultural and industrial uses.*

Safe Drinking Water Quality Regulations

The State Department of Public Health (DPH) establishes "primary" and "secondary" Domestic Water Quality Standards for drinking water supplied by public water systems such as the City. The standards are required by state law to meet or exceed standards adopted by the U.S.

Environmental Protection Agency. The concentrations of specified constituents are limited to maximum contaminant levels. Maximum allowable levels have been established for bacteriological contaminants (such as coliform), organic chemicals (such as benzene), inorganic chemicals (such as total dissolved solids), and radioactivity (such as gross alpha particle activity). Primary standards are set at levels necessary to protect public health and may not be exceeded. Secondary standards are based on aesthetic criteria such as taste and odor and are composed of (1) recommended limits that may be exceeded but are not recommended to be exceeded; (2) upper limits that may be exceeded for a limited duration with prior DPH approval; and (3) short-term limits that may not be exceeded.

Public water systems also must obtain a domestic water supply permit from DPH that must be amended to reflect any changes in the water supply system. The City has obtained such a permit.

Urban Water Management Planning Act

The Urban Water Management Planning Act (Act) was established in Division 6, Part 2.6 of the California Water Code. The Act was first passed in the early 1980s and has been amended several times. The Act was developed due to concerns for potential water supply shortages throughout the State of California. It requires information on water supply reliability and water use efficiency measures. Urban water providers supplying more than 3,000 customers or supplying more than 3,000 AFY must develop and submit an UWMP to the California Department of Water Resources (DWR) every 5 years. The UWMP must describe the provider's efforts to promote efficient use and management of water resources. The City has complied with this Act through the adoption of the City's UWMP, which is described in the "Local Regulations" subsection below.

Groundwater Management

SB 1938 requires any public agency seeking State funds administered through the Department of Water Resources for the construction of groundwater projects or groundwater quality projects to prepare and implement a groundwater management plan with certain specified components. Required components include establishing basin management objectives, preparing a plan to involve other local agencies in a cooperative planning effort, and adopting monitoring protocols that promote efficient and effective groundwater management.

Water Conservation Projects Act

The State of California's Water Conservation Projects Act of 1985 (Water Code Sections 11950 – 11954) is intended to encourage local agencies and private enterprise to implement water conservation and reclamation projects.

Local Regulations

Water Forum Agreement

As described in Section 9A.2 above, the WFA is the result of the efforts of a diverse group of community stakeholders. The stakeholder group was formed in 1994 with the goal of formulating principles for developing solutions to meet future regional water supply needs by providing a reliable and safe water supply for the region through the year 2030 while preserving the fishery, wildlife, recreational, and aesthetic values of the Lower American River.

Essential elements of a package of actions developed as part of the WFA effort are defined in Section9A.2 above. As a result of participation in the WFA, the City of Roseville signed onto a PSA describing how Roseville will implement each of the WFA elements. As described in Section 9A.2 above, the PSA influences the City's surface water planning by limiting the City's diversion from the American River to a maximum of 58,900 AFY in normal and wet years and to a minimum of 39,800 AFY in critically dry years.

City of Roseville General Plan

The City of Roseville General Plan contains goals and policies relating to water supply and distribution. The goals and policies relevant to consideration of the project's impacts related to water consumption include the following:

Goal 1: Maintain a water system that adequately serves the existing community and planned growth levels, ensuring the ability to meet projected water demand and to provide needed improvements, repairs and replacements in a timely manner.

Goal 2: Provide water services to all existing and future Roseville water utility customers. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its utility customers or the provisions of City services is not feasible.

Goal 4: Actively pursue water conservation measures.

Policy 1: Secure sufficient sources of water to meet the needs of the existing community and planned growth.

Policy 2: Provide sufficient water treatment capacity and infrastructure to meet projected water demand.

Policy 5: Ensure all development provides for and pays a fair share of the cost for adequate water distribution, including line extensions, easements, and plant expansions.

Policy 6: Design the City's water system to maintain a minimum water pressure of 50 pounds per square inch (PSI), while providing adequate water to meet fire demands in the system.

Policy 10: Develop and implement water conservation standards and measures as necessary elements of the water system.

City of Roseville Urban Water Management Plan and Groundwater Management Plan

The City prepared and adopted a 2005 Urban Water Management Plan (UWMP). This plan was prepared to comply with the Urban Water Management Planning Act of the California Water Code (described above). The UWMP describes the availability of water and discusses water use, recycled water use and water conservation. The 2005 UWMP considered water demands within the WRSP of which this project is a part.

The City participated with PCWA and the City of Lincoln to complete a groundwater management plan in August 2007. PCWA's integrated water resources strategy anticipates that

groundwater pumping would not exceed safe yields as long as the long-term multiple years average does not exceed 95,000 AFY.

City of Roseville Municipal Code and Water Conservation Ordinance

Section 14 of the City's Municipal Code contains regulations associated with water rates, conservation and water waste prohibitions. The City's Water Conservation and Drought Mitigation Ordinance is contained in Municipal Code Chapter 14.09. The goal of this ordinance is to ensure compliance with all federal, state and local requirements relating to water conservation and drought mitigation. Specifically, this ordinance aims to reduce per capita water consumption, protecting and conserving the City's water supply, and minimizing and/or eliminating water waste. Under this ordinance, the City has authority to declare water shortage conditions and implement drought related measures to restrict water use.

City of Roseville Water Efficient Landscape Ordinance

The City of Roseville's Water Efficient Landscape Ordinance, Chapter 19.67 of the city's Zoning Ordinance, is based on the State Model Water Efficient Landscape Ordinance prepared by DWR. The City's ordinance provides landscaping and irrigation standards for public projects (including parks and landscape corridors), private non-residential projects, single-family and multi-family residential projects, and cemeteries. The ordinance establishes limitations on the maximum water usage annually as well as the maximum turf area and slopes. It also establishes requirements for irrigation design, scheduling and maintenance.

City of Roseville Improvement Standards

Section 8 of the City's Improvement Standards (Water System Design) provides criteria for the design of domestic water systems. Compliance with these standards ensures water delivery facilities are properly sized to distribute water to any new customers that would be created as a result of implementing the proposed project.

9A.4 IMPACTS

Potential impacts associated with potable water supply have been evaluated using criteria identified in Appendix G of the CEQA Guidelines. The analysis below considers whether the project would have a significant impact related to water supply, distribution, and consumption by resulting in any of the following conditions:

- Require new or expanded entitlements for water supplies
- Require or result in the construction of new water treatment facilities or expansion of existing facilities
- Substantially deplete groundwater supplies such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level

Project Impacts

IMPACT 9A.1:	**Require New Or Expanded Water Supply Entitlements**
APPLICABLE POLICIES AND REGULATIONS:	Urban Water Management Planning Act Water Conservation Projects Act Water Forum Agreement City of Roseville General Plan Policies Urban Water Management Plan City of Roseville Improvement Standards City of Roseville Water Conservation Ordinance
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less than Significant
MITIGATION MEASURES:	None
SIGNIFICANCE AFTER MITIGATION:	Less than Significant

Development of the Fiddyment Ranch area under the proposed Fiddyment Ranch SPA 3 project would increase the amount of residential and commercial land uses beyond the amount of development planned under the WRSP. The project would also incorporate water conservation strategies in all new development within the Fiddyment Ranch SPA 3 project area. The water conservation measures include turf reductions and low water use-landscaping in residential front yards, smart irrigation controllers for irrigation uses, re-circulating hot water systems for residential units, and efficient water closets. It is anticipated that inclusion of these water conservation measures within the Fiddyment Ranch area of the WRSP will reduce water demands by 370 AFY. The water conservation measures along with anticipated water savings are included as an appendix in the Wood Rodgers Domestic Water Study for Fiddyment Ranch SPA No. 3, provided as Appendix E2 to this Draft EIR.

To determine if the project would result in a need for expanded or new water entitlements, the potable water demand for existing plus project conditions and at buildout of the City plus the project is compared against the City's water supply portfolio and the City's ability to obtain American River water supply in normal/wet year conditions and in critically dry (driest year) conditions. For analysis in critically dry years, water demands are evaluated against the reduced water supplies available per the WFA or by other reasonably foreseeable cut backs as could be instituted by USBR as a result of the OCAP.

Water Demand

Based on the City's water demand land use factors, development of Fiddyment Ranch under the WRSP would generate a total water demand of 3,528 AFY, while development of Fiddyment Ranch under the proposed Fiddyment Ranch SPA 3 would generate a total water demand of 4,100 AFY, as shown in Table 9A-3. A portion of this increased demand would be offset by conservation savings of 370 AFY. Therefore, the proposed project would increase water demand by 202 AFY.

Table 9A-3
Fiddyment Ranch Water Demands

Project Land Use	Existing Fiddyment Ranch Land Use Plan Water Demand (AFY)	Proposed Fiddyment Ranch SPA 3 Project Land Use Plan Water Demand (AFY)	Change in Demand (AFY)
Low Density Residential	1,925	2,157	232
Medium Density Residential	63	283	220
High Density Residential	281	375	94
Community Commercial	113	134	21
Elementary School	67	74	7
High School	241	241	-
Public/Quasi Public	9	9	-
Park	738	724	(14)
Paseo	22	23	1
Open Space	0	-	-
Right of Way	-	-	-
Sub-Total (w/o losses)	3,459	4,020	561
2% for Losses	69	80	11
Sub-Total (w/losses)	**3,528**	**4,100**	**572**
Water Conservation Reduction	-	(370)	(370)
Total	**3,528**	**3,730**	**202**

Demand at City Buildout Plus Project

When the increased water demand for the proposed project is combined with projected water demand for buildout of the City, the total water demand is 63,235 AFY (63,033 AFY demand from buildout of currently planned land uses plus 202 AFY of additional demand generated by the proposed changes in land uses and density for the SPA 3 project area). As documented in **CHAPTER 9C RECYCLED WATER** a total of 4,409 AFY of recycled water would be used within the City after implementation of the proposed Fiddyment Ranch SPA 3 project. This includes 4,478 AFY under the current buildout assumptions and a reduction of 69 AFY of recycled water demands as a result of implementing water conservation measures within the Fiddyment Ranch SPA 3 project area. The use of recycled water as an assured water supply source reduces total surface water supply needs for meeting buildout water demands. With use of recycled water, total potable water demands at buildout of the City plus the proposed project would be 58,826 AFY.

