4.12.3 PUBLIC UTILITIES - WASTEWATER

4.12.3.1 INTRODUCTION

This section evaluates the potential impacts from development of the Amoruso Ranch Specific Plan (ARSP or Proposed Project) on wastewater treatment facilities. The existing wastewater treatment setting such as current treatment facilities and demand is described. Information for the wastewater analysis was based upon information within the following documents:

- *Amoruso Ranch Specific Plan Area – Wastewater Master Plan*, September 2015 (Kimley Horn, 2015; Included in **Appendix J**)
- *City of Roseville General Plan 2025,* as amended June 2015 (City of Roseville, 2015a)
- *Creekview Specific Plan Final EIR*, April 2011 (City of Roseville, 2011a)
- *South Placer Regional Wastewater and Recycled Water Systems Evaluation Updated Final Report* (Systems Evaluation; RMC, 2009) and all supporting Technical Memoranda (as updated)
- *Roseville Regional Wastewater Treatment Service Area Master Plan*, May 1996 (City of Roseville, 1996a)
- *Roseville Regional Wastewater Treatment Service Area Master Plan Final EIR*, May 1996 (City of Roseville, 1996b)
- *Roseville Regional Wastewater Treatment Service Area Master Plan EIR Mitigation Monitoring Program*, November 1996 (City of Roseville, 1996c; Included in **Appendix V**).
- *Cumulative Analysis of UGA Impacts on Water Quality and Aquatic Resources in Pleasant Grove Creek, Roseville, California*, Merritt Smith Consulting, Technical Memorandum dated January 15, 2006 (Merritt Smith Consulting, 2006; Included in **Appendix W**).
- *Regional University Specific Plan Final EIR*, September 2008 (Placer County, 2008a)
- *Sierra Vista Specific Plan Final EIR*, May 2010 (City of Roseville, 2010c)
- *Roseville Hotel and Conference Center Draft EIR*, May 2014 (City of Roseville, 2014c)
- *West Roseville Specific Plan*, February 2004 (City of Roseville, 2004a)
- *West Roseville Specific Plan Final EIR*, February 2004 (City of Roseville, 2004b)

All of the above listed documents are available for review during normal business hours (Monday through Friday, 8 a.m. to 5 p.m.) at:

City of Roseville Permit Center
311 Vernon Street
Roseville, CA 95678

No comments related to wastewater were received in response to the Notice of Preparation (NOP; **Appendix C**). Refer to **Appendix C** of this Environmental Impact Report (EIR) to view the comments received on the Proposed Project in response to the NOP.

4.12.3.2 ENVIRONMENTAL SETTING

The ARSP Area (project site), described in detail in **Section 2.0**, **Project Description**, is primarily undeveloped. Consequently, there are no on-site public wastewater treatment or conveyance facilities. Septic systems have been used on the site to serve the rural residence currently located on site.

The City of Roseville (City) is the wastewater service provider for properties located within the City and will be the service provider for the ARSP. 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 compliance with state permit requirements, or is used as recycled water.

