

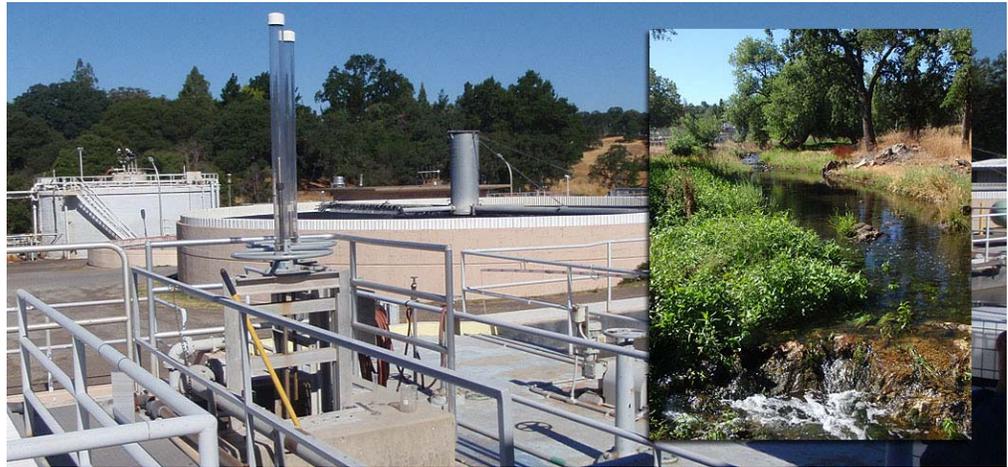
Initial Study/Mitigated Negative Declaration
Sewer Maintenance District 1
Wastewater Treatment Plant Upgrade and Expansion



Prepared for:
Placer County

Initial Study/Mitigated Negative Declaration

Sewer Maintenance District 1 Wastewater Treatment Plant Upgrade and Expansion



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NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

NOTICE IS HEREBY GIVEN that the staff of the Placer County Department of Facility Services (PCDFS) has prepared a Mitigated Negative Declaration (MND) for the proposed Sewer Maintenance District 1 (SMD 1) Wastewater Treatment Plant (WWTP) Upgrade and Expansion Project and intends to recommend the MND to the Placer County Board of Supervisors for approval.

PROJECT: Sewer Maintenance District 1 Wastewater Treatment Plant Upgrade and Expansion Project

PROJECT LOCATION AND DESCRIPTION: The SMD 1 service area is located in the Sierra Nevada foothills along State Route (SR) 49 in Placer County. The existing service area of the SMD 1 WWTP encompasses approximately 3,300 acres and approximately 7,900 equivalent dwelling units (EDUs) (approximately 5,100 residential and 2,800 commercial or industrial users). The existing SMD 1 WWTP is located in North Auburn, approximately 0.2 mile west of SR 49 at the intersection of Joeger Road and Meadow Glen Road. The existing WWTP is located on two County-owned parcels (Assessor's Parcel Numbers 076-080-007 and 076-080-003). The County also owns two parcels (Assessor's Parcel Numbers 076-080-012 and 076-080-029) to the east and directly adjacent to the site of the existing WWTP.

Current influent wastewater flows to the SMD 1 WWTP average approximately 1.7 million gallons per day (mgd) average dry weather flow (ADWF) and the WWTP is currently permitted to treat and discharge up to 2.18 mgd of wastewater. The proposed SMD 1 WWTP upgrade and expansion would include upgrades throughout most of the facility, including new facilities for biological removal of nutrients and a new ultraviolet (UV) disinfection system and has been designed to accommodate influent wastewater flows up to 2.7 million gallons per day mgd ADWF to accommodate planned growth in accordance with the *Auburn/Bowman Community Plan*.

The SMD 1 WWTP currently discharges into Rock Creek at two locations. Rock Creek is tributary to Dry Creek, which flows into the Bear River and ultimately into the Sacramento River. The primary discharge point is located 200 feet upstream of the confluence of Dry Creek and Rock Creek. A secondary discharge point, used only when the primary discharge is taken out of service for regular cleaning and maintenance, is located on Rock Creek another 200 feet upstream of the primary discharge location. After the upgrade and expansion, the secondary discharge point would no longer be required.