Water Supply for Existing Plus Project Condition

In 2010, existing citywide water demands were 30,342 AFY. In both 2011 and 2012, potable water demands have decreased, presumably due to the economic down-turn. For purposes of the existing plus project conditions analysis, existing water demand from 2010 is conservatively used as the basis for existing demands.

Included within the existing 2010 demands are some units that have been constructed within the Fiddyment Ranch Area. As of 2010, 545 residential units had been constructed within the Fiddyment Ranch Area; this is approximately 13% of the 4,208 units currently allocated within Fiddyment Ranch. It is estimated that these residential units would generate approximately 13% of the estimated demand in that area or 459 AFY.

As indicated in Table 9A-3, the Fiddyment Ranch area included the SPA 3 amendment will result in a total of 3,730 AFY of water demand once constructed. As indicated above, as of 2010 approximately 459 AFY of water demands within this area was already accounted for within the existing demands. Therefore, buildout of the Fiddyment Ranch SPA 3 project plus existing conditions would generate a total demand of 33,613 AFY (30,342 AFY + 3,730 AFY – 459 AFY).

Of this amount, 1,709 AFY is currently met through recycled water supplies. Therefore, the total potable water demand for the existing development in the City plus buildout of the Fiddyment Ranch SPA 3 project area is conservatively assumed to be 31,904 AFY (33,613 AFY total existing plus project water demand - 1,709 AFY met through recycled water supplies). The City's water supply ranges from 58,900 to 39,800 AFY. In all types of hydrologic years (including driest years), the City's supply is sufficient to meet the demands from existing land uses and from buildout of the Fiddyment Ranch SPA 3 project. The project would have no impact with respect to the need for new or expanded water supply entitlements in the existing plus project condition.

Water Supply for City Buildout Plus Project Condition

Normal/Wet Years

As discussed in Section 9A.1 above, the City's maximum water supply diversion from Folsom Reservoir in normal and wet years is 58,900 AFY. Including the water demand associated with the proposed project, total potable water demands under existing conditions in the City of Roseville are expected to be 31,446 AFY, and total potable water demands at buildout of the City's General Plan are expected to be 58,826 AFY (63,235 AFY water demands – 4,049 AFY available recycled water supplies). Both the existing and future demands are less than the City's available normal/wet year water diversion amount of 58,900 AFY. Therefore the project would not require new or expanded water supply entitlements in normal and wet years. This impact is considered less than significant.

Water Conservation and Groundwater Use During Dry Years

In drier and driest years, the City's water diversions form Folsom Reservoir will be reduced in accordance with the City's PSA. During supply cut-backs the City will implement the water conservation strategies outlined in the Roseville Municipal Code (RMC) and may use groundwater to make up water supply shortfalls. Section 14.09 of the RMC identifies "stages" of conservation designed to achieve a specific amount of reduction in water use to match available supplies for that year. Section 14.09 of the RMC outlines five drought stages with specific actions a water customer can implement to achieve a 10 to 50 percent water reduction.

Groundwater use has been identified as a method to augment available surface water supplies during drought stages three through five. The use of groundwater will lessen the impact of American River (surface water) supply shortfalls. Although the City has not used groundwater

as a source since 1991 (except for testing associated with approval of the ASR program), the use of groundwater in future drier and driest years would be consistent with City practices and groundwater is already identified in the General Plan as a backup source of supply to be used in droughts or emergencies.

A driest (critically dry) year would necessitate implementation of the measures associated with a state four or five drought to reduce water demands to a level that is comparable with available supplies. Actions associated with drought stages one, two and three would be required during the drier years depending on the level of surface water supply shortfall. If the City is able to accomplish sufficient reductions in demand by implementing the conservation measures outlined in the RMC, the City's water demands would be commensurate with available supplies, and use of groundwater as a backup source may not be needed. However, for purposes of this analysis, the City conservatively assumes that only a 20 percent reduction in surface water demands would be achieved in all dry year types to evaluate the volume of groundwater that could need to be pumped to supplement water demands. Environmental impacts as a result of groundwater pumping are analyzed in Impact 9A.4, which concludes the project's contribution to the use of groundwater during dry and driest years would have a less-than-significant impact on the groundwater basin.

As stated above, the total Citywide water demand at buildout of the General Plan and with construction of the proposed project would be 63,235 AFY. After use of recycled water demands, surface water demands at buildout total 58,826 AFY. If implementation of conservation measures achieves a 20 percent reduction in surface water demands (a reduction of 11,765 AFY), the remaining demand would be 47,090 AFY.

Critically Dry Year Water Supply– Water Forum Scenario

Under the WFA, the amount of water available for diversion varies depending on the American River's unimpaired inflow in drier years. Diversions can range from a maximum of 58,900 AFY in normal/wet years to a minimum of 39,800 AFY in critically dry years. Hydrologic data for the American River indicates that under the Water Forum Scenario, meeting the water demands of buildout of the City, including the proposed project, would require some level of water conservation in 15 years and use of groundwater in 6 years, over a period of 100 years. Specifically, there were two "driest" years in which the City's diversion from the American River would be limited to 39,800 AFY; six drier years in which the City's diversion from the American River would range from 40,000 to 50,000 AFY; and seven drier years in which the City's diversion from the American River would be greater than 50,000 AFY. These are outlined within the WSA for this project included as Appendix E1 to this Recirculated Draft Subsequent EIR.

The amount of groundwater pumped in each of these 6 years would vary depending on the year type and the amount of surface water cutbacks, but would not exceed 7,261 AFY. Including an assumed 220 AF to supplement recycled water in emergency conditions, the total amount of groundwater extracted by the City of Roseville in a 100-year period, is estimated to be 31,890 AF. This was determined based on the 100 year hydrologic record, the need to pump groundwater in only 6 of 100 years, and the annual amount of groundwater required during each of the 6 years. Groundwater pumping would occur only under drought stages three, four, and five. As discussed in Impact 9A.4, there is sufficient groundwater available to supply the

proposed project in drier and driest years under the Water Forum Scenario and the project would not require new or expanded water supply entitlements. This impact is considered less than significant.

Dry Year Water Supply – USBR OCAP Scenario

As discussed in Section 9A.2 above, the OCAP is an operations plan that coordinates operation of the CVP and SWP with each other and ensures protection of biological resources within the Sacramento River system and Delta. The OCAP has not been finalized and is subject to refinements by USFWS and NMFA to ensure protection of biological resources. This analysis of water supply under the OCAP is based on the modeling that was used by USFWS and NMFS to support their preparation of Biological Opinions and RPAs for the OCAP. The modeling was prepared with the CALSIM II model and was based on existing and assumed future conditions. Based on this modeling, it is expected that full deliveries of contracted water supplies would occur about 50% of the time. In some years, the RMC water conservation strategies for drought stages one and two (10% and 20%), would be sufficient to ensure that water demand does not exceed water supply. Approximately 30% of the time, the reduction in water supplies would require greater conservation and may require supplemental supply from groundwater.

Under the OCAP scenario, and assuming only a 20 percent reduction in demands from conservation efforts, groundwater would be required in 14 of 100 years as compared to 6 out of 100 years under the WFA assumptions. As above, annual groundwater needs to supplement surface water supplies would vary but would not exceed 7,261 AFY. An additional 220 AF is assumed to be needed to supplement recycled water supplies during emergency conditions. The total amount of groundwater extracted over 100 years under the OCAP scenario is estimated at 60,204 AF. As discussed in Impact 9A.4, there is sufficient groundwater available to supply the proposed project in drier and driest years and the project would not require new or expanded water supply entitlements. This impact is considered less than significant.

IMPACT 9A.2:	**Impact on American River and Delta Associated with Surface Water Diversion**
APPLICABLE POLICIES AND REGULATIONS:	Water Forum Agreement City of Roseville Urban Water Management Plan
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less than Significant
MITIGATION MEASURES:	None
SIGNIFICANCE AFTER MITIGATION:	Less than Significant

Water demands from the proposed Fiddyment Ranch SPA 3 project are estimated at 4,100 AFY. This amount would be reduced by 370 AFY as a result of water conservation measures incorporated in the project and by 705 AFY of demand that would be met by use of recycled water. Additionally, a portion of the water demands associated with the project were previously anticipated under Fiddyment Ranch development described in the WRSP and has been assumed in the City's water planning. The currently planned land uses for the Fiddyment Ranch area are assumed to have water supply demand of 3,528 AFY. The total additional water supply demand from the proposed project is 202 AFY.

It is also noted that demand associated with the 2009 Fiddyment Ranch SPA 3 project proposal was assumed in the most recent UWMP update. When accounting for the difference water conservation reductions, the currently proposed Fiddyment Ranch SPA 3 project would have slightly decreased water demand compared to the 2009 project.

The proposed project would increase the overall intensity of development within Fiddyment Ranch compared to the land uses and densities planned under the WRSP. The additional amount of water demand represented by the proposed project is 202 AFY as outlined in Table 9A-3 above.

At buildout of the City's General Plan and the proposed project, water demands, offset by the projected use of recycled water, would be 58,826 AFY (63,235 AFY buildout water demands – 4,409 AFY recycled water use). This volume of water falls within the City's current WFA wet year water supply entitlement of 58,900 AFY. As discussed in Section 9A.2, the diversion of 58,900 AFY from the American River was analyzed under the WFA EIR certified in October 1999.

