4.12.3 WASTEWATER – PUBLIC UTILITIES

4.12.3.1 INTRODUCTION

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

- *Sierra Vista Specific Plan Sanitary Sewer Master Plan,* May 26, 2009 as amended by Addendum #1 dated July 6,2009
- *Sierra Vista Specific Plan FEIR,* February 2004
- *South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation,* June 2007*)* and all supporting Technical Memoranda (as updated)
- *Cumulative Analysis of UGA Impacts on Water Quality and Aquatic Resources in Pleasant Grove Creek, Roseville, California, by Merritt Smith Consulting (Technical Memorandum* dated January 15, 2006*)*
- *West Roseville Specific Plan FEIR,* February 2004
- *Roseville Regional Wastewater Treatment Service Area Master Plan,* May 1996
- *Roseville Regional Wastewater Treatment Service Area Master Plan Final EIR,* May 1996

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

City of Roseville Permit Center

311 Vernon Street

Roseville, California

No comments were received relative to wastewater in response to the Notice of Preparation (NOP) and Initial Study (Appendix A). Refer to Appendix B of this EIR to view the comments received on the proposed project in response to the NOP.

4.12.3.2 ENVIRONMENTAL SETTING

The SVSP area, described in detail in Chapter 2, (*Project Description*), is undeveloped. Subsequently, there are no onsite wastewater treatment or conveyance facilities on site. Septic systems have been used on the site to serve the rural residential uses.

The City serves as the wastewater service provider for the City and will be the service provider for the SVSP area. Wastewater is collected in sewer lines which ultimately connect to one of two regional wastewater treatment facilities. Treated wastewater is then either discharged into local area creeks in accord with state permit requirements or is used as recycled water supply.