DOCUMENT REVIEW AND AVAILABILITY: The 30-day public review period for this Mitigated Negative Declaration begins on April 25, 2011 and ends May 24, 2011. A copy of the Initial Study/Mitigated Negative Declaration is available for public review at the following locations:

- www.placer.ca.gov/Departments/CommunityDevelopment/EnvCoordSvcs/NegDec.aspx
- PCDFS's offices located at 2855 2nd Street, Auburn, CA 95603
- Community Development Resource Agency (CDRA), 3091 County Center Drive, Auburn, CA 95603
- Auburn Public Library, 350 Nevada Street, Auburn, CA 95603
- Meadow Vista Public Library, 16981 Placer Hills Road, Suite B6, Meadow Vista, CA 95722
- Applegate Public Library, 18018 Applegate Road, Applegate, CA 95703

CONTACT: Please send your comments on this environmental document to: the Placer County Department of Facility Services, Attention: Rebecca Lillis, 11476 C Avenue, Auburn, CA 95603

11476 C Avenue Auburn CA 95603
Entrance at 2855 2nd Street

Administration – Building Maintenance – Capital Improvements – Museums – Parks
Property Management – Environmental Engineering - Utilities

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ACRONYMS AND ABBREVIATIONS

°F	Fahrenheit
µg/l	micrograms per liter
ABCP	Auburn/Bowman Community Plan
ADWF	average dry-weather flow
AEP	annual exceedance probability
APCO	Air Pollution Control Officer
APE	area of potential effect
ACHP	Advisory Council on Historic Preservation
APN	Assessor's Parcel Number
AR/CCERP	Auburn Ravine/Coon Creek Ecosystem Restoration Plan
ARB	California Air Resources Board
dBA	A-weighted decibel
BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
Basin Plan	<i>Water Quality Control Plan for the Sacramento River and San Joaquin River Basins</i>
BMI	benthic macroinvertebrate
BMP	best management practice
BOD	biochemical oxygen demand
CAL FIRE	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CDO	Cease and Desist order
CDP	Census-designated place
CEC	constituent of emerging concern
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
cfs	cubic feet per second
CH ₄	methane
CNDDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CNPS	California Native Plant Society
CO ₂	carbon dioxide
CO ₂ e	CO ₂ -equivalents
COLD	cold freshwater habitat
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSMP	corridor system management plan

CTR	California Toxics Rule
CWA	federal Clean Water Act
dBA	A-weighted decibel
DDT	dichlorodiphenyltrichloroethane
DFG	California Department of Fish and Game
DO	dissolved oxygen
EDC	endocrine-disrupting compound
EDU	equivalent dwelling unit
EOP	City of Auburn Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
ESA	federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FTA	Federal Transportation Administration
FTE	full-time equivalent
GHG	greenhouse gases
GWP	global warming potential
HFC	hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
IS/MND	initial study/mitigated negative declaration
ITE	Institute of Transportation Engineers
lb/day	pounds per day
L_{eq}	equivalent noise level
L_{eq} [h]	hourly equivalent noise level
LHMP	Local Hazard Mitigation Plan
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
mgd	million gallons per day
MIGR	migration of aquatic organisms
MLD	Most Likely Descendant
MSL	mean sea level
MTBE	methyl tertiary butyl ether
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NCIC	North Central Information Center
NOA	naturally occurring asbestos

NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PAE	phthalate acid ester
PCAPCD	Placer County Air Pollution Control District
PCB	polychlorinated biphenyl
PCCP	Placer County Conservation Plan
PCTPA	Placer County Transportation Planning Agency
PFCs	perfluorocarbons
PM _{2.5}	fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less
PM ₁₀	respirable particulate matter with an aerodynamic diameter of 10 micrometers or less
PPCP	pharmaceutical and personal care product
proposed project	Sewer Maintenance District 1 Wastewater Treatment Plant Upgrade and Expansion Project
RAS	return activated sludge
ROG	reactive organic gases
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SF ₆	sulfur hexafluoride
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMD 1	Sewer Maintenance District 1
SPWN	spawning, reproduction, and/or early development
SR	State Route
SRF	State Revolving Fund
SRT	solids residence time
SWPPP	stormwater pollution prevention plan
SWRCB	California State Water Resources Control Board
TAC	toxic air contaminant
THM	trihalomethane
TPD	tons per day
TPY	tons per year
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UV	ultraviolet

VOC	volatile organic compound
WARM	warm freshwater habitat
WAS	waste-activated sludge
WDRs	Waste Discharge Requirements
WWTP	Wastewater Treatment Plant