Because the WFA EIR is over 10 years old, the City conducted an analysis to confirm or update the determinations related to the impacts on the American River and Delta from the City of Roseville diverting 58,900 AFY from the American River. This analysis is based on current regional water supply issues and conditions. This analysis, completed by Robertson – Bryan Inc. and HDR (*Sierra Vista Specific Plan EIR Technical Memorandum: Effects of Changed Water Management Operations on Fisheries and Water Quality Impacts Previously Disclosed in the Water Form Agreement EIR*, October 2009) is referred to as the RBI Study and is provided as Appendix E3 to this Recirculated Draft Subsequent EIR. The changed conditions documented in the RBI Study include CVP operation changes implemented since the WFA EIR as well as reasonably foreseeable actions that may impact CVP/SWP operations.

The Delta-related impacts that were re-analyzed are the 17 individually numbered impacts for Fisheries Resources and Aquatic Habitat and the two individually numbered impacts for Water Quality addressed within the WFA EIR and listed below. In all cases, the RBI Study confirmed that the analysis and conclusions in the WFA EIR are still valid under the changed conditions and that no new or substantially more severe significant findings would occur. As such the mitigation measures identified within the WFA EIR for these impacts are still valid. The mitigation measures applicable to the City of Roseville for these impacts are provided in the excerpt from the WFA EIR Executive Summary included in Appendix E4 to this Draft Subsequent EIR. The proposed Fiddyment Ranch SPA 3 project would not increase the extent or severity of these impacts, and would not alter the mitigation requirements. This impact is considered less than significant.

Fisheries Impacts

- Folsom Reservoir and Lake Natoma:
  - Impacts to Folsom Reservoir Coldwater and Warmwater Species (WFA EIR Impacts 4.5-1and 4.5-2),
  - Impact to Coldwater and Warmwater Species in Lake Natoma (Impact 4.5-3), and

- ♦ Temperature Impacts to Nimbus Fish Hatchery Operations and Fish Production (Impact 4.5-4).

❖ Lower American River:

- ♦ Impact to Fall-run Chinook Salmon (WFA EIR Impact 4.5-5).
- ♦ Impact to Steelhead (WFA EIR Impacts 4.5-6).
- ♦ Flow- and Temperature-Related Impacts to Splittail (Impact 4.5-7).
- ♦ Flow- and Temperature-Related Impacts to American Shad (Impact 4.5-8) and Striped Bass (Impact 4.5-9).

❖ Other CVP Reservoir Storage: Impacts to Coldwater and Warmwater Species in Shasta Reservoir (WFA EIR Impacts 4.5-10 and 4.5-11), Trinity Reservoir (WFA EIR Impacts 4.5-12 and 4.5-13), and Keswick Reservoir (WFA EIR Impacts 4.5-14).

❖ Sacramento River:

- ♦ Flow-Related Impacts to Sacramento River Fisheries (WFA EIR Impacts 4.5-15).
- ♦ Temperature-Related Impacts to Sacramento River Fisheries (WFA EIR Impacts 4.5-16).

❖ Delta: Impacts to Delta Fish Populations (WFA EIR Impacts 4.5-17).

Water Quality Impacts

❖ Lower American River and Folsom Reservoir Water Quality (Impact 4.4-1)

❖ Lower Sacramento River and Delta Water Quality (Impact 4.4-2)

IMPACT 9A.3:	**Require New Or Expanded Water Treatment Facilities**
APPLICABLE POLICIES AND REGULATIONS:	Water Master Plan City of Roseville Improvement Standards
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less than Significant
MITIGATION MEASURES:	None
SIGNIFICANCE AFTER MITIGATION:	Less than Significant

Water treatment for the City of Roseville is provided at the Barton Road WTP. The existing treatment plant has a rated capacity of 100 mgd and experienced peak demands of 58 mgd in July 2006. As documented above, potable water demands at buildout of the City and the proposed Fiddyment Ranch SPA 3 project are estimated at 58,826 AFY. This equates to an average day treatment demand of 52.5 mgd.

Peaking Factors

Peaking factors are used to calculate water demand expected under various conditions such as maximum day and peak hour periods. The maximum day demand is used to evaluate and size water delivery facilities; the peak hour peaking factor is used to evaluate storage capacity needs. For analysis of raw water delivery facilities (USBR pumping capacity and water treatment plant

capacity), a maximum day demand factor of 1.83 is used. This factor is based upon historical data representing actual water demands over a 15-year period.

Treatment Plant Capacity Needs

The average day water treatment demand for buildout of the City and the project is 52.5 mgd. Using the maximum day peaking factor of 1.83 described above, a water treatment plant capacity of 96.1 mgd would be required. The City's water treatment plant currently has a capacity of 100 mgd. Because treatment plant capacity exceeds anticipated buildout plus project demands, this impact is considered less than significant.

IMPACT 9A.4:	**Deplete Groundwater Supplies**
APPLICABLE POLICIES AND REGULATIONS:	City of Roseville General Plan Water Forum Agreement Groundwater Management Plan
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less than Significant
MITIGATION MEASURES:	None
SIGNIFICANCE AFTER MITIGATION:	Less than Significant

Development of the proposed project would increase the demand for water supplies, and in driest and some drier years, the City would meet the increased demand in part through groundwater pumping. Groundwater may also be used as an emergency backup for recycled water supplies in accordance with City policy.

When a well first begins extracting groundwater from an aquifer's groundwater storage, it results in a localized cone of depression that fluctuates with operation of the well. When extraction decreases, the aquifer typically recharges and returns to its pre-extraction condition. Over time, a well can also induce an incremental decline in regional groundwater elevations. Large cones of depression can form in areas where multiple groundwater extraction wells are in operation. The use of groundwater, although relatively infrequent, could affect aquifers in an area by altering groundwater elevations, which could in turn, affect recharge conditions, change aquifer storage characteristics, result in localized well impacts, and/or cause areas of poorer quality groundwater to shift.

The following analysis of the effects on the groundwater basin of extracting groundwater to provide potable water supplies is based in part on a groundwater impact analysis prepared by MWH in June 2003 (*Groundwater Impact Analysis for Proposed Reason Farms Land Retirement Plan*). That report was included as an Appendix to the Creekview Specific Plan EIR and is available for review at the City of Roseville website. The MWH report used the *North American River and Sacramento County Combined Integrated Groundwater and Surface Water Model* (IGSM) to simulate groundwater conditions.

Reason Farms is a 1,754-acre City owned property located northwest of the WRSP Area. Prior to City acquisition of the property in early 2003, Reason Farms was used for rice production. It is estimated that approximately 6,483 AFY of groundwater was extracted from the aquifer underlying the property and applied to 1,080 acres of the land for irrigation purposes. The major portion of this water was lost to evapotranspiration, while a smaller amount returned to

the groundwater basin through deep percolation. Since the City acquired the property in 2003, rice farming has been discontinued and the property is now dry farmed resulting in "banked" groundwater. However, up to approximately 700 AFY may still be used to support cattle ranch and dry farming operations. The following assumptions were made for the analysis of mitigating dry-year and emergency groundwater use, which was assumed to be accomplished by revised farming practices at the Reason Farms property:

- 1,080 acres of land removed from rice production
- 6,483 AFY of groundwater formerly extracted for rice irrigation demand
- 2,632 AFY of groundwater used for irrigation returned to the basin by deep percolation
- 700 AFY of groundwater used for cattle or dry farming operations
- Net 3,151 AFY of groundwater recharge "banked" for beneficial uses (6,483 AFY – 2,632 AFY – 700).

Water Forum Scenario

As discussed in Impact 9A.1, it is estimated that groundwater would need to be used in 6 years out of 100 to supplement available surface water supplies under the Water Forum scenario. This is based on the water demands for the proposed project and buildout of the City's General Plan as well as recycled water use and a 20 percent reduction in demand due to implementation of conservation measures in dry years. If groundwater pumping is needed to augment surface water supplies, it is estimated that the amount of groundwater pumped in a single per year would not exceed 7,290 AFY. The total amount of groundwater pumped in the 100-year analysis period is estimated not to exceed 31,890 AF. The amount of banked groundwater obtained through fallowing Reason Farms is estimated to be 296,194 AF (banking assume to occur in 94 years of 100 years with a total of 3,151 AF banked annually). After subtracting the amount of groundwater used for dry years, the groundwater recharge (banking) that occurs at the Reason Farms property would ensure that 264,304 AF would remain in the groundwater basin (296,194 AF – 31,890AF). Because the amount of groundwater pumped over the 100 year hydrologic conditions analyzed would be less than the amount banked through the fallowing of Reason Farms, groundwater pumping to augment surface water supplies would not result in a long-term drawdown of the aquifer and this impact is considered less than significant.

USBR OCAP Scenario

Under the OCAP projected deliveries, it is expected that groundwater pumping would be necessary in 14 out of 100 years. The estimated amount of groundwater per year needed to augment surface water supplies would vary based on actual surface water supplies but would not exceed 7,261 AFY, and would total 60,204 AF for the 100-year analysis period. The amount of banked groundwater obtained through fallowing Reason Farms is estimated to be 270,986 AF (banking assumed to occur in 86 years out of 100 years with a total of 3,151 AFY banked). After subtracting the amount of groundwater used in dry years from the amount of bank groundwater, 210,782 AF would remain in the groundwater basin (270,986 AF – 60,204 AF). Because the amount of groundwater pumped over the 100 year hydrologic conditions analyzed would be less than the amount banked through the fallowing of Reason Farms, groundwater pumping to augment surface water supplies would not result in a long-term drawdown of the aquifer and this impact is considered less than significant.

9A.5 MITIGATION MEASURES

Require New or Expanded Water Supply Entitlements

This impact is determined to be less than significant. No mitigation measures are necessary.

Impact on American River and Delta Associated with Surface Water Diversion

This impact is determined to be less than significant. No mitigation measures are necessary.

Require New or Expanded Water Treatment Facilities

This impact is determined to be less than significant. No mitigation measures are necessary.