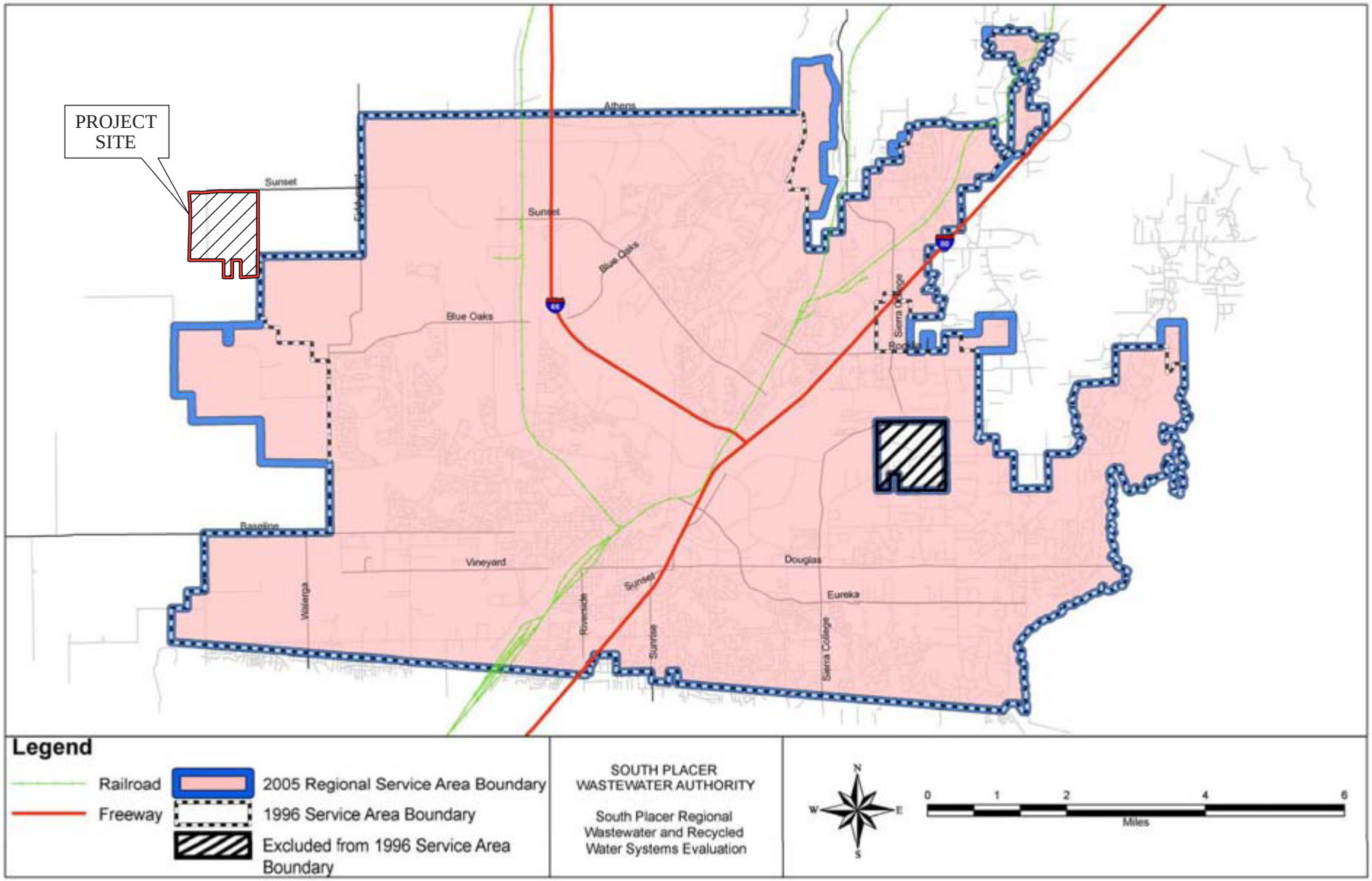
Wastewater Service Area

The City of Roseville, the South Placer Municipal Utility District (SPMUD), and Placer County are regional participants in the South Placer Wastewater Authority (SPWA). The SPWA was created in 2000 to oversee the funding regional wastewater infrastructure. The SPWA operates under a Joint Powers Authority (JPA) between the City of Roseville, SPMUD, and Placer County. The SPWA is primarily a funding authority responsible for overseeing the Regional Capital Improvement Program for the Authority members. The City owns and operates two regional wastewater treatment facilities on behalf of the regional partners. These treatment facilities are the Dry Creek Wastewater Treatment Plant (DCWWTP) and the Pleasant Grove Wastewater Treatment Plant (PGWWTP) and are described further below.

The City prepared the South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation, June 2007 and updated December, 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 2005 SAB includes areas within Roseville, Rocklin, Loomis, and portions of Granite Bay and unincorporated Placer County and is still considered by the City to be current. The Systems Evaluation is also the long-term planning tool to project wastewater treatment and transmission needs, and to identify necessary capital improvement projects to accommodate urban growth within the service area of the partners. **Figure 4.12.3.-1** shows the 2005 SAB along with the project's location in relationship 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, including rezones and intensifications, would result in 16.34 million gallons per day (mgd) average dry weather flow (ADWF) at the DCWWTP and 16.52 mgd ADWF at the PGWWTP, totaling 32.86 mgd ADWF in the 2005 SAB (RMC, 2009).

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 included:

- Amoruso Ranch;
- Creekview;
- Curry Creek;
- Enviro Tech;
- Orchard Creek;
- Placer Ranch area;



SOURCE: RMC, 2009; AES, 12/10/2015

Figure 4.12.3-1
2005 Service Area Boundary

- Placer Vineyards;
- Portions of Placer County;
- Regional University;
- Sierra Vista;
- SMD-3; and
- SPMUD.

These projects are discussed in detail in **Section 5.0**, **CEQA Considerations**. Buildout of the Ultimate SPWA Service Area, which includes the 2005 SAB, would result in 19.98 mgd at the DCWWTP and 25.67 mgd at the PGWWTP totaling 45.65 mgd ADWF in the Ultimate SPWA Service Area (RMC, 2009). **Figure 4.12.3-2** shows the Ultimate SPWA Service Area, as considered within the Systems Evaluation.

Wastewater Treatment

Wastewater from the City is currently treated at two regional wastewater treatment facilities. Both facilities are City-owned-and-operated. The first plant, the DCWWTP, is located on Booth Road, along Dry Creek, in the southwest portion of the City. The second plant, the PGWWTP, is located on the east side of Westside Drive, south of the Roseville Energy Park.