PROPOSED MITIGATED NEGATIVE DECLARATION

PROJECT: Sewer Maintenance District 1 (SMD 1) Wastewater Treatment Plant (WWTP) Upgrade and Expansion Project

LEAD AGENCY: Placer County Department of Facility Services

AVAILABILITY OF DOCUMENTS: The initial study/ mitigated negative declaration (IS/MND) and documents referenced in the IS/MND are available for public review during normal business hours at the Placer County Department of Facility Services, 2855 2nd Street Avenue, Auburn, CA 95603. The IS/MND may also be reviewed at the the Community Development Resource Agency (CDRA), 3091 County Center Drive, Auburn, CA 95603; the Auburn Public Library, 350 Nevada Street, Auburn, CA 95603; the Meadow Vista Public Library, 16981 Placer Hills Road, Suite B6, Meadow Vista, CA 95722; the Applegate Public Library, 18018 Applegate Road, Applegate, CA 95703; and electronically at <http://www.placer.ca.gov/Departments/CommunityDevelopment/EnvCoordSvcs/NegDec.aspx>. Property owners within 300 feet of the subject site shall be notified by mail of the upcoming hearing before the Placer County Board of Supervisors June 21, 2011. For questions or comments regarding the IS/MND, contact Rebecca Lillis at (530) 886-4984 or rlillis@placer.ca.gov.

PROJECT DESCRIPTION: This IS/MND evaluates the environmental effects of the proposed SMD 1 WWTP Upgrade and Expansion Project. The SMD 1 WWTP is located in North Auburn, an area of single-family residences and a commercial corridor located along State Route 49. The existing service area of the SMD 1 WWTP encompasses approximately 3,300 acres and approximately 7,900 equivalent dwelling units (EDUs).

The SMD 1 WWTP presently operates and discharges treated effluent to Rock Creek under waste discharge requirements (WDRs) set forth in a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley Regional Water Quality Control Board (RWQCB) as Order No. R5-2010-0092 (NPDES Permit No. CA 0079316). The NPDES permit includes final effluent limitations for biochemical oxygen demand, total suspended solids, total coliform organisms, and ammonia, and requires full compliance with these final effluent limitations by September 1, 2015. In addition, the Central Valley RWQCB has adopted Cease and Desist Order (CDO) No. R5-2010-0093 because the SMD 1 WWTP is not able to consistently comply with effluent limitations for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite. The CDO No. R5-2010-0093 requires full compliance with final effluent limitations for these constituents by September 1, 2015.

Improvements planned for the WWTP under the proposed project are necessary to achieve compliance with the requirements for effluent quality specified in the NPDES permit, and with the schedules in the NPDES permit and CDO. The proposed project would also be necessary to accommodate growth that is planned and defined in the *Auburn/Bowman Community Plan* (Placer County 1994a).

The proposed expansion would include upgrades throughout most of the facility, including new facilities for biological removal of nutrients and a new ultraviolet (UV) disinfection system. The upgraded and expanded SMD 1 WWTP would be designed to accommodate influent wastewater flows up to 2.7 mgd ADWF.

FINDINGS: An initial study (IS) has been prepared to assess the project's potential effects on the environment and the significance of those effects. Based on the results of the IS, the proposed project would not have any significant effects on the environment after implementation of mitigation measures. This conclusion is supported by the following findings:

- ▶ The proposed project would result in no impacts to agricultural resources, land use and planning, and mineral resources.

- ▶ The proposed project would result in no impacts and less-than-significant impacts to geology and soils, hazards and hazardous materials, population and housing, recreation, and transportation and traffic.
- ▶ The proposed project would result in less-than-significant impacts to greenhouse gas emissions, and public services.
- ▶ Mitigation would be implemented to reduce potential significant impacts to less-than-significant levels for aesthetics (potential impacts related to degradation of views); air quality (potential impacts related to short-term construction emissions and odors); biological resources (potential impacts on sensitive habitat, tree-nesting raptors, and special-status amphibians and reptiles); cultural resources (potential to disturb or damage undiscovered subsurface cultural resources or human remains during construction); hydrology and water quality (potential to exceed applicable water quality standards); noise (short-term noise impacts during construction and long-term operations-related noise impacts), and utilities and service systems (environmental impacts associated with WWTP construction).
- ▶ Although there are no known cultural resources that might be disturbed, mitigation is included to address the potential for discovering archaeological and/or human remains during the construction phase of the project.
- ▶ The project would not substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, reduce the number or restrict the range of a special-status species, or eliminate important examples of California history or prehistory.
- ▶ The project would not achieve short-term environmental goals to the disadvantage of long-term environmental goals.
- ▶ The project would not have environmental effects that are individually limited but cumulatively considerable.
- ▶ The project would not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.
- ▶ No substantial evidence exists that the project would have a significant negative or adverse effect on the environment.
- ▶ The project incorporates all applicable mitigation measures, as listed below and described in the IS.