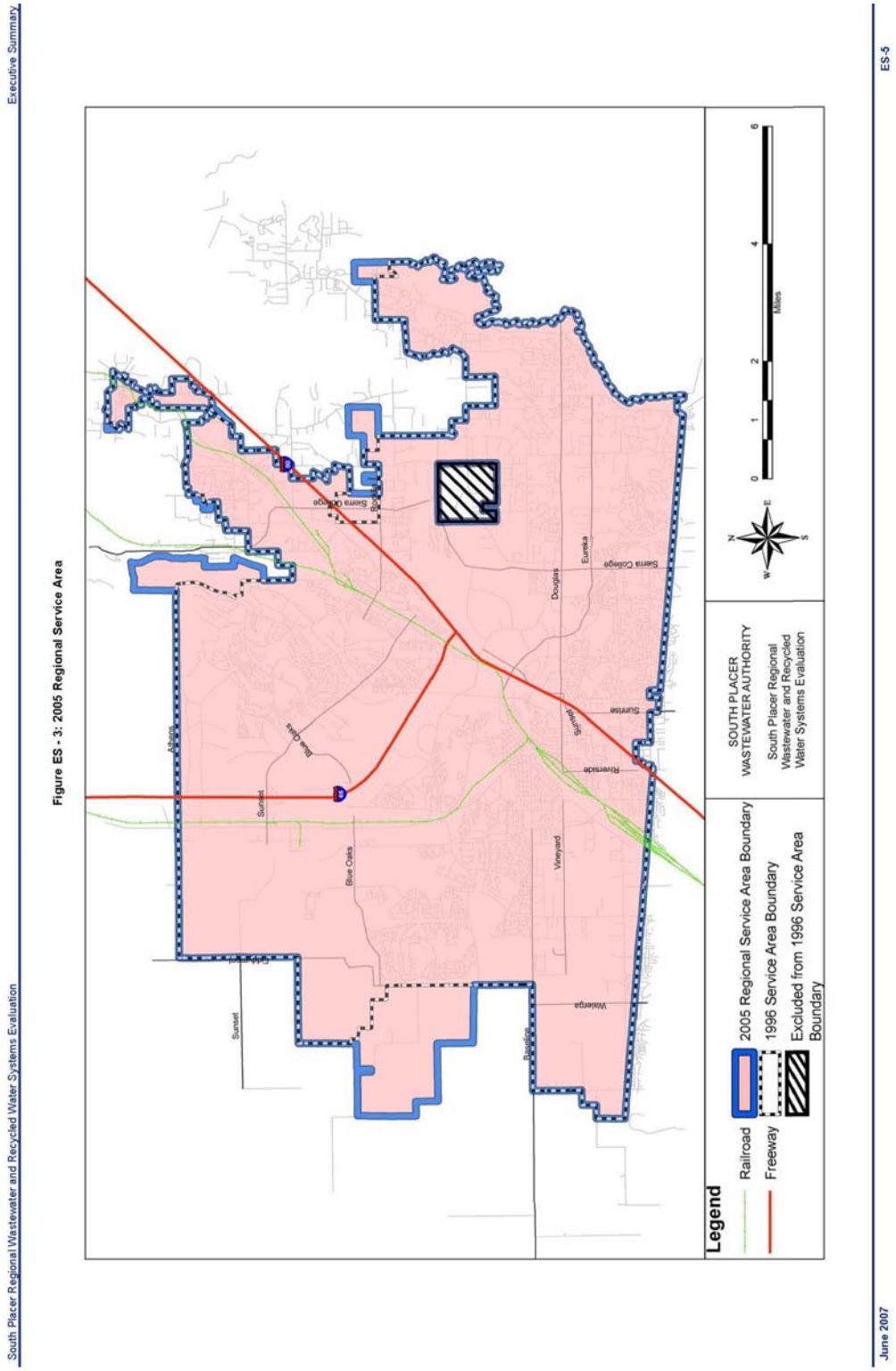
Wastewater Service Area

The City of Roseville, the South Placer Municipal Utility District, and Placer County are regional participants in the South Placer Wastewater Authority (SPWA). The SPWA was created in 2000 to oversee policy for funding regional wastewater infrastructure. The City owns and operates two regional wastewater treatment facilities on behalf of the regional partners. These treatment facilities include the Dry Creek Wastewater Treatment Plant (DCWWTP) and the Pleasant Grove Wastewater Treatment Plant (PGWWTP) are described further below.

The City prepared the South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation, June 2007) 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 2005 SAB includes areas within Roseville, Rocklin, Loomis, and portions of Granite Bay and unincorporated Placer County. The Systems Evaluation is also the long-term planning tool to project wastewater treatment needs, and to identify necessary capital improvement projects to accommodate urban growth within the 2005 SAB. Figure 4.12.3.-1 shows the 2005 SAB along with the project's location relative to the 2005 SAB. The Systems Evaluation document addressed system conditions as of June 2004 and anticipated buildout conditions within the 2005 Boundary. Buildout of the 2005 SAB, would result in 16.34 million gallons per day (mgd) average dry water flow (ADWF) at the DCWWTP and 16.15 mgd ADWF at the PGWWTP (RMC TM 2a, Update January 24, 2008 and included within the Systems Evaluation document) totaling 32.49 mgd ADWF in the 2005 SAB.

FIGURE 4.12.3-1

2005 SERVICE AREA BOUNDARY



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 consider 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 included:

- 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
- Brookfield.

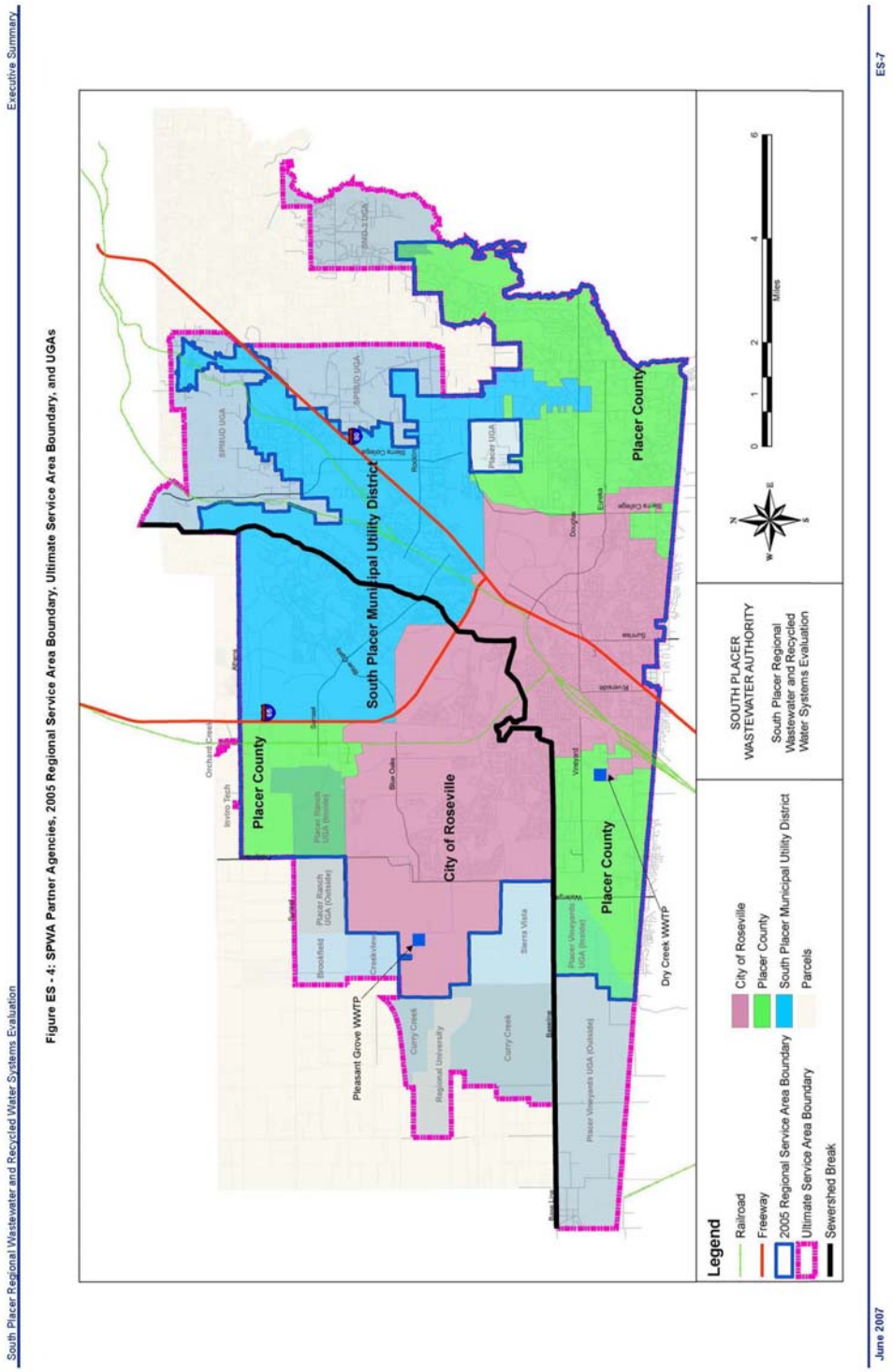
These projects are discussed in detail in Chapter 5.5.2, CEQA Considerations/Cumulative Analysis. Average Dry Weather Flows at buildout of this Ultimate SPWA Service Area would result in 25.7 mgd at the PGWWTP[1] with total buildout of 45.27 mgd ADWF in the Service Area. Figure 4.12.3-2 shows the Ultimate SPWA Service Area, as considered within the Systems Evaluation report.