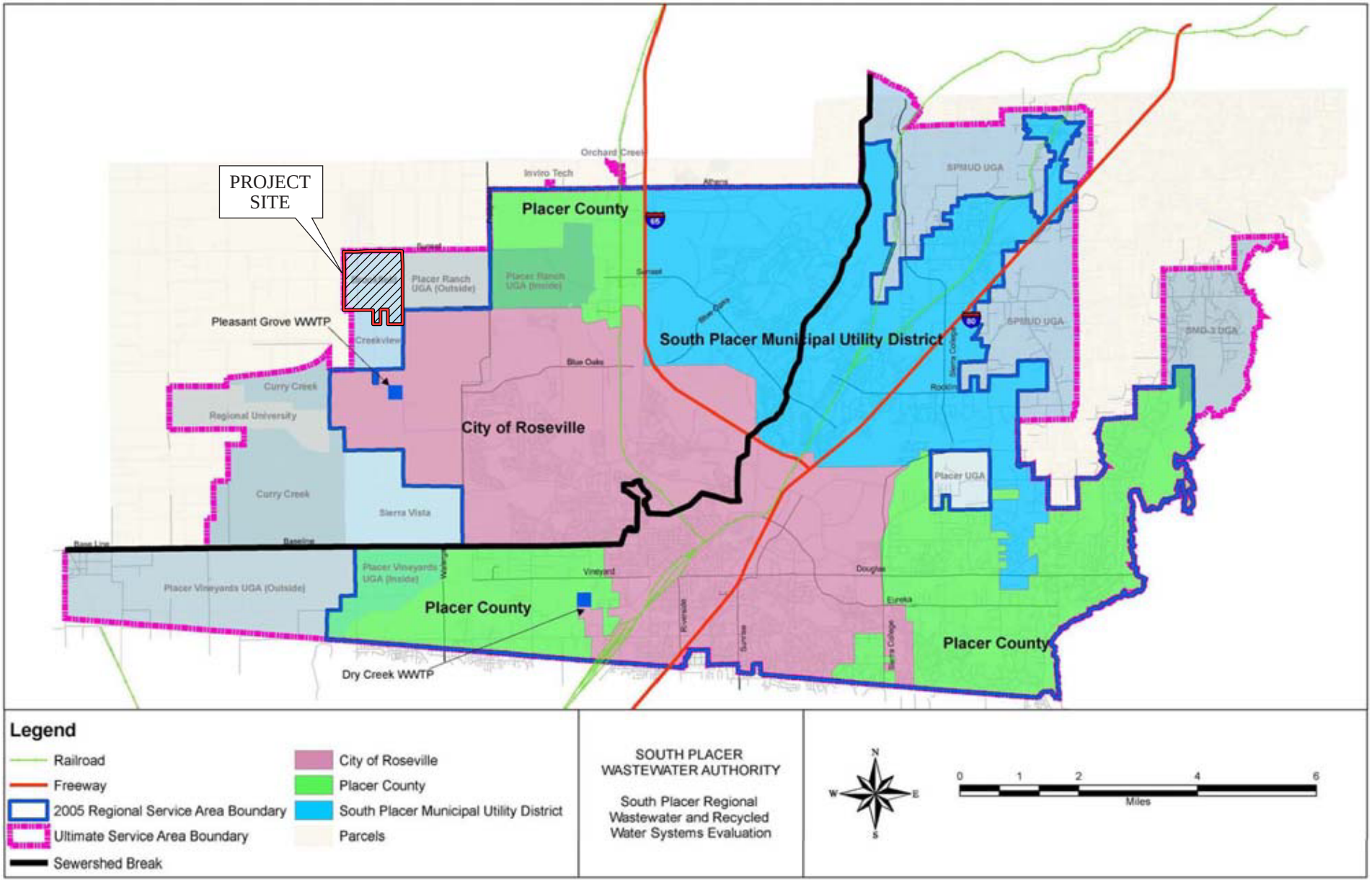
Regional Plants

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 a biological process that achieves full nitration and de-nitrification. The recycled water produced at the DCWWTP is used to irrigate four major golf courses, several parks and selected streetscape. The DCWWTP is permitted to treat 18 mgd ADWF and 45 mgd peak wet weather flow (PWWF). The current ADWF is approximately 9.3 mgd, with a PWWF of 25.1 mgd (Buchanan, 2015). The plant is permitted to discharge up to 18 mgd ADWF into Dry Creek under an existing National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079502 / Waste Discharge Requirements (WDR) No. R5-2014-0049 adopted on March 28, 2014. It is not anticipated that this plant will serve the ARSP.

The PGWWTP provides tertiary-level treatment through the process of screening, grit removal, extended aeration, secondary clarification, filtration, and ultraviolet disinfection. The plant provides a biological process that achieves full nitrification and de-nitrification, and produces recycled water that meets Title 22 regulations for full, unrestricted use. Recycled water is used to irrigate golf courses, parks, streetscapes and other non-residential irrigation areas. The PGWWTP is permitted to treat 12 mgd ADWF and 30 mgd PWWF (City of Roseville, 2014c). The PGWWTP currently treats approximately 7.4 mgd ADWF and 16.9 mgd PWWF (Buchanan, 2015). The PGWWTP is presently authorized to discharge treated effluent into Pleasant Grove Creek under the NPDES Permit No. CA0084573/WDR No. R5-2014-0051 adopted on March 28, 2014. Under this permit, the PGWWTP can discharge an ADWF of 12 mgd, increasing to a permitted ADWF discharge of 15 mgd ADWF upon completion of additional treatment facilities. The PGWWTP currently serves the northwest areas in the existing City of Roseville, the Stanford Ranch area of SPMUD, and the Sunset Industrial Area of Placer County and will serve the ARSP.

PGWWTP Service Area Plans

As described above, the current ADWF at the PGWWTP is approximately 7.4 mgd (Buchanan, 2015). The Systems Evaluation report provides estimates of flow to the PGWWTP at buildout of the of the 2005



SOURCE: RMC, 2009; AES, 12/10/2015

Figure 4.12.3-2
Ultimate SPWA Service Area

SAB, as well as at buildout of the Ultimate SPWA Service Area boundary. At buildout of the 2005 boundary, wastewater flows (including rezones) are anticipated to be 16.52 mgd ADWF. Under the Ultimate SPWA Service Area (the 2005 Service Area plus anticipated UGAs), the ADWF is estimated at 25.67 mgd (RMC, 2009). The ARSP was included within the anticipated Ultimate SPWA Service Area boundary (**Figure 4.12.3-2**).