The following mitigation measures will be implemented as part of the project to avoid or minimize environmental impacts. Implementation of these mitigation measures would reduce the potential environmental impacts of the proposed project to less-than-significant levels.

Mitigation Measure AES-1: Include Landscaping in the WWTP Design Plans that is Adequate to Screen Views of New Facilities from Nearby Residences.

Design plans for the site will include a landscaping plan that will adequately screen views of new facilities, including heightened structures, from nearby residences. Should solar panels be located in an area that increases daytime glare experienced by adjacent residences, particular attention shall be given to ensuring adequate screening of adjacent residences from solar panels to limit daytime glare to the greatest extent possible. Landscaping can include establishing vegetated berms and planting trees, shrubs, and ground cover. Effective visual screening with landscaping also can include planting of vegetation that will grow to cover perimeter fences.

Mitigation will be considered successful when the County implements a landscaping plan that is adequate to visually screen views of the new WWTP facilities from nearby residences. All landscaping will be maintained by the County, and plants that fail to thrive will be replaced.

Mitigation Measure AES-2: Practice Best Management Practices when Installing New or Upgraded Lighting.

Design plans for the site will include all reasonably available best management practices (BMPs), and these BMPs available will be implemented to ensure minimal adverse impacts to nighttime views for adjacent residents. BMPs may include, but are not limited to:

- ▶ Identifying where and when lighting is needed and confining and minimizing lighting to the extent necessary to meet safety purposes;
- ▶ Choosing light fixtures that direct light downward;
- ▶ Select compact fluorescent (2300K) or High Pressure Sodium as light sources (bulb types), unless the light is motion sensor activated, in which case incandescent or the instant start compact fluorescent bulbs may be used;
- ▶ Utilizing "shut off" controls such as sensors, timers, and motion detectors, etc.;
- ▶ Limiting the height of fixtures, the amount of light crossing property lines, and overall light levels where possible.

Mitigation Measure AQ-1: Reduce Temporary Construction Emissions of, ROG, NO_x, and PM₁₀ (Dust)

In accordance with PCAPCD Rule 228, the County will implement the following recommended mitigation measures during construction of the proposed project.

1. Prepare and submit a construction emission/dust control plan to PCAPCD for approval before groundbreaking. This plan will address the minimum administrative requirements found in Sections 300 and 400 of District Rule 228 (Placer County 2010).
2. Ensure that fugitive dust on-site will not exceed 40% opacity and not go beyond the boundary of the project site at any time. If lime or other drying agents are utilized to dry out wet grading areas, they will be controlled so as to not exceed Rule 228 limitations.
3. Ensure that construction equipment exhaust emissions will not exceed Rule 202 limitations. Operators of vehicles and equipment that exceed opacity limits will be immediately notified and the equipment shall be repaired within 72 hours.
4. Prohibit open burning of vegetation removed during infrastructure improvements.
5. Enforce a 5-minute maximum idling time for all diesel-power equipment.
6. Require the construction contractor to use ARB-recommended low sulfur diesel fuel for all diesel-powered equipment.
7. Ensure that water is applied to control dust as needed to prevent dust impacts off-site. Operational water truck(s) shall be on-site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.
8. Require that effective soil cover (e.g., mulch, approved chemical soil stabilizers, vegetative mats, or other appropriate material) be applied to all inactive construction areas (previously disturbed areas which remain inactive for 14 days), following best management practices to manufacturer's specifications.
9. Require the construction contractor to implement effective wind erosion control measures (e.g., applying water and/or other dust palliatives) as necessary to prevent or alleviate erosion by the forces of wind on

unpaved roads and employee/equipment parking areas. Sediment and other construction related materials shall be removed from paved roadways by vacuuming or sweeping.

10. Use existing power sources (e.g., power poles) or use clean fuel where feasible or low-sulfur fuel in diesel-powered generators.

Mitigation Measure AQ-2: Survey Project Area for Naturally Occurring Asbestos and Implement Asbestos Air Toxic Control Measures as required by PCAPCD and ARB.