Wastewater Treatment

Wastewater from the City of Roseville is currently treated at two regional wastewater treatment facilities. Both facilities are City-owned-and-operated. The first plant, the Dry Creek Wastewater Treatment Plant (DCWWTP), is located on Booth Road, along Dry

[1] RMC TM 2b, Update through September 3, 2009 and included within the Systems Evaluation document

FIGURE 2.12.3-2
ULTIMATE SPWA SERVICE AREA



Creek, in the southwest portion of the City. The second plant, the Pleasant Grove Wastewater Treatment Plant, is located on the east side of Westside Drive, south of the Roseville Energy Park.

Regional Plants

The DCWWTP provides tertiary-level wastewater treatment through the process of screening, grit removal, primary clarification, aeration, secondary clarification, filtration and ultraviolet disinfection; in addition, the DCWWTP provides full nitration and de-nitrification. The current average dry weather flow (ADWF) is approximately 11 million gallons per day (mgd), of which approximately 6 mgd come from the City of Roseville. The peak daily wet weather flow (PWWF) during the last 12 months was 22 mgd. The plant can discharge up to 18 mgd ADWF and 45 mgd PWWF into Dry Creek under an existing National Pollutant Discharge Elimination System (NPDES) permit No. CA0079502 adopted on June 12, 2008. It is not anticipated that this plant will serve the Project Area.

The Pleasant Grove Wastewater Treatment Plant (PGWWTP) will serve the SVSP area. This plant is located on the east side of Westside Drive, south of the Roseville Energy Park and currently serves the northwest areas in the existing City of Roseville, the Stanford Ranch area of the South Placer Municipal Utility District (SPMUD), and the Sunset Industrial Area of Placer County. The PGWWTP currently treats approximately 7 mgd ADWF with approximately 4 mgd coming from the City of Roseville. The PGWWTP provides tertiary-level treatment through the process of screening, grit removal, extended aeration, secondary clarification, filtration, chlorination, and dechlorination. The plant provides full nitrification and de-nitrification, as well as 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 Landfill for disposal.

The PGWWTP 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 average dry weather flow (ADWF) of 12 million gallons per day (mgd) increasing to a permitted ADWF discharge of 15 mgd upon completion of additional treatment facilities.

PGWWTP Service Area Flows

Current flow data from the PGWWTP indicate the ADWF at the PGWWTP is 7 mgd. The Systems Evaluation report provides estimates of flow to the PGWWTP at buildout of the of the 2005 Service Area Boundary, as well as at buildout of the ultimate SPWA service area boundary. At buildout of the 2005 boundary, wastewater flows (included rezones) are anticipated to be 16.52 mgd ADWF (RMC TM2b updated through September 3, 2009). Under the ultimate SPWA boundary (the current 2005 Service Area plus anticipated Urban Growth Areas), the ADWF is estimated at 25.67 mgd (RMC TM2b updated through September 3, 2009). The SVSP was included within the anticipated SPWA ultimate service area boundary.

The impacts of treating and discharging effluent up to 29.5 mgd average dry weather flow (ADWF) and the impacts of expanding the PGWWTP up to 24.7 mgd ADWF have been previously addressed in two environmental impact reports. These are the *Roseville Regional Wastewater Treatment Service Area Master Plan Environmental Impact Report* (WWMP EIR), prepared by Environmental Science Associates in May 1996 and the *West Roseville Specific Plan EIR* prepared by EIP Associates in September 2003. Both environmental documents are hereby incorporated by reference. Throughout this document, the *Roseville Regional Wastewater Treatment Service Area Master Plan Environmental Impact Report* is also referred to as the Wastewater Master Plan EIR.