The impacts of treating and discharging effluent up to 29.5 mgd ADWF and the impacts of expanding the PGWWTP up to 24.7 mgd ADWF have been previously addressed in two EIRs. These are the Roseville Regional Wastewater Treatment Service Area Master Plan EIR (Wastewater Master Plan EIR or WWMP EIR), prepared by Environmental Science Associates in May 1996 (SCH#1993092079) and the West Roseville Specific Plan (WRSP) Final EIR prepared by EIP Associates in February 2004 (SCH# 2002082057). The WWMP EIR analyzed the construction and operation of the PGWWTP up to 29.5 mgd ADWF within its 110-acre site (then referred to as 116 acres) under Alternative 2 Site A. The WRSP Final EIR analyzed the construction and operation of a future expansion of the PGWWTP up to 24.7 mgd ADWF within a 20-acre City-owned parcel within the WRSP on the south side of the PGWWTP. The WWMP and the WRSP Final EIR are incorporated by reference, as described within **Section 1.4** of this EIR.

Wastewater Collection

The City's wastewater collection system includes both gravity sewer lines and lift stations with associated force mains. The closest existing wastewater collection system to service the project site is located within the City's WRSP Area. With the development of Creekview Specific Plan (CSP) the wastewater collection system will extend north within Westbrook Boulevard towards the southern boundary of the project site. The impacts of extending the wastewater collection system to the project site were previously addressed in the CSP Final EIR prepared by the City of Roseville in April 2011 (SCH# 2008032017). The CSP Final EIR is incorporated by reference, as described within **Section 1.4** of this EIR.

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 NPDES permit system was established in the Clean Water Act (CWA) 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 emissions of pollutants contained in the discharge; prohibitions in discharges not specifically allowed in the permit; provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, and self-monitoring activities; and other regulatory requirements. The Central Valley Regional Water Quality Control Board (CVRWQCB) establishes the quality of the effluent

that can be discharged to waterways within the Sacramento area through WDRs that implement the NPDES permit. WDRs are updated at least every five years. A new permit must be issued in the event of a major change or expansion of the facility.

The wastewater discharge from the PGWWTP to Pleasant Grove Creek is regulated under NPDES Permit No. CA0084573/WDR No. R5-2014-0051 issued by the CVRWQCB. 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 WDRs 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 NPDES permit define allowable effluent concentrations for a number of parameters including flow, biological oxygen demand (BOD), total suspended solids, ammonia nitrogen, nitrate plus nitrite, total coliform, oil and grease, and pH. Limitations also encompass 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 CVRWQCB or civil action.

Title 40 of the Code of Federal Regulations (CFR), Part 503 and Part 258, serves as the basis for the CVRWQCB requirements for biosolids disposal by land application or in a landfill. Title 27 of the California Code of Regulations (CCR) and standards established by the State Water Resources Control Board (SWRCB) in a General Order for the disposal of biosolids regulate the disposal of biosolids (Water Quality Order No. 2004-12-DWQ).

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 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality plans, policies, 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 Regional Water Quality Control Boards (RWQCBs). The Porter-Cologne 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 Act are in Title 27 of the CCR.

General Waste Discharge Requirements (GWDRs) for Sanitary Sewer Systems

The General Waste Discharge Requirements (GWDRs) 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. 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. The City's SSMP was revised on April 16, 2012 and again on December 12, 2013 (City of Roseville, 2013b).

Local

South Placer Wastewater Authority

The SPWA is a JPA formed to fund regional wastewater and recycled water facilities in southwestern Placer County for three partner agencies (the "participants"): the City, 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 monitors compliance with funding and operational criteria established in the Funding and Operations Agreements among the participants.

The Funding Agreement outlines each participant's responsibility for debt service of SPWA's bonds and funding of regional facilities. The Operations Agreement documents maintenance and operations responsibilities for regional facilities (primarily the WWTPs) and establishes the City as the owner and operator of the two WWTPs as well as regional infrastructure 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.

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.

Public Facilities Element – Wastewater and Recycled Water Systems Goals

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 Environmental Protection Agency (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.

Public Facilities Element – Wastewater and Recycled Water Systems Policies

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 2013 Design/Construction Standards

Section 9 of the City's 2013 Design and Construction Standards, Sanitary Sewer Design provides criteria for design of sewer systems (City of Roseville, 2013c). Compliance with these standards reduces 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 Proposed Project.

4.12.3.4 IMPACTS

Method of Analysis

Wastewater Collection

For wastewater collection within the project site, PWWF estimates were used to size required on-site infrastructure to service the ARSP, including pipelines and lift stations. The PWWF within the trunk system was calculated by summing factored flows at the nodes along the trunk system alignment and applying appropriate peaking factors from the Peaking Factor Curve shown in Figure SS-1 of Section 9 of the City's current Design Standards. This analysis is included in the *ARSP Area Wastewater Master Plan* dated September 2015 prepared by Kimley-Horn. This master plan is included in **Appendix J** of this EIR.