If NOA is found at the site during any ground disturbing activities, the County will report any discovery of NOA, serpentine, or ultramafic rock to the PCAPCD Air Pollution Control Officer no later than the next business day, and will comply as required by PCAPCD with all requirements outlined in the ARB *Asbestos Air Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations* to reduce potential impacts from exposure to NOA to a less-than-significant level. These requirements include (1) an asbestos dust mitigation plan that must be approved by PCAPCD before construction restarts, and must be implemented at the beginning and maintained throughout the duration of construction and grading activities; and (2) an asbestos health and safety program (if required under 8 CCR Section 1529[4]).

In accordance with 17 CCR Sections 93105(e)(2) and 93105(e)(4), the asbestos dust mitigation plan prepared by the County will specify dust mitigation practices that are sufficient to ensure no equipment or operation emits dust that is visible crossing property lines. The plan will also include track-out prevention and control measures, control measures for disturbed surface areas, and storage piles that will remain inactive for more than 7 days, postconstruction stabilization, and asbestos monitoring, if required. Examples of control measures may include but will not be limited to surface wetting, surface covering, surface crusting, application of chemical dust suppressants or stabilizers, installation of wind barriers, construction area speed limits, truck spillage controls, and establishment of vegetative covers. In addition, the County's asbestos dust mitigation plan will include recordkeeping and reporting requirements that document the results of any air monitoring, geologic evaluation, and asbestos bulk sampling.

The County will implement the asbestos health and safety program if permissible exposure limits for airborne asbestos are found to be exceeded within the project site. Implementation will include applicable construction worker protection measures as defined under 8 CCR Section 1529(g), and any additional measures required under the California Occupational Safety and Health Administration, to reduce exposure of construction workers to airborne asbestos.

Mitigation Measure AQ-3: Implement All Feasible Odor Control Measures on Any New or Upgraded Odor-Producing Treatment Plant Elements.

The County will implement the following mitigation measures:

- ▶ Ensure that appropriate engineering controls have been incorporated into the design of the proposed project to minimize the production of unpleasant odors. Engineering controls to diminish odors may include, but will not be limited to, covering headworks, use of chemical additives to remove unpleasant odors, and installing systems to remove odiferous air (e.g., odor scrubbers).
- ▶ To the extent feasible, locate potential sources of odors as far from sensitive receptors as possible or provide systems to collect and treat the odiferous air.
- ▶ After project improvements are completed, operate the controls designed to suppress odors and periodically evaluate adjacent odor levels. If offensive odors are found to be present, take appropriate actions to mitigate them to the extent practical.

- ▶ If possible, conduct all cleaning or other activities that may produce major odors under meteorological conditions that are effective in mitigating odors. Meteorological parameters to consider include wind speed and direction, and air temperature.
- ▶ Notify nearby receptors before any of these potentially major odiferous activities are conducted.

Mitigation Measure Bio-1: Conduct Tree and Shrub Trimming and Removal Activities during the Nonbreeding Season for Special Status Birds and Raptors, or Retain a Qualified Biologist to Conduct a Nesting Bird Survey before Tree and Shrub Removal Activities.

If feasible, the county will begin construction and conduct any tree and shrub trimming and removal activities during the non-breeding season (generally between August 16 and February 28) to avoid disturbing any active special-status species or raptor nests.

If construction or tree and shrub trimming and removal activities are initiated during the nesting season (generally between March 1 and August 15), a preconstruction survey to determine if there are active migratory bird or raptor nests located within 500 feet of the project site will be conducted by a qualified biologist retained by the County. This survey will be conducted no more than 14 days prior to the start of construction or tree and shrub trimming and removal activities. If the biologist determines that the area surveyed does not contain any active nests, then construction and trimming and removal activities can commence without any further mitigation.

If an active migratory bird or raptor nest is discovered during the nesting survey, a no-disturbance buffer will be established around the active nest to avoid disturbance or destruction of the nest. The size of the no disturbance buffer around the active nest will be determined by the biologist in coordination with DFG and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and line-of-sight between the nest and disturbance. The no-disturbance buffer will remain in place until after the nesting season (March 1 through August 15) or until the qualified biologist retained by the County determines that the young have fledged from the nest.

Mitigation Measure Bio-2: Avoid, Minimize, and Mitigate Potentially Significant Impacts to Riparian Forest.