Deplete Groundwater Supplies

This impact is determined to be less than significant. No mitigation measures are necessary.

CHAPTER 9B WASTEWATER CONVEYANCE AND TREATMENT

9B.1 INTRODUCTION

The proposed Fiddyment Ranch Specific Plan Amendment (SPA) 3 project would amend the existing West Roseville Specific Plan (WRSP) by changing the land use and zoning designations for some parcels and by changing development densities within the project area. The project would result in the development of 1,661 additional residential units and 7.3 additional acres of commercial land uses compared with the development evaluated in the WRSP EIR. Other changes proposed to the land uses within the Fiddyment Ranch SPA 3 project area include minor adjustments in acreage for parks, open space, public/quasi-public (elementary school), and roadway rights-of-way. While the wastewater generation and treatment requirements for the overall WRSP were evaluated in the WRSP EIR, the additional development proposed as part of the Fiddyment Ranch SPA 3 project would generate additional demand for wastewater treatment. In addition, other development has been approved in the City since the time the WRSP was approved. This Recirculated Draft Subsequent EIR chapter evaluates the capacity of wastewater conveyance and treatment facilities that serve the City of Roseville and the availability of wastewater conveyance and treatment capacity to serve the proposed project.

Information for this analysis was based upon information within the following documents:

- *Creekview Specific Plan Final EIR*, City of Roseville, April 2011 (hereby incorporated by reference)
- *Cumulative Analysis of UGA Impacts on Water Quality and Aquatic Resources in Pleasant Grove Creek*, 2006
- *Sanitary Sewer Study Fiddyment Properties SPA No. 3 and Phase 2*, Wood Rodgers, 2010
- *Roseville Regional Wastewater Treatment Service Area Master Plan*, City of Roseville, 1996
- *Roseville Regional Wastewater Treatment Service Area Master Plan Final EIR,* City of Roseville 1996
- *South Placer Regional Wastewater and Recycled Water Systems Evaluation* (Systems Evaluation), June 2007 and all supporting Technical Memoranda (as updated)
- *West Roseville Specific Plan FEIR,* City of Roseville, February 2004

All of the above listed documents are available for review during normal business hours at:

City of Roseville Permit Center
311 Vernon Center
Roseville, California

The 2013 Notice of Preparation (NOP) for this EIR, the Initial Study, comments received in response to the NOP and comments received at the 2013 Public Scoping Meeting are provided in Appendix A. No comments related to wastewater generation and treatment were received in response to the NOP. As discussed in **CHAPTER 1 INTRODUCTION**, an NOP was circulated in 2010 and a Draft Subsequent EIR was circulated in 2011 for a previous Fiddyment Ranch SPA 3 proposal. The comments on the 2010 NOP and 2011 Draft Subsequent EIR are also included in Appendix A. No comments related to wastewater generation and treatment were received in

response to the 2010 NOP. Many comments on the 2011 Draft Subsequent EIR stated concern that the EIR analysis of project impacts, including impacts related to wastewater, did not fully capture the significant impacts of the project; however no specific details regarding this concern were provided. The analysis in this chapter identifies the volume of wastewater that would be generated by the proposed project and compares that to existing and projected capacity of the wastewater treatment plant.

9B.2 SETTING

The City of Roseville serves as the wastewater service provider for the City and would be the service provider for the proposed Fiddyment Ranch SPA 3 project. Wastewater is collected in sewer lines that ultimately connect to one of two regional wastewater treatment facilities which the City owns and operates on behalf of the regional partners in the South Placer Wastewater Authority (SPWA). These are the Dry Creek Wastewater Treatment Plant (WWTP) and the Pleasant Grove WWTP. Treated wastewater is then either discharged into local area creeks in accordance with state permit requirements or is used as recycled water supply.

Regional Wastewater Treatment

South Placer Wastewater Authority

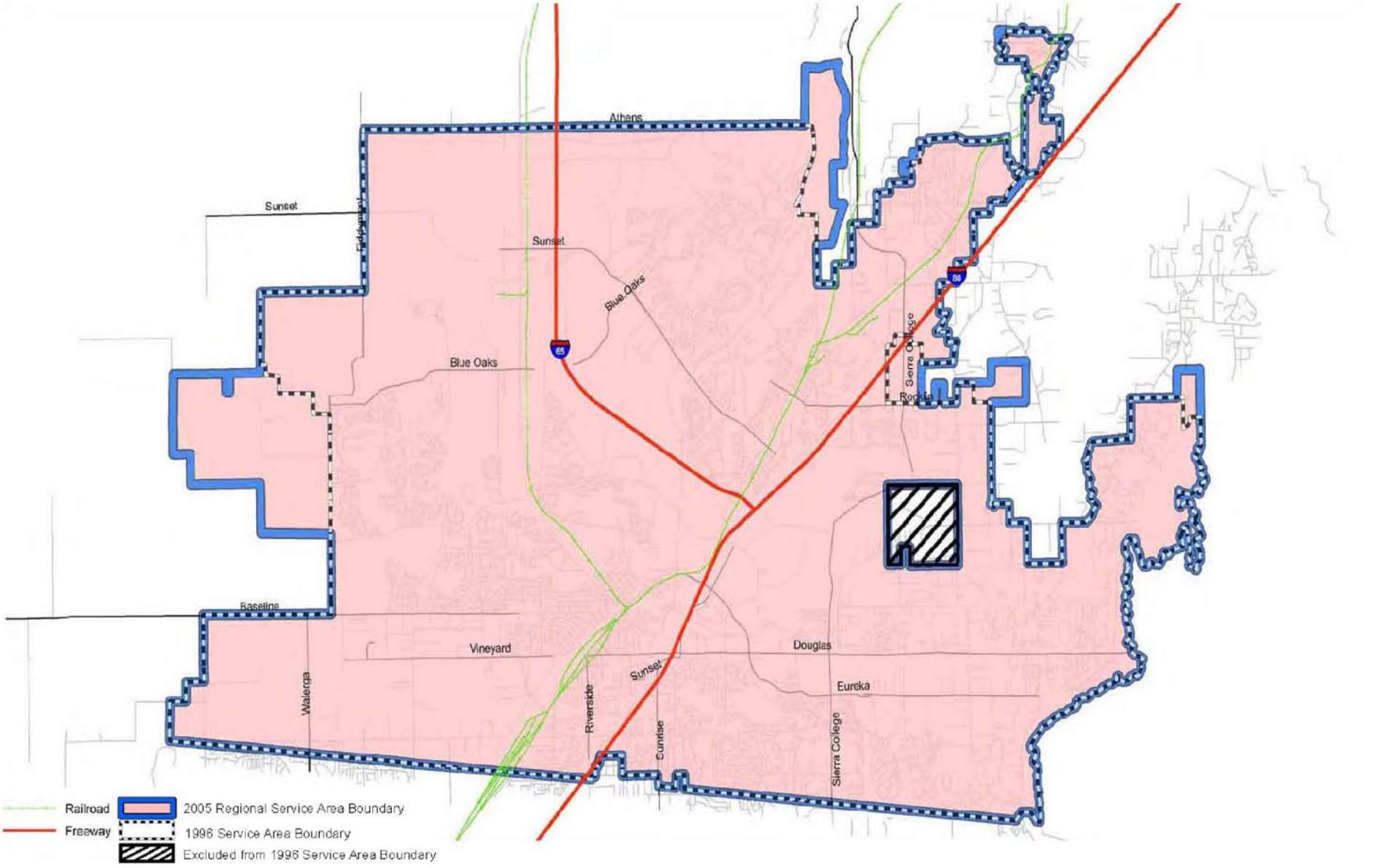
The South Placer Wastewater Authority (SPWA) is a joint powers authority formed to fund regional wastewater and recycled water facilities in southwestern Placer County. There are three partner agencies that comprise SPWA (the "participants"): the City of Roseville, the South Placer Municipal Utility District (SPMUD), and Placer County. The regional facilities funded by the SPWA thus far include recycled water facilities, trunk sewer lines, and two WWTPs. All three participants transmit wastewater to these WWTPs.

Each SPWA participant is committed to meeting the operational criteria established in the SPWA Funding Agreement and the SPWA Operations Agreement. The Funding Agreement outlines each participant's responsibility for debt service on SPWA's bonds and funding of regional facilities. The Operations Agreement documents maintenance and operations responsibilities for regional facilities (primarily the wastewater treatment plants) and establishes the City of Roseville as the owner and operator of the two WWTPs. The Operations Agreement also identifies a regional service area boundary which delineates the area served by SPWA-funded regional facilities, as discussed further below.

Wastewater Service Area

The City of Roseville prepared the South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation 2007 and updated 2009) which delineates the 2005 regional wastewater service area boundary (2005 SAB) and provides baseline and projected characterizations of the City's regional wastewater and recycled water systems. *Figure 9B-1* shows the 2005 SAB, which includes the Fiddyment Ranch project site. The 2005 SAB includes areas within Roseville, Rocklin, Loomis, and portions of unincorporated Placer County. The Fiddyment Ranch SPA 3 project site is included in the 2005 SAB.

The Systems Evaluation is also the long-term planning tool to project wastewater treatment needs and identify necessary capital improvement projects to accommodate urban growth within the 2005 SAB. The Systems Evaluation addressed system conditions as of June 2004 and



DUDEK

SOURCE: South Placer Wastewater Authority

FIGURE 9B-1
2005 SAB

7677-05

FIDDYMENT RANCH SPA 3 EIR

anticipated buildout conditions within the 2005 SAB. Buildout within the 2005 SAB would result in 16.34 million gallons per day (mgd) average dry weather flow (ADWF) at the Dry Creek WWTP and 16.52 mgd ADWF at the Pleasant Grove WWTP (RMC 2009) totaling 32.86 mgd ADWF in the 2005 SAB.