For off-site wastewater collection facilities, the amount of wastewater that would be generated by the ARSP was calculated and compared to the capacity of the wastewater collection facilities planned for the CSP.

Wastewater Treatment

For wastewater treatment, the demand for treatment was calculated for the ARSP and compared to the capacity of the PGWWTP as well as to demand estimates included in the Systems Evaluation. The ADWF for treatment capacity was determined utilizing unit flow factors established in the City of Roseville Design and Construction Standards, which are consistent with those included in the System Evaluation. These unit flow factors, provided in **Table 4.12.3-1**, have been applied to the proposed land uses in the ARSP to estimate the quantity of wastewater to be treated at the PGWWTP.

TABLE 4.12.3-1
AVERAGE DRY WEATHER FLOW ARSP GENERATION RATES

Project Land Use	Land Use Abbreviation	Flow Rate[1]
Low Density Residential	LDR	190 gpd/du
Medium Density Residential	MDR	190 dpd/du
High Density Residential	HDR	130 gpd/du
Community Commercial	CC	850 gpd/ac
Community Commercial Village District	CC-VC	2300 gpd/ac
Open Space	OS	0
Parks & Recreation (>10 acres)	P/R	10 gpd/ac
Public/Quasi Public	P/QP	660 gpd/ac
Public/Quasi Public (School)	P/QP	170 ppd/ac
Public/Quasi Public (Fire Station & Utility Site)	P/QP	660 gpd/ac

1 - Average Dry Weather Flow Factors per City of Roseville Design and Construction Standards, Section 9 (Sanitary Sewer Design), dated January 2013.
Source: Kimley-Horn, 2015; **Appendix J.**

Thresholds of Significance

For the purpose 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 WWTP to serve the project's projected demand in addition to existing wastewater treatment commitments.
- Exceed wastewater treatment requirements of the RWQCB.

Impacts

IMPACT 4.12.3-1	CONSTRUCTION OR EXPANSION OF WASTEWATER COLLECTION FACILITIES
Applicable Policies and Regulations	City of Roseville Design and Construction Standards
Significance with Policies and Regulations	Less than Significant
Mitigation Measures	None Required
Significance After Mitigation	Less than Significant

Wastewater will be conveyed to the PGWWTP for treatment by a network of pipelines installed within street rights-of-way or easements. The conveyance system will include on-site collection systems and off-site existing and planned collection systems located within the CSP Area and WRSP Area.

Sewer collection pipes within the project site would range from 6 to 24 inches in diameter. The topography of the ARSP would require the use of two pump stations in order to convey wastewater to the PGWWTP. The north pump station, proposed within Public/Quasi-Public (P/QP) parcel AR-56, would serve the northwestern portion of the project site and would convey flows from this area to the central lift station, in the southwestern portion of the project site within P/QP parcel AR-57. The central pump station would convey flows from the project site to the CSP sanitary system point of connection, which eventually flows to the PGWWTP. 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 ARSP. Additionally, the proposed system accommodates an allowance for flows from existing residences within unincorporated Placer County-Toad Hill Ranches, consisting of 274dwelling units zoned as R1[1]. No sewer system is planned to connect to the residences at this time, but infrastructure will be stubbed to the edge of the project site, should the County decide to provide connections in the future. Compliance with the City's Design and Construction Standards would ensure that the wastewater collection and conveyance facilities would be adequate to serve the ARSP and Toad Hill Ranches. Actual pipe sizes required to convey the flows from the ARSP to the PGWWTP via connection to the CSP are identified in the *ARSP Area Wastewater Master Plan* by Kimley–Horn (**Appendix J**). **Figure 2-14** in **Section 2.0**, **Project Description**, provides an overview of the planned wastewater system to serve the Proposed Project. Potential environmental effects that could occur as result of constructing these on-site wastewater collection facilities are addressed in this EIR, including **Section 4.4**, **Air Quality**; **Section 4.8**, **Vegetation and Wildlife**; **Section 4.9**, **Cultural and Paleontological Resources**; and **Section 5.0**, **CEQA Considerations**.

Flows from the Plan Area would connect to planned infrastructure within the CSP Area, which will connect to the PGWWTP via a planned 21-inch pipeline along Westbrook Boulevard and a planned 24-inch pipeline along Phillip Road within the WRSP Area. Infrastructure for the CSP Area, including off-site

[1] Toad Hill Ranches currently contains 105 dwelling units.

pipelines to the PGWWTP, was planned and sized to accommodate flow from the ARSP and evaluated within the CSP Final EIR (April 2011). Flows calculated for the project site as part of the *Wastewater Master Plan* (**Appendix J**) are less than the flows assumed in the Creekview Sanitary Sewer Master Plan (Appendix G of the CSP Final EIR). Within the Creekview study, the projected wastewater flow from the ARSP was 0.621 ADWF. As described further below, projected flows from the ARSP calculated in *Wastewater Master Plan* are 0.554 ADWF for the project site and 0.606 ADWF if flows from Toad Hill Ranches are included. Therefore, the ARSP wastewater flows are less than the assumed demand within the Creekview Sanitary Sewer Master Plan and no upsizing of planned infrastructure is necessary.