Wastewater Collection

The City's wastewater collection system includes both gravity sewer lines and lift stations with associated force mains. The closest wastewater collection system to service the project area is located within the City's West Roseville Specific Plan (WRSP).

4.12.3.3 REGULATORY SETTING

The collection, treatment and discharge of wastewater flows within the City of Roseville are regulated by Federal, State and Local regulations as summarized below.

Federal

NPDES Permits (Federal and State)

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: effluent and receiving water limits of allowable concentrations and/or mass of pollutants contained in the discharge; 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 wastewater discharge from the PGWWTP to Pleasant Grove Creek is regulated under a NPDES permit issued by the 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 average dry weather flows 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 the maintenance of public health and safety, protection of receiving water resources, and safeguarding of designated beneficial uses of water bodies. Discharge limitations in the PGWWTP 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 provisions provide 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.

Title 40 of the Code of Federal Regulations (CFR), Part 503 and Part 258, serves as the basis for the RWQCB requirements for biosolids disposal by land application or in a landfill. Title 27 of the California Code of Regulations and standards established by the RWQCB in a General Order for the disposal of biosolids regulate the disposal of biosolids.

Title 40 of the CFR, Parts 405 through 471, contains the Federal Categorical Pretreatment Standards for the pretreatment of industrial wastes discharged to publicly owned treatment works such as the PGWWTP

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 State Water Resources Control Board (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 Regional Water Quality Control Boards (RWQCB). The Porter-Cologne Water Quality Control Act authorizes the SWRCB and RWQCB to issue NPDES permits containing waste discharge requirements, 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 (GWDRs) for Sanitary Sewer Systems

The General Waste Discharge Requirements for Sanitary Sewer Systems was adopted by the State Water Resources Control Board 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. The SSMP also includes the following elements:

- Organizational Structure
- Legal Authority
- O&M Program
- Design and Construction standards
- Emergency Response
- Fat, Oils and Grease (FOG) control
- Capacity Assurance
- Performance Measures

- Self Audit Program
- Communication Program

The WDRs require that the local jurisdiction approve the SSMP and the Roseville City Council approved the City's SSMP on January 21, 2009.

Local

South Placer Wastewater Authority (SPWA)

The SPWA is a joint powers authority formed to fund regional wastewater and recycled water facilities in southwestern Placer County for three partner agencies (the "participants"): the City of Roseville, the South Placer Municipal Utility District (SPMUD), and portions of Placer County. The regional facilities funded by the SPWA thus far include recycled water facilities, trunk sewer lines, and two wastewater treatment plants (WWTPs). All three participants transmit wastewater to these WWTPs. SPWA also monitors compliance with operational criteria established in the Funding and Operations Agreements among the participants.

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 on behalf of the participants.

The Operations Agreement also identifies a regional service area boundary which delineates the area served by SPWA-funded regional facilities. Projects that require wastewater treatment using SPWA-funded regional facilities – especially projects outside the existing service area boundary – require appropriate environmental analyses. The SPWA Board considers the adequacy of the environmental documentation for such projects to ensure that regional facilities needs are met. Once that review has occurred, the participants may agree to modify the service area boundary identified in the Operations Agreement.

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. Chapter 14.26 prohibits 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

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 3: Initiate upon 75 percent utilization of treatment plant capacity, expansion studies to determine necessary improvements to meet projected wastewater treatment demands.

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 would reduce impacts related to wastewater conveyance by ensuring that wastewater collection and conveyance facilities are properly sized to convey the flows from development associated with the project.

4.12.3.4 IMPACTS

Analysis Methodology

For purposes of utilities analysis, the project is the entire annexation area with the proposed land uses shown in Figure 2-5, *Land Use Plan*. This includes the Urban Reserve.

Wastewater Treatment

For wastewater treatment, the demand for treatment was calculated for the SVSP and compared to the capacity of the PGWWTP as well as to demand estimates included in the Systems Evaluation. The Average Dry Weather flow for treatment capacity was determined utilizing unit flow factors established in the System Evaluation report. These unit flow factors, provided in Table 4.12.3-1 have been applied to the proposed land uses in the SVSP and to land uses assumed for the Urban Reserve parcels to estimate the quantity of wastewater to be treated at the PGWWTP.

TABLE 4.12.3-1

AVERAGE DRY WEATHER UNIT GENERATION RATES

Project Land Use	Flow Rate (gpd/du)
Low Density Residential	190
Medium Density Residential	190
High Density Residential	130
Commercial Mixed Use	2,300
Community Commercial	850
Commercial Business Park	850
Parks – 10 acres	10
Public/Quasi Public - Public Facilities	660
Public/Quasi Public - Religious Facilities	660
Public/Quasi Public - Schools	170

For wastewater collection, Peak Wet Weather Flow (PWWF) estimates were used to size required on-site infrastructure to service the SVSP. The PWWF estimates were generated using flow and peaking factors established in the System Evaluation report. This analysis is included in the *Sierra Vista Specific Plan Sanitary Sewer Master Plan* document dated May 26, 2009 prepared by McKay

and Somps Civil Engineers and as amended July 6, 2009 by McKay and Somps Civil Engineers. This master plan and subsequent amendment are included in Appendix G of this EIR.