In addition to buildout of the 2005 SAB, the Systems Evaluation evaluates future Urban Growth Areas (UGAs) to determine an ultimate SPWA service area boundary. The UGAs include recently approved and pending specific plans and other development proposals, and thus include areas that have not yet been approved for development. Specifically, the UGAs considered in the System Evaluation include:

- Curry Creek;
- Regional University;
- Invoro Tech;
- Portions of Placer County;
- Orchard Creek;
- Placer Ranch;
- Placer Vineyards;
- SMD-3;
- SPMUD;
- Creekview including the panhandle;
- Sierra Vista; and
- Amoruso Ranch Study Area.

Buildout of this ultimate SPWA Service Area would result in 25.67 mgd ADWF at the Pleasant Grove WWTP and 19.98 mgd ADWF at the Dry Creek WWTP with total buildout of 45.65 mgd ADWF in the Service Area.

Regional Wastewater Treatment Plants

The Pleasant Grove WWTP would serve the Fiddyment Ranch SPA 3 project area. This plant is located on the east side of Westside Drive, south of the Roseville Energy Park. This plant currently serves the northwest areas in the City of Roseville, the Stanford Ranch area of SPMUD, and the Sunset Industrial Area of Placer County. The Pleasant Grove WWTP currently treats approximately 7 million gallons per day (mgd) average dry weather flow (ADWF) with approximately 4 mgd coming from the City of Roseville. The Pleasant Grove WWTP provides tertiary-level treatment through the process of screening, grit removal, extended aeration, secondary clarification, filtration, ultraviolet disinfection. The plant provides full nitrification and de-nitrification; it also produces recycled water that meets Title 22 regulations for full, unrestricted use. Recycled water is used to irrigate golf courses, parks, streetscapes and other public areas including landscaped areas in commercial and multi-family residential developments.

The Pleasant Grove WWTP is presently authorized to discharge treated effluent into Pleasant Grove Creek under the National Pollutant Discharge Elimination System (NPDES) Permit No. CA0084573 adopted on June 12, 2008. Under this permit the PGWWTP can discharge an ADWF of 12 mgd, increasing to a permitted ADWF discharge of 15 mgd upon completion of additional treatment facilities.

The Dry Creek WWTP, located on Booth Road along Dry Creek in the southwest portion of the City, provides tertiary-level wastewater treatment through the process of screening, grit removal, primary clarification, aeration, secondary clarification, filtration and ultraviolet disinfection; in addition, the Dry Creek WWTP provides full nitrification and de-nitrification.

The current ADWF is approximately 10 mgd, of which approximately 6 mgd come from the City of Roseville. The plant can discharge up to 18 mgd ADWF into Dry Creek under an existing NPDES permit No. CA0079502 adopted on June 12, 2008. It is not anticipated that this plant would serve the proposed project.

Service Area Flows

Current flow data from the Pleasant Grove WWTP indicate the ADWF at the Pleasant Grove WWTP is 7 mgd. The Systems Evaluation provides estimates of flow to the Pleasant Grove WWTP at buildout of the of the 2005 SAB, as well as at buildout of the ultimate SPWA service area boundary. At buildout of the 2005 boundary, wastewater flows (including proposed redevelopment/intensification within Roseville and Rocklin) are anticipated to be 16.52 mgd ADWF (RMC 2009). Under the ultimate SPWA Service Area (the current 2005 SAB plus anticipated Urban Growth Areas), the ADWF is estimated at 25.67 mgd (RMC 2009).

The Roseville Regional Wastewater Treatment Service Area Master Plan EIR (Environmental Science Associates 1996) evaluated the impacts of treating and discharging effluent up to 29.5 mgd ADWF at the Pleasant Grove WWTP. Additionally, the WRSP EIR (EIP Associates 2003) evaluated the impacts of treating and discharging effluent up to 24.7 mgd ADWF at the Pleasant Grove WWTP. Both environmental documents are hereby incorporated by reference, and the applicable portions of the impact analysis are summarized in Section 9B.3 of this chapter. Throughout this document, the Roseville Regional Wastewater Treatment Service Area Master Plan EIR is also referred to as the Wastewater Master Plan EIR (WWMP EIR). As noted above, the WWMP EIR and WRSP EIR are available for review at the City of Roseville Permit Center and the WRSP EIR is also available for review on the City of Roseville website.

Wastewater Conveyance Infrastructure

The wastewater collection and conveyance system within the City of Roseville includes both gravity sewer lines and lift stations with associated force mains. A 78-inch trunk sewer line exists south of Pleasant Grove Creek through the project site. There are also two existing 15-inch trunk lines and one 36-inch trunk line within the project site. These lines convey wastewater to the Pleasant Grove WWTP.

Recycled Water

Recycled water refers to WWTP effluent that has received a level of treatment that meets the State requirements (Title 22) for direct non-potable reuse (for example, landscaping irrigation). Recycled water is part of the City's water supply portfolio and is available from both of Roseville's WWTPs. Both plants produce a Title 22-quality effluent that is available for recycled water applications. The system currently delivers nearly 2,040 AFY of recycled water to City parks, streetscapes, and golf courses and an additional 960 AFY to other water system customers. System expansion is planned for more intensive use of recycled water in the western portion of the City as new development is built. Recycled water used within the Fiddyment Ranch SPA 3 project area would be provided from the Pleasant Grove WWTP.

The City's recycled water system and anticipated demands are described in Chapter 9C of this Recirculated Draft Subsequent EIR. Recycled water is discussed in this section as it pertains to the wastewater treatment system.

9B.3 REGULATORY SETTING

Federal Regulations

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the U.S. The discharge of wastewater to surface waters is prohibited unless an NPDES permit has been issued to allow that discharge. Each NPDES permit includes the following provisions:

- limits of allowable concentrations and/or mass of pollutants contained in the discharge effluent and the receiving water;
- prohibitions on discharges not specifically allowed under the permit;
- provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, and self-monitoring activities; and
- other regulatory requirements.

The Clean Water Act delegates implementation of the NPDES program to the State Water Resources Control Board (SWRCB), which in turn delegates authority to each of the nine Regional Water Quality Control Boards (RWQCBs). The wastewater discharge from the Pleasant Grove WWTP to Pleasant Grove Creek is regulated under a NPDES permit issued by the Central Valley RWQCB. To obtain the permit, a Report of Waste Discharge (RWD) was prepared. The RWD includes information about the design and operation of the treatment plant (including the ADWF for the plant), influent wastewater characteristics, and removal rates for specific water quality parameters. The NPDES permit and the Waste Discharge Requirements (WDR) are used to identify discharge prohibitions, effluent limitations, and monitoring and reporting requirements.

The discharge prohibitions and limitations in the permit are designed to ensure maintenance of public health and safety, protection of receiving water resources, and safeguarding of designated beneficial uses of water bodies. Discharge limitations in the Pleasant Grove WWTP permit define allowable effluent concentrations for flow, biological oxygen demand (BOD), total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, and pH. Limitations also encompass mineralization and toxicity to aquatic life. The permit includes stipulations for the disposal of solid materials, and limitations on impacts to receiving waters. The permit also specifies the sampling, monitoring, and reporting of requirements for compliance with waste discharge regulations. The monitoring program entails sampling influent, effluent, and the receiving water. The provisions of the NPDES permit and the WDR are enforceable through an order issued by the RWQCB or civil action.

State

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that will provide protection to the State's waters for the use and enjoyment of the people of California. In California, the SWRCB has authority and

responsibility for establishing policy for water quality control issues for the State. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The Porter-Cologne Water Quality Control Act authorizes the SWRCB and RWQCB to issue NPDES permits containing WDRs, and to enforce these permits. SWRCB and RWQCB regulations implementing the Porter-Cologne Water Quality Control Act are included in Title 27 of the California Code of Regulations.

General Waste Discharge Requirements for Sanitary Sewer Systems

The General WDRs for Sanitary Sewer Systems was adopted by the SWRCB in May 2006. These WDRs require local jurisdictions to develop a Sewer System Management Plan (SSMP) that addresses the necessary operation and emergency response plans to reduce sanitary sewer overflows. A SSMP must include several other elements, such as those providing design and construction standards; requirements for control of fats, oils, and greases; and performance measures. The Roseville City Council approved the City's SSMP on January 21, 2009.

Local

City of Roseville Municipal Code

Section 14 of the City's Municipal Code contains regulations associated with sewer use, sewer rates and charges, and industrial wastewater. Chapters 14.12 and 14.26 prohibit discharge to a sanitary sewer of any pollutant or wastewater that would interfere with the operation or performance of the City's wastewater collection or treatment facilities. Chapter 14.12 also defines requirements for establishing new connections to the public sewer system.

City of Roseville General Plan

The City of Roseville General Plan contains goals and policies that are designed to ensure that residents have adequate wastewater service.

Goal 1: Participate in a cooperative regional approach to wastewater that adequately services planned growth within the city.

Goal 2: Provide wastewater services to all existing and future Roseville development through the City's wastewater utility. The provision of services by another provider may be considered when it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible.

Goal 4: Meet State of California and EPA water quality standards for the discharge of treated wastewater, as well as meet State of California quality standards for the production of recycled water.

Policy 2: Ensure adequate storm surge capacity at the wastewater treatment plants.

Policy 4: Ensure that wastewater treatment capacity is available and that wastewater generation is minimized.

City of Roseville Improvement Standards

Section 9 of the City's Improvement Standards (Sanitary Sewer Design) provides criteria for design of sewer systems. Compliance with these standards minimizes the potential for impacts related to wastewater conveyance by ensuring that wastewater collection and conveyance facilities are properly sized to convey the flows from each project.