In summary, the proposed on-site wastewater collection and conveyance system and the proposed off-site conveyance system in the CSP Area and WRSP Area have been sized to serve the anticipated wastewater flows generated by the ARSP. These facilities will be constructed in public roads and right-of ways. The physical impacts of associated on-site construction activities are analyzed in this EIR. As described above, no upsizing of planned infrastructure within the CSP or WRSP areas is necessary to convey wastewater generated by the ARSP to the PGWWTP. Therefore, there would be no additional impacts beyond those described in the other issue area sections of this EIR. Impacts of ARSP on wastewater collection systems would be **less than significant**.

IMPACT 4.12.3-2	CAPACITY OF WASTEWATER TREATMENT FACILITY
Applicable Policies and Regulations	Chapter 14.26 of City of Roseville Municipal Code
Significance with Policies and Regulations	Potentially Significant
Mitigation Measures	MM 4.12.3-1 Treatment Plant Capacity
Significance After Mitigation	Less than Significant

The ARSP is expected to generate 0.554 mgd ADWF of wastewater. To calculate flows for the ARSP, unit flow factors and peaking factors included in the City of Roseville Design and Construction Standards and System Evaluation report were used. The unit flow factors (shown in **Table 4.12.3-1** above) have been applied to the proposed land uses in the ARSP to estimate the quantity of wastewater to be treated at the PGWWTP. **Table 4.12.3-2** summarizes the ADWF by land use for the ARSP.

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 UGAs at the time of the Systems Evaluation. Since development of that flow estimate, the Regional University Specific Plan has been approved by Placer County, and the Sierra Vista Specific Plan (SVSP) and CSP have been approved by the City. Regional University anticipates conveying up to 1.17 mgd ADWF, the SVSP anticipates conveying 1.37 mgd ADWF, and the CSP anticipated conveying 0.37 mgd ADWF for treatment at the PGWWTP. As described above, the ARSP is projected to generate wastewater flows of 0.554 mgd, while the combined

total wastewater flows for the ARSP and Toad Hill Ranches are projected to be 0.606 mgd. This would bring total ADWF at the PGWWTP to 20.036 mgd as summarized in **Table 4.12.3-3** below.

TABLE 4.12.3-2
ARSP AVERAGE DRY WEATHER FLOW SUMMARY

Project Land Use	ADWF (mgd)
Low Density Residential	0.247
Medium Density Residential	0.103
High Density Residential	0.114
Commercial Village District - Residential	Included on next line
Community Commercial Village District – Non-residential	0.063
Community Commercial	0.020
Open Space	0
Parks and Recreation	0
Parks and Recreation (Paseos)	0
Public/Quasi Public (school)	0.002
Public/Quasi Public (Fire Station & Utility Site)	0.005
Urban Reserve	0
Rights-of-Way	0
NAPOTS	0
Subtotal	**0.554**
Toad Hill Ranches (LDR)[1]	0.052
Total	**0.606**

Notes:
1 - A pipeline stub (manhole) will be provided at the north boundary of the ARSP that will facilitate a future connection by Toad Hill Ranches, if the County pursues this service option in the future.
Source: Kimley Horn, 2015, included as **Appendix J**.

TABLE 4.12.3-3
PGWWTP BUILDOUT AVERAGE DRY WEATHER FLOWS WITH ARSP

	ADFW (mgd)	Source
2005 SPWA Service Area Boundary	16.52	Systems Evaluation (December 2009)
Regional University	1.17	Regional University Specific Plan Final EIR (September 2008)
Sierra Vista	1.37	SVSP Final EIR (May 2010)
CSP	0.37	CSP Final EIR (April 2011)
ARSP plus Toad Hill Ranches	0.606	Amoruso Ranch Specific Plan Area Wastewater Master Plan (Kimley Horn, 2015)
Total Flow	**20.036**	
Evaluated Treatment Facility Capacity	29.50	WWMP EIR (May 1996)
	24.70	WRSP Final EIR (February 2004b)
	25.67	Systems Evaluation (December 2009)

Source: RMC, 2009; Placer County, 2008a; City of Roseville, 2010c; City of Roseville; 2011a; Kimley-Horn, 2015; City of Roseville, 2014c; City of Roseville, 1996a; City of Roseville, 2004b.

The WRSP Final EIR evaluated wastewater treatment impacts associated with expansion of wastewater treatment facilities up to 24.7 mgd ADWF. The total projected wastewater flows to the PGWWTP listed in the table above would not exceed the flows previously analyzed in Section 4.11, Impact 4.11-7 of the WRSP Final EIR, which is incorporated into this document by reference, as described within **Section 1.4** of this EIR, and summarized below.

As disclosed in the WRSP Final EIR, the construction of additional treatment facilities would be needed to accommodate growth. WWTP capacity must be expanded prior to developing residences and non-residential uses that would cause total wastewater flows from the ARSP together with other projects 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 ARSP will require expansion of the treatment facilities. As described in General Plan Policy 3, the City of Roseville will initiate expansion efforts at the time the PGWWTP nears 75 percent capacity. 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. The significant environmental effects of this future expansion was analyzed in the WRSP EIR. The proposed ARSP's contribution to the expansion of PGWWTP, in combination with other development in the region would add to the need to expand the facility. This is a potentially **significant** impact.