Thresholds of Significance

For the purposes of this EIR, a significant impact would occur if the development proposed for the project would do the following:

- Result in or require the construction or expansion of wastewater treatment, or collection facilities that would create significant environmental effects.
- Result in a determination that inadequate capacity is available at the wastewater treatment plant to serve the project's projected demand in addition to existing wastewater treatment commitments.
- Exceed wastewater treatment requirements of the Regional Water Quality Control Board.

IMPACT 4.12.3-1	CONSTRUCTION OR EXPANSION OF WASTEWATER COLLECTION FACILITIES	
Applicable Policies and Regulations	City of Roseville Improvement Standards	
	SVSP	**Urban Reserve**
Significance with Policies and Regulations	Less Than Significant	Less Than Significant
Mitigation Measures:	None Required	None Required
Significance after Mitigation:	Less Than Significant	Less Than Significant

SIERRA VISTA SPECIFIC PLAN

Wastewater will be conveyed to the PGWWTP for treatment by a network of pipes installed within street rights-of-way or easements. The conveyance system will include onsite collection systems and off-site existing and planned collection systems located within the West Roseville Specific

Plan Area (WRSP). Sewer collection pipes within the project area would range in size from 8-inches to 21-inches diameter. Flows from the project area would connect to existing or planned infrastructure within the WRSP, which connect to the PGWWTP. Infrastructure within the WRSP was planned and sized to accommodate flow from the SVSP and evaluated in the WRSP EIR, 2004. Similarly, portions of the wastewater collection system installed during development of the SVSP would be oversized to accommodate wastewater from the Urban Reserve. Because of site topography, a small portion of the SVSP will require the use of a sanitary sewer lift station to lift flows into onsite gravity sewer mains. This lift station is identified on the land use plan and is located in the western portion of the plan area, on the south side of Road B (KT-60, PQ/P).

The wastewater collection infrastructure would be constructed and installed over time to coincide with development entitlements and would be designed to accommodate buildout of the SVSP. 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. The actual pipe sizes required to convey the flows from the project to the PGWWTP are identified in the *Sierra Vista Specific Plan Sanitary Sewer Master Plan by McKay and Somps,* May 26, 2009, as amended). Figure 2-12 in the *Project Description*, provides an overview of the planned wastewater system to serve the project.

As indicated above, the wastewater conveyance system within the West Roseville Specific Plan was oversized to accommodate buildout of the Sierra Vista Specific Plan area, because it was identified as an area for future expansion within the City/County MOU (Referred to as the "Remainder Area" in the West Roseville Specific Plan, Final EIR, February 2004). As indicated in the West Plan EIR:

> *"Portions of the wastewater collection system installed during development of the WRSP Area would be oversized to accommodate wastewater flow from the Remainder Area. In addition, three manholes would be installed as part of the wastewater infrastructure for the WRSP Area that would serve as future connection points for the Remainder Area. These manholes would be located at…..the southern boundary in Pleasant Grove Boulevard, and at the western boundary of the southernmost portion of the WRSP Area"*

In summary, the proposed onsite wastewater collection and conveyance system and the existing and proposed offsite conveyance system in the WRSP Area, have been sized to serve the anticipated wastewater flows generated by the SVSP. These facilities will be constructed in public

roads and right-of ways and the physical impacts of associated construction activities are analyzed in this EIR. Therefore, the impacts of constructing the WRSP wastewater collection system would be **less than significant.**

URBAN RESERVE

Because no specific land use plans are proposed, the exact line sizes and layout of the wastewater collection system are not currently known. The design of the system would comply with the City of Roseville Environmental Utilities Department requirements. These requirements are found in Section 9, Sanitary Sewer Design, of the City of Roseville Improvement Standards and would ensure that applicants in the Urban Reserve demonstrate that wastewater collection is adequate to accommodate flows generated by development.

The Urban Reserve is separated from the PGWWTP by the WRSP to the north. As previously discussed, infrastructure already planned with the WRSP would need to be extended down Westside drive to connect the project with the PGWWTP. Similar to the SVSP, infrastructure within the WRSP was planned and sized to accommodate flow from the Urban Reserve area and was evaluated in the WRSP EIR, 2004. As such it is anticipated that adequate capacity can be accommodated in the WRSP to include flows from the Urban Reserve area.

Development of the Urban Reserve must comply with city standards for wastewater conveyance and impacts from construction of any necessary improvements will be analyzed in the planning and environmental review of the Urban Reserve. Also, the SVSP conveyance system is being designed to accommodate flows from the Urban Reserve. As a result the impact of constructing the wastewater collection system would be **less than significant**.