9B.4 IMPACTS

Significance Criteria

Potential impacts associated with wastewater collection, conveyance, and treatment have been evaluated using criteria identified in Appendix G of the CEQA Guidelines. The analysis below considers whether the project would have a significant wastewater related impact by resulting in any of the following conditions:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board
- Require or result in the construction of new wastewater collection or treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

Project Impacts

IMPACT 9B.1:	**Impair Water Quality as a Result of Increased Wastewater Discharges**
APPLICABLE POLICIES AND REGULATIONS:	Porter-Cologne Water Quality Act NPDES Permit City of Roseville Municipal Code
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less Than Significant
MITIGATION MEASURES:	None Required
SIGNIFICANCE AFTER MITIGATION:	Less Than Significant

The Fiddyment Ranch SPA 3 project area is included within the 2005 SAB. The 2009 Systems Evaluation found that wastewater flows from buildout of the 2005 SAB, including an assumed 6,501 residential units within Fiddyment Ranch, are expected to generate 16.52 mgd ADWF of wastewater to be treated at the Pleasant Grove WWTP. The proposed project would reduce development intensity within the 2005 SAB, providing a total of 5,869 residential units within Fiddyment Ranch – a decrease of 632 units. It is expected that the reduction in units within Fiddyment Ranch would decrease wastewater flows by 0.10 mgd. Thus, implementation of the proposed Fiddyment Ranch SPA 3 project would not be expected to increase the projected ADWF of wastewater treated at the Pleasant Grove WWTP.

Since development of the Systems Evaluation estimate (16.52 mgd ADWF), Placer County approved the Regional University Specific Plan. Development of that project would generate

an additional 1.17 mgd ADWF which would be treated at the Pleasant Grove WWTP. Also since development of the Systems Evaluation estimate, the City of Roseville approved the Sierra Vista Specific Plan, Westbrook Amendment to the Sierra Vista Specific Plan, Creekview Specific Plan, and the Westpark Phase #4 amendment to the WRSP. Development of these projects would generate an additional 2.26 mdg ADWF which would be treated at the Pleasant Grove WWTP. Thus, the total flows to the Pleasant Grove WWTP from development within the 2005 SAB and approved development outside the SAB are currently anticipated to be 19.95 mgd. With implementation of the proposed Fiddyment Ranch SPA 3 project, the total flows to the Pleasant Grove WWTP would be reduced by 0.10 mgd to 19.85 mgd.

As discussed above, the WRSP EIR evaluated impacts and identified mitigation measures associated with the expansion of the Pleasant Grove WWTP to 24.7 mgd ADWF and the impacts of discharging up to 29.5 mgd ADWF were addressed in the WWMP EIR. In addition, a technical memorandum titled *Cumulative Analysis of UGA Impacts on Water Quality and Aquatic Resources in Pleasant Grove Creek* (Merritt Smith Tech Memo; Merritt Smith 2006) was prepared to evaluate the cumulative impacts to water quality and aquatic resources associated with treatment and discharge of all foreseeable wastewater flows from future UGAs (e.g., discharge of flow from areas outside the 2005 SAB). The Merritt Smith Tech Memo calculated the estimated future ADWF from the PGWWTP 2005 SAB plus flows from the UGAs located outside of the 2005 SAB as 23.4 mgd. A copy of the Merritt Smith Tech Memo is available for review at the City of Roseville; it is also provided on the City's website as Appendix I of the Creekview Specific Plan EIR.

The WWMP EIR and the Merritt Smith Tech Memo considered the following potential water quality impacts related to discharge of effluent to Pleasant Grove Creek as well as flow-related effects:

- Temperature
- Trace Metals and Organic Pollutants
- Aquatic Life Toxicity
- Mercury
- pH
- Biostimulatory substances (Nutrients)
- Dissolved Oxygen
- Taste and Odor
- Flooding Effects
- Sedimentation/Turbidity
- Riparian Habitat Effects

The Merritt Smith Tech Memo confirmed the impacts and mitigation measures documented in the WWMP EIR are still valid for the potential cumulative effects of wastewater flows from the UGAs. With the exception of temperature, trace metals/organic pollutants, dissolved oxygen and riparian habitat, all other issues were determined to have a less then significant impact. Table 9B-1 summarizes the mitigation measures established in the WWMP EIR to reduce remaining potentially significant impact issues to less than significant levels. While the proposed project would contribute to wastewater flows at the Pleasant Grove WWTP, the impacts associated with treating regional wastewater flows have been previously evaluated and mitigated to the extent feasible. The proposed project would not increase these impacts or alter the mitigation requirements.

Table 9B-1
Water Quality and Aquatic Resource Mitigation Measures for Pleasant Grove WWTP Discharges up to 29.5 mgd

Impact Issue	Impact	Mitigation Measures from WWMP EIR
Temperature	Additional flow will increase thermal load in Pleasant Grove Creek	MM7-4: Install cooling towers if necessary.
Trace Metals, Organic Pollutants	Additional flow will reduce dilution from Pleasant Grove Creek, resulting in a greater concentration of effluent constituents	MM7-2: Install advanced treatment facilities. MM7-3: Use pre-treatment metal source controls.
Dissolved Oxygen	Biochemical oxygen de3mand of effluent should be under 3 mg/L to prevent potentially significant decreases in dissolved oxygen	MM7-2: Install advanced treatment facilities. MM7-3: Use pre-treatment metal source controls.
Riparian Habitat	Loss of oak trees due to effluent discharge	MM4-13: Conduct oak mortality monitoring along creek.

Under the WWMP EIR, the City of Roseville is required to implement the mitigation measures listed in Table 9B-1. Compliance with these measures and with the NPDES permit would avoid the potential for significant impacts associated with an increased discharge of treated effluent from the Pleasant Grove WWTP by ensuring that water quality standards are met. Additionally, Chapter 14.26 of the City's Municipal Code prohibits discharge to any sanitary sewer of any pollutant or wastewater that would interfere with the operation or performance of the City's wastewater collection or treatment facilities. Future expansion(s) of the Pleasant Grove WWTP, as evaluated in the WRSP EIR and WWMP EIR, would require modifications to the plant's NPDES permit. Compliance with the modified permit and enforcement of the City's Municipal Code would ensure that water quality impacts associated with increased effluent discharges remain less than significant.

IMPACT 9B.2:	**Construction or Expansion of Wastewater Collection/Conveyance Facilities**
APPLICABLE POLICIES AND REGULATIONS:	City of Roseville Improvement Standards
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less Than Significant
MITIGATION MEASURES:	None Required
SIGNIFICANCE AFTER MITIGATION:	Less Than Significant

Wastewater from the proposed project would be conveyed to the Pleasant Grove WWTP for treatment by a network of pipes installed within street rights-of-way or easements. The conveyance system would include onsite collection systems and off-site existing and planned collection systems located within the WRSP area. Sewer collection pipes within the project area

would range in size from 8 inches to 21 inches in diameter. Flows from the project area would connect to existing or planned infrastructure within the WRSP, which connect to the Pleasant Grove WWTP.

Requirements for onsite wastewater conveyance facilities that would be constructed with the proposed Fiddyment Ranch SPA 3 project are identified in the Sanitary Sewer Study prepared by Wood Rodgers, which is included as Appendix E5 to this Recirculated Draft Subsequent EIR. The study identifies evaluates and calculates wastewater flow and sizing of sewer siphon and pipe networks for the project's Sanitary Sewer service area. The study was prepared in support of the 2009 project application for the Fiddyment Ranch SPA 3 project, which proposed 1,905 additional dwelling units in the project area. The study considers wastewater flow contributions from the overall Fiddyment Ranch development area, a total of 6,112 dwelling units, some of which have already been constructed. The study area also includes the adjacent Urban Growth Area Placer Ranch as some flows from that future development area would be conveyed through the Fiddyment Ranch site. In determining necessary sanitary sewer line sizes, the study considers both ADWF and PWWF. The study determines that the proposed project would not exceed the capacities of any existing sewer trunk line facilities. As stated above, the study was based on the 2009 Fiddyment Ranch SPA 3 project. The current project proposes 244 fewer dwelling units and would generate less wastewater; therefore the wastewater generated by the currently proposed project would not exceed the capacities of any existing sewer trunk line facilities. Further, as discussed above, the study identifies several 15-inch lines and one 36-inch line that would serve as the backbone onsite wastewater conveyance facilities. Compliance with the City of Roseville improvement standards would ensure that the wastewater collection and conveyance facilities would be adequate to serve the proposed project.

Wastewater conveyance facilities constructed as part of the project would be constructed in public roads and rights-of way and the physical impacts of the associated construction activities were evaluated in Impact 4.11-6 of the WRSP EIR. The proposed Fiddyment Ranch SPA 3 project would not change the footprint of development compared to the footprint evaluated in the WRSP EIR. Impact 4.11-6 was determined to be less than significant, and the proposed project would not alter that determination. Therefore impacts related to construction of wastewater conveyance infrastructure for the Fiddyment Ranch SPA 3 project would be less than significant.

IMPACT 9B.3:	**Exceed Wastewater Treatment Capacity or Result in Physical Environmental Effects from Construction or Expansion of Wastewater Treatment Facilities**
APPLICABLE POLICIES AND REGULATIONS:	Chapter 14.26 of Roseville Municipal Code
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Significant
MITIGATION MEASURES:	Mitigation Measure 9B.3a
SIGNIFICANCE AFTER MITIGATION:	Less Than Significant

As discussed above, the total flows to the Pleasant Grove WWTP from development within the 2005 SAB and approved development outside the SAB (Sierra Vista Specific Plan, Westbrook Amendment to the Sierra Vista Specific Plan, the WRSP Westpark Phase #4 Amendment, and

Creekview Specific Plan) are currently anticipated to be 19.95 mgd. With implementation of the proposed Fiddyment Ranch SPA 3 project, the total flows to the Pleasant Grove WWTP would be reduced by 0.10 mgd to 19.85 mgd.