The WRSP Final EIR identified mitigation measure WMM 4.11-5 to reduce this impact to a less-than-significant level. Implementation of **Mitigation Measure 4.12.3-1,** Treatment Plant Capacity by the ARSP applicant, which duplicates mitigation measure WMM 4.11-5 adopted with the WRSP, requires the ARSP applicant to pay connection fees for all ARSP development, which will contribute to the planned PGWWTP expansion. This will allow for capacity expansion of the PGWWTP as necessary to accommodate development within the ARSP and will reduce the impact to a **less-than-significant** level.

IMPACT 4.12.3-3	**CONSTRUCTION OR EXPANSION OF WASTEWATER TREATMENT FACILITIES**
Applicable Policies and Regulations	Chapter 14.26 of City of Roseville Municipal Code
Significance with Policies and Regulations	Significant
Mitigation Measures	MM 4.12.3-2 Treatment Plant Expansion
Significance After Mitigation	Significant and Unavoidable

As identified in **Impact 4.12.3-2** above, the capacity of the PGWWTP would need to be expanded to accommodate development within the project site. In accordance with Wastewater and Recycled Water Systems General Plan Policy 3, the City of Roseville will initiate expansion studies to determine necessary improvements to meet projected wastewater treatment demands upon 75 percent utilization of the treatment plants capacity. However, as discussed above, the potential impacts of treating and

discharging effluent up to 29.5 mgd ADWF and the impacts of expanding the PGWWTP up to 24.7 mgd ADWF were previously addressed the WWMP EIR and the WRSP Final EIR, incorporated herein by reference, as described within **Section 1.4** of this EIR.

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, and was analyzed in the WRSP Final EIR. Construction impacts associated with plant expansion anticipated to occur are: noise, dust, air quality 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. Operational impacts would include contribution to downstream flooding due to increased stormwater runoff, increased urban contaminants in runoff, degradation of water quality in Pleasant Grove Creek, raw wastewater mingling with floodwaters, odor, noise from odor control fans, ingestion of recycled water by the public, contamination of groundwater and domestic water sources, increased mosquito populations, exposure to toxic air contaminants, increased sludge needing disposal at the landfill, and alteration of visual character.

As concluded within the WRSP Final EIR, the majority of impacts from construction and operation of expansion of the PGWWTP would be less than significant, or could be reduced to less-than-significant levels with mitigation identified in the WWMP EIR. However, the WRSP Final EIR determined that the following impacts, which were originally identified in the WWMP EIR, may not be reduced to less-than-significant levels after application of recommended mitigation and would, therefore, remain significant:

- 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; and
- Disposal of sludge at the Western Regional Sanitary Landfill (WRSL).

Implementation of **Mitigation Measure 4.12.3-2**, Treatment Plant Expansion, requires that all appropriate construction related mitigation measures identified in the WWMP EIR be implemented as part of expanding the PGWWTP to reduce construction related impacts. Nevertheless, as listed above, some environmental impacts of the expansion would remain significant after mitigation. Because the ARSP would contribute to the need to expand the PGWWTP, which would result in **significant** environmental impacts, this impact is considered **significant and unavoidable**.

IMPACT 4.12.3-4	EXCEED WASTEWATER TREATMENT REQUIREMENTS OF THE RWQCB
Applicable Policies and Regulations	Porter-Cologne Water Quality Control Act; NPDES Permit
Significance with Policies and Regulations	Potentially Significant
Mitigation Measures	MM 4.12.3-1 Treatment Plant Capacity MM 4.12.3-2 Treatment Plant Expansion
Significance After Mitigation	Less than Significant

The ARSP is currently located outside of the SPWA 2005 SAB as shown on **Figures 4.12.3-1** and **4.12.3-2**. This impact evaluates 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.

As shown in **Table 4.12.3-3,** wastewater flows from the ARSP and Toad Hill Ranches plus buildout of the 2005 SAB, including the recently approved Regional University Specific Plan, the SVSP, and CSP are expected to generate 20.036 mgd ADWF of wastewater to be treated at the PGWWTP, which will have sufficient capacity upon expansion. The impacts of discharging up to 29.5 mgd ADWF were previously 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, 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 resources perspective of foreseeable wastewater flows from future UGAs (e.g. discharge of flow outside the 2005 SAB) to the PGWWTP including Curry Creek, Regional University, Orchard Creek, Placer Ranch, Enviro Tech, Sierra Vista, and CSP. The Merritt Smith Tech Memo calculated the estimated future ADWF from the PGWWTP 2005 Service Area plus flow from these UGAs located outside the 2005 SAB as 23.4 mgd. This estimate is 6.1 mgd less than the 29.5 mgd future flow projected for the PGWWTP in the WWMP EIR, but 3.364 mgd more than anticipated from the proposed ARSP calculations shown in **Table 4.12.3-3** above. The Merritt Smith technical memorandum is included in **Appendix W** 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:

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

The Merritt Smith Tech Memo confirmed that the water quality impacts and mitigation measures documented within the WWMP EIR are still valid to disclose and reduce the potential cumulative effects of wastewater flows from the UGAs (including the Proposed Project). With the exception of temperature, trace metals/organic pollutants, dissolved oxygen and riparian habitat, all other issues were determined to have a less-than-significant impact. Mitigation Measures were identified in the WWMP EIR to reduce the remaining potentially **significant** impact issues to **less-than-significant** levels as summarized in **Table 4.12.3-4**.