IMPACT 4.12.3-2	CONSTRUCTION OR EXPANSION OF WASTEWATER TREATMENT FACILITIES	
Applicable Policies and Regulations	Chapter 14.26 of Municipal Code	
	SVSP	**Urban Reserve**
Significance with Policies and Regulations	Significant	Significant
Mitigation Measures:	MM 4.12.3-1 Treatment Plant Capacity	WMM 4.11-6 Treatment Plant Capacity Policies
Significance after Mitigation:	Less Than Significant	Less Than Significant

SIERRA VISTA SPECIFIC PLAN

The SVSP is expected to generate 1.37 mgd Average Dry Weather flow (ADWF). To calculate flows for the SVSP, unit flow factors and peaking factors established in the System Evaluation report are used. The unit flow factors (shown in Table 4.12.3-1) have been applied to the proposed land uses in the SVSP to estimate the quantity of wastewater to be treated at the PGWWTP. Table 4.12.3-2 summarizes the average dry weather flow by land use.

The projected flow to the PGWWTP from buildout of the 2005 Service Area Boundary is 16.52 mgd. This flow does not include projects that were considered Urban Growth Areas (UGAs) at the time of the report. Since development of that flow estimate, the Regional University Specific Plan has been approved by Placer County. Regional University anticipates conveying up to 1.17 mgd ADWF to the PGWWTP beyond what was included in TM 2a. The SVSP is projected to generate treatment flows of 1.37 mgd ADWF. This brings total flows at the PGWWTP to 19.06 mgd as summarized in Table 4.12.3-3 below.

TABLE 4.12.3-2

SVSP AVERAGE DRY WEATHER FLOW SUMMARY

Project Land Use	ADWF (mgd)
Low Density Residential	0.479
Medium Density Residential	0.422
High Density Residential	0.214
Commercial Mixed Use	0.080
Community Commercial	0.131
Commercial Business Park	0.023
Parks	0.001
Public/Quasi Public - Public Facilities	0.005
Public/Quasi Public - Religious Facilities	0.005
Public/Quasi Public - Schools	0.008
TOTAL AVERAGE DRY WEATHER FLOW	**1.37 (rounded)**

TABLE 4.12.3-3

PGWWTP BUILDOUT FLOWS with SVSP (ADWF)

	ADWF (mgd)	Source
2005 SPWA Service Area Boundary	16.52	Systems Evaluation
Regional University	1.17	Regional University Specific Plan Draft EIR (December 2007)
SVSP	1.37	SVSP Sanitary Sewer Master Plan (2009)
Total Flow (SVSP)	**19.06**	
Evaluated Treatment Facility Capacity	24.7	West Roseville Specific Plan EIR

The West Roseville Specific Plan EIR (WRSP EIR) evaluated impacts and identified mitigation measures, WMM4.11-5, associated with the expansion of wastewater treatment facilities up to 24.7 mgd ADWF. While the projected wastewater flows to the PGWWTP are less than the flows

evaluated by the West Roseville Specific Plan EIR, this impact is considered **significant**. As identified in the WRSP EIR, the construction of additional treatment facilities will be needed to accommodate the identified growth. Wastewater treatment plant capacity must be expanded prior to developing residences and non-residential uses that would cause total wastewater flows from the SVSP to exceed the existing treatment capacity of the PGWWTP. Increasing wastewater treatment capacity of the PGWWTP to accommodate planned growth in the regional service area and the SVSP will require expansion of the treatment facilities. A 20-acre city-owned parcel on the south side of the PGWWTP was identified as part of the WRSP to accommodate future expansion of the PGWWTP. While SVSP's contribution to the expansion of PGWWTP is incremental, and would be in combination with other development in the region, it would nonetheless, add to the need to expand the facility.

Construction impacts associated with plant expansion that are anticipated to occur include noise, dust, emissions from construction vehicles, increased traffic congestion due to construction vehicles, potential disruption of utility lines, erosion, water quality impacts, and potential disturbance of cultural resources. As evaluated in the Wastewater Master Plan EIR, the construction impacts of the expansion necessary to support the SVSP would be temporary and would be **less than significant** after mitigation. As noted in General Plan Policy 3 above, the City of Roseville will initiate expansion efforts at the time the PGWWTP nears 75 percent capacity. Because the plant would be expanded (rather than having a new plant constructed), it can be assumed that the operational impacts would be similar to those that occurred during construction of the existing facility. Expansion of the treatment plant would likely contribute to potential growth inducement, land use compatibility, traffic, noise, dust, odors, and water quality impacts, including increased outfall to Pleasant Grove Creek and potential impacts to water temperatures associated with operation of the PGWWTP. The onsite impacts 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 at PGWWTP
- Increased criteria air pollutant emissions due to subsequent development

It is anticipated these impacts could occur if the PGWWTP were expanded on the 20-acre parcel to the south of the plant. Implementation of MM 4.12.3-1, Treatment Plant Capacity, will ensure that at the time expansion is deemed necessary, the City will prepare required CEQA documents to analyze any impacts and identify appropriate mitigation measures.

URBAN RESERVE

Flows from the Urban Reserve would be treated at the PGWWTP. The Urban Reserve is projected to 0.47 mgd ADWF of wastewater to be treated as shown in Table 4.12.3-4 below. Increasing wastewater treatment capacity of the PGWWTP to accommodate planned growth in the regional service area and the Urban Reserve will require expansion of the treatment facilities. A 20-acre City-owned parcel on the south side of the PGWWTP was identified as part of the WRSP to accommodate future expansion of the PGWWTP. While the Urban Reserve's contribution to the expansion of PGWWTP is incremental, and would be in combination with other development in the region, it would nonetheless, add to the need to expand the facility.