The existing treatment capacity of the Pleasant Grove WWTP is 12 mgd. The Pleasant Grove WWTP would need to be expanded to treat all wastewater flows from buildout of the 2005 SAB or expanded SAB as approved by the SPWA, including the proposed project. As evaluated in the WRSP EIR, development of Fiddyment Ranch under the WRSP would incrementally contribute to the need for expansion of the Pleasant Grove WWTP because WWTP capacity must be expanded prior to developing residences and non-residential uses that would cause total wastewater flows to exceed the existing treatment capacity. Because the Systems Evaluation assumed more units than are proposed under the Fiddyment Ranch SPA 3 project, the total flows to the Pleasant Grove WWTP would actually be less than what is anticipated under the Systems Evaluation. However, expansion of the Pleasant Grove WWTP would still be necessary and this impact is considered significant. As noted in General Plan Policy 3 above, the City of Roseville will initiate expansion efforts at the time the Pleasant Grove WWTP nears 75% capacity.

The WRSP identified a 20-acre city-owned parcel on the south side of the Pleasant Grove WWTP to accommodate future expansion of that facility and the WRSP EIR evaluated impacts and identified mitigation measures associated with the expansion of wastewater treatment facilities up to 24.7 mgd ADWF. Construction impacts associated with plant expansion that are anticipated to occur include noise, dust, air pollutant emissions from construction vehicles, increased traffic congestion due to construction vehicles, potential disruption of utility lines, erosion, water quality degradation, and potential disturbance of cultural resources. As evaluated in the WWMP EIR, the construction impacts of the expansion necessary to support the Fiddyment Ranch development (under the existing WRSP and under the proposed Fiddyment Ranch SPA 3 project) would be temporary and would be less than significant after mitigation. The WRSP EIR identified Mitigation Measure 4.11-5 to reduce this impact to a less than significant level. This measure requires project applicants for development within the WRSP to demonstrate that the Pleasant Grove WWTP would be expanded to a treatment capacity of 22.4 mgd prior to issuance of building permits for development that would cause total wastewater flows from the WRSP area to exceed 1.1 mgd. This measure also requires applicants for development within the WRSP to obtain necessary permits to discharge the treated flow, demonstrate that the timing of WWTP expansion would be sufficient to serve the WRSP area without impeding other development assumed in the WWMP, and implement all relevant mitigation measures identified in the WWMP EIR.

Because the plant would be expanded (rather than having a new plant constructed), it can be assumed that the construction and operational impacts would be similar to those associated with the existing facility. Expansion of the treatment plant would likely contribute to potential growth inducement, land use compatibility conflicts, traffic, noise, dust, odors, and water quality impacts, including increased outfall to Pleasant Grove Creek and potential impacts to water temperatures. These impacts were evaluated and mitigated to the extent feasible in the WWMP EIR (SCH #93092079). The impacts within the WWTP expansion site that have previously been identified include:

- Loss of vernal pools/seasonal wetlands, and impacts to vernal pool special status species
- Loss of raptor habitat
- Odor and noise emissions
- Increased criteria air pollutant emissions due to subsequent development

It is anticipated these impacts would occur if the Pleasant Grove WWTP were expanded on the 20-acre parcel to the south of the plant. Implementation of *Mitigation Measure 9B.3a* will ensure that applicants for development within the Fiddyment Ranch SPA 3 area will fund their fair share of costs to construct the additional wastewater treatment capacity and environmental review necessary to authorize that construction, that at the time expansion is deemed necessary the City will prepare the necessary CEQA documents to analyze any impacts and identify appropriate mitigation measures, and that the mitigation measures previously identified to avoid or reduce impacts associated with expansion of the Pleasant Grove WWTP will be implemented. With implementation of this mitigation measure, environmental effects associated with construction of the WWTP expansion will be reduced to less than significant levels.

9B.5 MITIGATION MEASURES

Impair Water Quality as a Result of Increased Wastewater Discharges

This impact is determined to be less than significant. No mitigation measures are necessary.

Construction or Expansion of Wastewater Collection/Conveyance Facilities

This impact is determined to be less than significant. No mitigation measures are necessary.

Exceed Wastewater Treatment Capacity or Result in Physical Environmental Effects from Construction or Expansion of Wastewater Treatment Facilities

Mitigation Measure 9B.3a: The project applicant shall participate financially through connection fees in the construction of additional wastewater treatment capacity sufficient to accommodate projected flows. The applicant shall also participate on a fair share basis in other financial mechanisms for any additional environmental review required to secure approvals necessary to increase wastewater discharges from the plant. It is recognized that the Fiddyment Ranch Specific Plan Amendment 3 applicant will rely on the City (on behalf of the SPWA partners) to construct regional treatment and regional transmission facilities needed to discharge treated wastewater flows from within the service area boundary. In the event the City is unable to obtain the appropriate permits (e.g. NPDES permit) or is unable to complete the required facility expansions, development within the service area boundary may continue until existing capacity has been exhausted, at which time any additional development will be curtailed until sufficient treatment and discharge capacity becomes available. Further, the applicant and/or the City, as appropriate, shall implement all relevant construction related mitigation measures for expansion of the plant listed in Appendix E6 of this Recirculated Draft

Subsequent EIR and all water quality and aquatic resource mitigation measures applicable to this project as listed in Table 9B-1 of this EIR.

CHAPTER 9C RECYCLED WATER

9C.1 INTRODUCTION

The proposed Fiddyment Ranch Specific Plan Amendment (SPA) 3 project would amend the existing West Roseville Specific Plan (WRSP) by changing the land use and zoning designations for some parcels and by changing development densities within the project area. The project would result in the development of 1,661 additional residential units and 7.3 additional acres of commercial land uses compared with the development evaluated in the WRSP EIR. Other changes proposed to the land uses within the Fiddyment Ranch SPA 3 project area include minor adjustments in acreage for parks, open space, public/quasi-public (elementary school), and roadway rights-of-way. As described in Chapter 9A, the project includes significant water conservation measures including reductions in the amount of landscaping using turf. While the recycled water usage of the overall WRSP was evaluated in the WRSP EIR, the additional development proposed as part of the Fiddyment Ranch SPA 3 project, when considering water conservation measures, would reduce overall demand for recycled water supply within the WRSP area. However, since the time that the WRSP was approved, other development has been approved in the City which has increased overall demand for recycled water. This Recirculated Draft Subsequent EIR chapter evaluates recycled water supply within the City of Roseville and the availability of recycled water to serve the proposed project.

Information for the recycled water analysis was based upon the following documents:

- *Domestic Water Study, Fiddyment Ranch SPA No. 3,* Wood Rodgers 2010, including Appendix G Water Conservation Plan
- *Recycled Water Study, Fiddyment Ranch SPA No. 3,* Wood Rodgers 2010
- *South Placer Regional Wastewater and Recycled Water Systems Evaluation* (Systems Evaluation), June 2007, and all supporting Technical Memoranda (as updated in February 2008)
- *West Roseville Specific Plan FEIR,* City of Roseville, February 2004
- *West Roseville Recycled Water Focused Study,* 2010

All of the above listed documents are available for review during normal business hours at:

City of Roseville Permit Center
311 Vernon Center
Roseville, California

The 2013 Notice of Preparation (NOP) for this EIR, the Initial Study, comments received in response to the NOP and comments received at the 2013 Public Scoping Meeting are provided in Appendix A. No comments related to recycled water were received in response to the NOP. As discussed in **CHAPTER 1 INTRODUCTION**, an NOP was circulated in 2010 and a Draft Subsequent EIR was circulated in 2011 for a previous Fiddyment Ranch SPA 3 proposal. The comments on the 2010 NOP and 2011 Draft Subsequent EIR are also included in Appendix A. No comments related to recycled water were received in response to the 2010 NOP or the 2011 Draft Subsequent EIR.

9C.2 SETTING

Recycled Water Supply

Recycled water refers to wastewater treatment plant effluent that has received a level of treatment that meets the State requirements (Title 22) for direct non-potable reuse (for example, irrigating landscaping). Recycled water is part of the City's water supply portfolio and is available from Roseville's two wastewater treatment plants (WWTPs), the Dry Creek WWTP and the Pleasant Grove WWTP. Both plants produce a Title 22-quality effluent that is available for recycled water applications. The system currently delivers nearly 2,040 AFY of recycled water within the City to irrigate commercial properties, high-density residential properties, parks, golf courses, landscape medians and corridors and an additional 960 AFY to other water system customers. In addition, recycled water is used at the Roseville Energy Park for industrial cooling purposes. System expansion is planned for more intensive use of recycled water in the western portion of the City as new development is built.

Water Treatment and Recycled Water Distribution System

As discussed in **CHAPTER 9B WASTEWATER CONVEYANCE AND TREATMENT**, the City of Roseville, the South Placer Municipal Utility District, and Placer County are regional partners in the South Placer Wastewater Authority (SPWA). The SPWA was created in 2000 to oversee policy for funding regional wastewater and recycled water infrastructure. The City owns and operates two regional wastewater treatment facilities on behalf of the regional partners – the Dry Creek WWTP and the Pleasant Grove WWTP. The City's recycled water distribution system operates under a Master Water Reclamation Permit issued by the Central Valley Regional Water Quality Control Board (RWQCB). This permit governs the treatment, quality, and allowable use of recycled water. Both plants produce a Title 22-quality effluent that meets the requirements for "full unrestricted reuse" and is available for recycled water applications. Recycled water for the Fiddyment Ranch SPA 3 project would be provided from the Pleasant Grove WWTP.

The City prepared the South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation 2007 and updated 2009), which delineates the 2005 regional wastewater service area boundary (2005 SAB) and provides baseline and projected characterizations of its regional wastewater and recycled water systems. The goal of utilizing recycled water supplies is to promote responsible water supply management by reusing available tertiary-treated recycled water for irrigation, which reduces demands for surface water and groundwater supplies.

Recycled water is distributed to customers via recycled water pipelines, storage tanks and pump stations. Recycled water pipelines originate at the two regional treatment plants and range in size from 6 to 30 inches in diameter. The City operates three recycled water storage tanks on two sites totaling 3.5 million gallons (mg) of capacity. The recent approvals of the Sierra Vista and Creekview specific plans will increase the storage capacity to 6.9 mg. Each storage tank site has an associated pumping station to boost system pressures as required to meet customer service needs.