TABLE 4.12.3-4
WATER QUALITY AND AQUATIC RESOURCE IMPACT SUMMARY ON PLEASANT GROVE CREEK FOR DISCAHRGES 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 Pleasant Grove Creek	Potentially significant, but less than significant after mitigation	MM 7-4: Install cooling towers if necessary.
Trace Metals/Organic Pollutants	Additional flow from UGAs will reduce dilution from Pleasant Grove Creek, resulting in a greater concentration of effluent constituents.	Potentially significant, but less than significant after mitigation	MM 7-2: Install advanced treatment facilities. MM 7-3: Use pre-treatment metal source controls.
Dissolved Oxygen	Biological oxygen demand of effluent should be under 3 mg/L to prevent potentially significant decreases in dissolved oxygen levels in Pleasant Grove Creek.	Potentially significant, but less than significant after mitigation	MM 7-2: Install advances treatment facilities. MM 7-3: Use pre-treatment metal source controls.
Riparian Habitat	Loss of oak trees due to effluent discharge	Potentially significant, but less then significant after mitigation.	MM 4-13: Conduct oak mortality monitoring along creek.

Source: Merritt Smith Consulting, 2006.

The ARSP's contribution to these impacts is considered **significant**. **Mitigation Measure 4.12.3-1,** Treatment Plant Capacity, requires that prior to issuance of building permits for development in the project site, the applicant shall demonstrate to the City that the SPWA has approved expansion of the SPWA 2005 SAB to include the ARSP. All applicants shall participate financially in the construction of additional wastewater treatment capacity sufficient to accommodate projected flows through payment of connection fees. In addition, City 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. **Mitigation Measure 4.12.3-2,** Treatment Plant Expansion, requires that the applicant and/or the City, as specified, shall implement all relevant construction related mitigation measures for expansion of the PGWWTP listed in the *Roseville Regional Wastewater Treatment Service Area Master Plan EIR Mitigation Monitoring Program*, included in **Appendix V**, and all water quality and aquatic resource mitigation measures applicable to this project as listed in **Table 4.12.3-4**. 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 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.

IMPACT 4.12.3-5	CUMULATIVE WASTEWATER IMPACTS
Applicable Policies and Regulations	City of Roseville Design and Construction Standards Chapter 14.26 of City of Roseville Municipal Code Porter-Cologne Water Quality Control Act; NPDES Permit
Significance with Policies and Regulations	Significant
Mitigation Measures	MM 4.12.3-1 Treatment Plant Capacity MM 4.12.3-2 Treatment Plant Expansion
Significance After Mitigation	Significant and Unavoidable

Wastewater from the Proposed Project and other regional projects would be treated at either the PGWWTP or DCWWTP. Potential expansion of both the PGWWTP and DCWWTP were identified in the Roseville WWMP EIR. Additionally expansion at the PGWWTP was identified in the WRSP Final EIR completed in 2004. Expansion of either plant to serve the flows resulting from regional growth could result in environmental impacts associated with construction to increase the capacity of the plant, loss of natural and other resources to expand the footprint of the facility, and degradation of water quality as a result of increased discharges to Pleasant Grove Creek or Dry Creek. The NPDES discharge permit for either WWTP would need to be amended to reflect higher flows. The construction and operation of additional wastewater treatment facilities, as well as wastewater collection systems to areas where such facilities do not exist, could result in potentially **significant** environmental effects. Each development proposal that comes forward would be subject to environmental review on a project-by-project basis. Similar to impacts relating to the expansion of the PGWWTP above, the construction of additional wastewater treatment and collection facilities, where such facilities do not exist, could result in indirect growth effects (e.g., traffic, air, and noise), which could be **significant and unavoidable** on a cumulative basis. The project's incremental contribution to cumulative environmental impacts associated with expansion of wastewater treatment and collection facilities is considered **significant** even after mitigation.

4.12.3.5 Mitigation Measures

MM 4.12.3-1 Treatment Plant Capacity (Impact 4.12.3-2, 4.12.3-4, and 4.12.3-5)

Prior to issuance of building permits for development in the ARSP, the applicant shall demonstrate to the City that the SPWA has approved expansion of the SPWA 2005 SAB to include the ARSP. All applicants shall participate financially in the construction of additional wastewater treatment capacity sufficient to accommodate projected flows through payment of connection fees. 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 ARSP applicant shall rely on the City (on behalf of the SPWA partners) to construct regional treatment and regional transmission facilities needed to treat and discharge wastewater produced within the service area boundary. In the event the City is unable to obtain all required permits (e.g. NPDES permit and WDRs) or is unable to complete the required facility expansion(s), development within the service area boundary may continue until existing capacity has been exhausted, at which time any remaining development shall be curtailed until such time as sufficient wastewater treatment and discharge capacity becomes available.

MM 4.12.3-2 Treatment Plant Expansion (Impact 4.12.3-3, 4.12.3-4, and 4.12.3-5)

The City shall implement all relevant construction related mitigation measures for expansion of the PGWWTP listed in **Appendix V** and all water quality and aquatic resource mitigation measures applicable to this project as listed in **Table 4.12.3-4**.