TABLE 4.12.3-4
PGWWTP BUILDOUT FLOWS with SVSP and Urban Reserve (ADWF)

	ADWF (mgd)	Source
2005 SPWA Service Area Boundary	16.52	Systems Evaluation
Regional University	1.17	Regional University Specific Plan Draft EIR (December 2007)
SVSP	1.37	SVSP Sanitary Sewer Master Plan (2009)
Urban Reserve	0.47	SVSP Sanitary Sewer Master Plan (2009
Total Flow (SVSP)	**19.53**	
Evaluated Treatment Facility Capacity	24.7	West Roseville Specific Plan EIR

Because the plant would be expanded (rather than having a new plant constructed), it can be assumed that the operational impacts would be similar to those that occur for the existing facility. Expansion of the treatment plant would likely contribute to potential growth inducement, land use compatibility, traffic, noise, dust, odors, and water quality impacts, including increased outfall

to Pleasant Grove Creek and potential impacts to water temperatures associated with operation of the PGWWTP. The onsite impacts 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 at PGWWTP
- Increased criteria air pollutant emissions due to subsequent development

It is anticipated these impacts could occur if the PGWWTP were expanded on the 20-acre parcel to the south of the plant. Implementation of WMM 4.11-6 Treatment Plan Expansion Policies will ensure that at the time expansion is deemed necessary, the City will prepare required CEQA documents to analyze any impacts and identify appropriate mitigation measures.

IMPACT 4-12.3-3	**WATER QUALITY IMPACTS FROM WASTEWATER DISCHARGES BEYOND THE SPWA 2005 SERVICE AREA BOUNDARY**	
Applicable Policies and Regulations	Porter-Cologne Water Quality Control Act NPDES Permit	
	SVSP	**Urban Reserve**
Significance with Policies and Regulations	Significant	Significant
Mitigation Measures:	MM 4.12.3-1 Treatment Plant Capacity	WMM 4.11-6 Treatment Plant Capacity Policies
Significance after Mitigation:	Less Than Significant	Less Than Significant

The SVSP is currently located outside of the SPWA 2005 Service Area Boundary (SAB) (reference Figures 4.12.3-1 and 4.12.3-2). This impact is intended to evaluate the water quality impacts associated with discharges to Pleasant Grove Creek from the wastewater flows to be conveyed to the PGWWTP from outside the 2005 SAB.

SIERRA VISTA SPECIFIC PLAN

Wastewater flows from the SVSP plus buildout of the 2005 Service Area Boundary, including the recently approved Regional University Specific Plan project, are expected to generate 19.06 mgd ADWF of wastewater to be treated at the PGWWTP (reference Table 4.12.3-3). The impacts of discharging up to 29.5 mgd average dry weather flow (ADWF) was previously addressed in the *Roseville Regional Wastewater Treatment Service Area Master Plan Draft Environmental Impact Report* (WWMP EIR), prepared by Environmental Science Associates in May 1996. In addition, a technical memorandum titled *Cumulative Analysis of UGA Impacts on Water Quality and Aquatic Resources in Pleasant Grove Creek, Roseville, California, by Merritt Smith Consulting dated January 15, 2006 (Merritt Smith Tech Memo),* was prepared to evaluate the cumulative impacts associated with treatment and discharge from a water quality and aquatic resource perspective of all foreseeable wastewater flows from future UGAs (e.g. discharge of flow outside the 2005 SAB). The Merritt Smith Tech Memo calculated the estimated future average dry weather flow from the PGWWTP 2005 Service Area plus flow from the UGAs located outside the 2005 service area as 23.4 mgd. This is 6.1 mgd less then the 29.5 mgd future flow projected for the PGWWTP in the WWMP EIR, but 4.71 mgd more then anticipated from the proposed SVSP. This is considered a **significant impact**. The Merritt Smith technical memorandum is included in Appendix H for reference.

The WWMP EIR and the Merritt Smith Tech Memo considered the following potential water quality degradation issues related to discharge of effluent to Pleasant Grove Creek as well as flow-related effects. Specifically, the following items were evaluated:

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

TABLE 4.12.3-5

WATER QUALITY AND AQUATIC RESOURCE IMPACT SUMMARY ON PLEASANT GROVE CREEK FOR DISCHARGES FROM THE PGWWTP UP TO 29.5 MGD

Impact Issue	Impact	Significance	Mitigation Measures from 1996 Master Plan EIR
Temperature	Additional flow from UGAs will increase thermal load in PG Creek.	Potentially significant, but less then significant after mitigation.	MM7-4: Install cooling towers if necessary.
Trace Metals / Organic Pollutants	Additional flow from UGAs will reduce dilution from PG Creek, resulting in a greater concentration of effluent constituents.	Potentially significant, but less then significant after mitigation.	MM 7-2: Install advanced treatment facilities. MM 7-3: Use pre-treatment metal source controls.
Dissolved Oxygen	Biochemical oxygen demand of effluent should be under 3 mg/L to prevent potentially significant decreases in dissolved oxygen levels in PG Creek.	Potentially significant, but less then significant after mitigation.	MM 7-2: Install advanced treatment facilities. MM 7-3: Use pre-treatment metal source controls.
Riparian Habitat	Loss of oak trees due to effluent discharge	Potentially significant, then significant after mitigation.	MM 4-13: Conduct oak mortality monitoring along creek.