Fiddyment Ranch Recycled Water Distribution System

Some recycled water conveyance facilities have already been installed within Fiddyment Ranch. These include a 6-inch recycled water main within Fiddyment Road south of Blue Oaks Boulevard, an 8-inch recycled water main within Fiddyment Road north of Blue Oaks Boulevard, a 12-inch recycled water main in Blue Oaks Boulevard, and a 6-inch recycled water main in the northern portion of Hayden Parkway extending approximately 1,900 feet west of Fiddyment Road.

Recycled Water Demand

The City's recycled water system currently delivers approximately 3,000 AFY of recycled water to customers within and outside of the City limits. Of this amount, approximately 2,040 AFY are for non-industrial customers located within the City of Roseville. Non-industrial recycled water demands within the City are expected to increase by approximately 2,720 AFY for a total recycled water demand of 4,478 AFY at buildout of the City's existing General Plan (includes the recently approved Sierra Vista, Westbrook Amendment to the SVSP, Westpark Phase #4 Amendment to the WRSP, and Creekview Specific Plan projects). Recycled water demands at buildout of the City's General Plan will be met with supply from the Pleasant Grove WWTP and the Dry Creek WWTPs. It is anticipated that the Pleasant Grove WWTP will meet 3,422 AFY of the 4,478 AFY City buildout recycled water demands with the Dry Creek WWTP providing the remaining 1,056 FY.

As discussed in **CHAPTER 9B WASTEWATER CONVEYANCE AND TREATMENT**, the Systems Evaluation considered future Urban Growth Areas (UGAs) to determine an ultimate SPWA service area boundary and estimated recycled water demands. The UGAs consist of recently approved and pending specific plans and other development proposals, and thus include areas that have not yet been approved for development. Specifically, the UGAs considered are:

- Curry Creek;
- Regional University;
- Placer Ranch;
- Placer Vineyards;
- Creekview, including the panhandle area;
- Sierra Vista and Urban Reserve; and
- Amoruso Ranch Study Area.

Annual recycled water demands of these UGAs were estimated at 7,762 AFY.

9C.3 REGULATORY SETTING

Federal Regulations

There are no federal regulations with regard to recycled water.

State Regulations

Department of Public Health

California Department of Public Health regulations require that recycled water must be conveyed in a totally separate distribution system from the potable water supply. The City's Water Utility has overall responsible for implementing a cross-connection program to ensure that future potable services are not accidentally connected to the recycled water system. Additionally, a public information program (including signage) is in place to notify the public where the use of recycled water occurs.

Regional Water Quality Control Board - Recycled Water Master Reclamation Permit

The recycled water distribution system operates under a Master Water Reclamation Permit (Order No. 97-147) issued by the RWQCB. This permit contains specific prohibitions on the use of recycled water by the City and places stringent standards for water quality, treatment, and disinfection on the City's recycled water. The permit prohibits the following: ponding of recycled water, recycled water seeping off the site where it is being applied, and/or recycled water entering waters of the state, unless expressly allowed by the permit.

Local Regulations

City of Roseville Municipal Code

Chapter 14.17 of the City's Municipal Code contains regulations pertaining to recycled water use. It is the policy of the City of Roseville that where the use of recycled water is feasible, appropriate, and acceptable to all applicable regulatory agencies, the City will require an owner or customer to use recycled water in lieu of potable water. The Recycled Water Division of the Environmental Utilities Department manages recycled water use in the City of Roseville.

City of Roseville General Plan

The City of Roseville General Plan contains the following goals that relate to the use of recycled water:

Goal 3: Actively pursue the use of recycled water where appropriate and expand recycled water distribution system to deliver and meet estimated demands of 4,500 acre-feet/year.

Goal 4: Meet State of California and EPA water quality standards for the discharge of treated wastewater, as well as meet State of California quality standards for the production of recycled water.

City of Roseville Improvement Standards

Section 14 of the City's Improvement Standards (Recycled Water Infrastructure Design) provides criteria for design of recycled water systems. Compliance with these standards reduces impacts related to recycled water distribution by ensuring these systems are properly sized for anticipated demands.

9C. 4 IMPACTS

Significance Criteria

A recycled water impact would be significant if implementation of the proposed project would:

- ❖ Result in or require construction or expansion of recycled water distribution and storage facilities that would create significant environmental effects.

Project Impacts

IMPACT 9C.1:	**Require Construction or Expansion of Recycled Water Distribution and Storage Facilities**
APPLICABLE POLICIES AND REGULATIONS:	City of Roseville Municipal Code RWQCB Reclamation Permit
SIGNIFICANCE WITH POLICIES AND REGULATIONS:	Less than Significant
MITIGATION MEASURES:	None
SIGNIFICANCE AFTER MITIGATION:	Less than Significant

Recycled water supplied from the Pleasant Grove WWTP would be used for landscape irrigation in parks, schools, public areas (i.e., roadway medians, paseos), and commercial and high-density residential uses within the Fiddyment Ranch SPA 3 project area. Fiddyment Ranch is part of the WRSP, and this analysis of provision of recycled water to the project includes consideration of all recycled water demands within the WRSP area.

Demand

Recycled water demands within the WRSP are estimated to reach nearly 1,750 AFY; of this amount recycled water use within the current Fiddyment Ranch portion of the WRSP under the proposed project is estimated at 774 AFY. As documented in the Water Supply Assessment for the Fiddyment Ranch Specific Plan Amendment 3 Project (City of Roseville 2013), with development under the proposed Fiddyment Ranch SPA 3 project, overall recycled water demands would be slightly increased to 1,766 AFY (an increase of 16 AFY). However, with implementation of the water conservation measures included in the proposed project, the overall recycled water demands would decrease by 85 AFY, for a total recycled water demand at buildout of the WRSP of 1,681 AFY. This change results in an overall reduction in recycled water use of 69 AFY compared to buildout of the currently entitled land uses. Under existing plus project conditions, with the overall decrease in recycled water demands, the project would have a less than significant impact on the City's provision of recycled water.

When considering full buildout of the City, recycled water demands are expected to reach 4,478 AFY without the proposed project, and 4,409 with the proposed project. As described above, recycled water demands with the project include a 69AFY reduction from land use changes and water conservation efforts within the Fiddyment Ranch SPA 3 area. At buildout of the City with the project, recycled water demands of 4,409 AFY will be supplied from both the Pleasant Grove WWTP (3,353 AFY) and the Dry Creek WWTP (1,056 AFY).

The City policy regarding provision of recycled water service is to meet demands on a first-come first-served basis. Therefore, buildout recycled water demands within the 2005 SAB are compared to available tertiary treated supply generated by wastewater flows within the 2005 SAB. As previously described, recycled water for the project will be supplied from the Pleasant Grove WWTP. At buildout of the 2005 SAB, including the project and other lands within the City and outside of the City, recycled water demands at the Pleasant Grove WWTP are estimated at 4,125 AFY (3,353 AFY within the City + 772 AFY outside the City).

As documented in **CHAPTER 9B WASTEWATER CONVEYANCE AND TREATMENT**, average dry weather flow to the Pleasant Grove WWTP at buildout of the 2005 SAB including the project is estimated at 19.85 mgd (22,235 AFY or 1,853 AF per month). Because irrigation demands vary by month, supply needs are estimated on a monthly basis with the peak demands occurring in July. The Peak Day Demand is calculated based on the monthly irrigation demand for July, which is 9.2 inches per acre (for comparison, the average monthly irrigation demand is 3.6 inches per acre). Table 9C-1 compares buildout recycled water demands to buildout recycled water supplies on a monthly basis. In all months, the recycled water supply at buildout of the 2005 SAB served by the Pleasant Grove WWTP, including the proposed project, is sufficient to meet projected recycled water demands.

Table 9C-1
PGWWTP Buildout Monthly Recycled Water Demand and Supply

Month	Recycled Water Demand (AF)	Recycled Water Supply (AF)	Difference
January	0	1853	1853
February	0	1853	1853
March	46	1853	1807
April	308	1853	1545
May	547	1853	1306
June	763	1853	1089
July	877	1853	975
August	763	1853	1089
September	547	1853	1306
October	273	1853	1579
November	0	1853	1853
December	0	1853	1853
Total Year	**4,125 AF**	**22,235 AF**	

Distribution

The necessary components of the recycled water distribution system for the WRSP, including the proposed project, are defined in the Fiddyment Ranch Specific Plan Amendment No. 3 Recycled Water Study (Wood Rodgers 2010). Specific to the area affected by the proposed Fiddyment Ranch SPA 3 project, the anticipated recycled water distribution system components include the following:

- A 12-inch line in the portion of Hayden Parkway north of Blue Oaks Boulevard and connecting to the existing 6-inch line in the eastern portion of Hayden Parkway;

- A 6-inch line in the portion of Holt Parkway between Fiddyment Road and Hayden Parkway; and
- A 12-inch line in Holt Parkway west of Hayden Parkway.

These facilities would be constructed to meet the requirements of the City of Roseville Municipal Code, and would be constructed within roadway rights-of-way. Installation of the recycled water distribution system would not result in any environmental impacts not evaluated in the WRSP EIR and the impact would remain less than significant.

Storage

Although there is a slight increase in demand for recycled water (before conservation) associated with the proposed project, the implementation of water conservation measures planned with the project within the Fiddyment Ranch SPA 3 portion of the WRSP would reduce recycled water demand to a level less than what was originally planned within the WRSP project. Therefore, the project does not require construction of any new recycled water storage facilities to meet peak day demands within the WRSP.

9C.5 MITIGATION MEASURES

Require Construction or Expansion of Recycled Water Distribution and Storage Facilities

This impact is determined to be less than significant. No mitigation measures are required.

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