Sources: Merritt Smith Consulting, Cumulative Analysis of UGA Impacts on Water Quality and Aquatic Resources in Pleasant Grove Creek, Roseville, California, January 15, 2006.

The Merritt Smith Tech Memo confirmed the impacts and mitigation measures documented within the WWMP EIR are still valid for the potential cumulative effects of wastewater flows from the UGAs (including the Project). 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. Mitigation Measures were established in the WWMP EIR to reduce remaining potentially significant impact issues to **less than significant** as summarized in Table 4.12.3-5.

SVSP's contribution to these impacts is considered **significant**. Compliance with the measures listed above and with the NPDES permit, would reduce impacts associated with an increased demand for discharge of the treated effluent from the PGWWTP, 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. The proposed expansion(s) of the PGWWTP would require modifications to the plant's NPDES permit. Compliance with the modified permit and enforcement of the City's Municipal Code would reduce water quality impacts associated with increased effluence discharges to a **less than significant** level.

URBAN RESERVE

Wastewater flows from the Urban Reserve plus SVSP plus buildout of the 2005 Service Area Boundary, including the recently approved Regional University Specific Plan project, are expected to generate 19.53 mgd ADWF of wastewater to be treated at the PGWWTP (reference Table 4.12.3-4). The Urban Reserve's contribution to water quality impacts associated with PGWWTP expansion is considered **significant**. Compliance with WMM 4.11-6 Treatment Plant Capacity Policies and with the NPDES permit would reduce impacts associated with an increased demand for discharge of the treated effluent from the PGWWTP, by ensuring that water quality standards are met. The proposed expansion(s) of the PGWWTP would require modifications to the plant's NPDES permit. Compliance with the modified permit would reduce water quality impacts associated with increased effluent discharges to a **less than significant** level.

4.12.3.5 MITIGATION MEASURES

The project area was included in the program-level analysis of the West Roseville Specific Plan Final EIR. Mitigation adopted by the City Council at time of approval in 2004 is still applicable to the project, especially to the Urban Reserve areas. This document includes the WRSP mitigation as "WMM" and provides ~~strikeout~~ to language that is being eliminated or <u>underline</u> to denote new language.

WMM 4.11-6 ***Treatment Plant Expansion Policies (Impact 4.12.3-2 and 4.12-3- Urban Reserve)***

Any proposal for development in the ~~Remainder Area~~ Urban Reserve shall require that adequate treatment capacity at the PGWWTP be demonstrated and evaluated in an environmental document that tiers from this EIR in order to provide a project-level analysis. The environmental document shall be the responsibility of the applicant. Permits to discharge the treated flows shall also be obtained prior to the granting of any occupancy within the ~~Remainder Area~~ Urban Reserve. Further, all relevant mitigation measures identified in the Wastewater Master Plan EIR shall be implemented. A list of mitigation measures applicable to this project area are found in Appendix ~~V~~ H of this EIR.

The following mitigation measure is deleted and replaced with MM 4.12.3-1

WMM 4.11-5 ***Treatment Plant Capacity (Impact 4.12.3-2 - SVSP)***

~~Prior to obtaining building permits for development that would cause total wastewater flows from the WRSP Area to exceed 1.1 mgd, the applicant shall demonstrate that the PGWWTP will be expanded to 22.4 mgd. This includes obtaining all necessary permits to discharge the treated flow. The applicant shall also demonstrate that the timing of the plant expansion will be adequate to serve the WRSP Area without impeding other planned development assumed in the Wastewater Master Plan. Further, the applicants shall implement all relevant mitigation measures identified in the Wastewater Master Plan EIR. A list of mitigation measures applicable to this project area are found in Appendix V of this EIR.~~

MM 4.12.3-1 ***Treatment Plant Capacity (Impact 4.12.3-2 SVSP)***

Prior to obtaining building permits in the SVSP, the applicant shall demonstrate to the City that the SPWA has approved expansion of the SPWA 2005 Service Area Boundary to include the SVSP area. The

applicants shall participate financially through connection fees in the construction of additional wastewater treatment capacity sufficient to accommodate projected flows. 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, including approval by the SPWA for expansion of the service area boundary. It is recognized that the SVSP 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 remaining development will be curtailed until such time that sufficient treatment and discharge capacity becomes available. Further, the applicants and/or the City, as appropriate, shall implement all relevant construction related mitigation measures for expansion of the plant listed in Appendix H and all water quality and aquatic resource mitigation measures applicable to this project as listed in Table 4.12.3-5 of this EIR.

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