If the riparian forest can be avoided during project construction, a qualified botanist will clearly mark the habitat boundary in the field and the construction contractor shall erect temporary construction fencing outside the boundary to keep construction activities out of the area. Before ground disturbance, all on-site construction personnel shall be instructed about the presence of this habitat and the importance of avoiding the disturbance of this habitat. During construction, the qualified botanist shall periodically monitor construction crews to ensure that the riparian forest area is avoided.

If complete avoidance is not feasible and construction work requires encroachment into the riparian forest area, the County shall develop a riparian habitat mitigation plan that will replace, restore, or enhance the ecological values of all riparian habitat that would be removed and/or degraded with project implementation at a minimum 1:1 ratio and achieve no net loss of riparian habitat functions and values. Compensation may be provided through the purchase of mitigation credits at approved mitigation banks, or through on-site and/or off-site preservation/restoration.

Mitigation Measure Bio-3: Ensure Construction of the Project Results in No Net Loss of Waters of the United States or State.

To mitigate impacts related to construction and removal of outfalls and/or other existing pipes, installation of stream monitoring equipment, and construction of a new fence in waters (i.e., Dry Creek, Rock Creek) and wetlands (i.e., freshwater marsh) in the project area, the County will undertake the following measures where feasible:

The County shall require construction contractors to conduct in-channel construction during the low-flow period, limit disturbance to the minimum extent practicable, implement Mitigation Measure HYD-2, "Prepare and Implement a Storm Water Pollution Prevention Plan and Implement Best Management Practices," and stabilize all portions of the channel that are disturbed to prevent future scour or erosion. In addition, the County will replace, restore, or enhance the ecological values of all wetlands and other waters of the United States and waters of the State that would be removed and/or degraded with project implementation (i.e., Dry Creek, Rock Creek, and adjacent freshwater marsh) at a minimum 1:1 ratio and on a "no net loss" basis (in accordance with USACE and Central Valley RWQCB guidelines). Compensation may be provided through the purchase of mitigation credits at approved mitigation banks, or through on-site and/or off-site preservation/restoration. The County shall also consult with DFG to determine if a streambed alteration agreement is required for the proposed project. The County shall comply with the requirements of the streambed alteration agreement, including implementing a habitat mitigation plan, if so required by DFG as a component of the streambed alteration agreement.

Mitigation Measure Bio-4: Submit Discretionary Project Permit Application to Placer County and Comply with Permit Conditions.

The proposed project will be subject to the provisions of the Tree Preservation Ordinance because the issuance of a Minor Use Permit is considered a discretionary action. Compliance includes the preparation of a justification statement that establishes how any remaining protected trees in the vicinity of the project site will be protected. The justification statement shall state that any construction or use within the protected zone of a protected tree shall be done with approved preservation methods. A site plan map and the locations of protected trees within 50 feet of any development activity shall be developed, including the location of the base and dripline for all protected trees, the tree number, and the location of the protected zone of a protected tree. An arborists report shall also be prepared by an individual certified as an arborist by the International Society of Arboriculture or a registered professional forester. This report shall contain specific information on the location, condition, potential impacts of development, recommended actions, and mitigation measures for trees on the project site. A survey showing the locations of the protected trees shall be conducted by a California professional engineer or California professional land surveyor.

The County shall replace the trees in kind, implement a vegetation plan, or if the project site is not capable of supporting all of the replacement trees, pay for replacement trees at the current market value, including cost of installation. The current market value shall be established by a certified arborist, a registered forester, or a registered landscape architect, with the funds to go into a tree preservation fund.

Mitigation Measure CR-1: Implement a Plan to Address the Inadvertent Discovery of Buried Cultural Resources. The County's Construction Contractor will implement this Plan during Project Construction.

The County shall require that before the start of grading or excavation activities, construction personnel involved with earthmoving activities shall be informed of the possibility of encountering cultural resources, the appearance and types of cultural resources likely to be seen during construction activities, and proper notification procedures should any be encountered. This construction worker training shall be prepared and presented by a qualified archaeologist.

If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bones, or paleontological resources are inadvertently discovered during ground-disturbing activities, the construction personnel shall stop all work in the area and within 100 feet of the find until a qualified archaeologist or paleontologist, approved by the County, assesses the significance of the find and, if necessary, develops appropriate treatment measures in consultation with the County.

Mitigation Measure CR-2: Implement a Plan to Address the Discovery of Human Remains and Adhere to State Procedures for the Inadvertent Discovery of Human Remains during Project Construction.

The County will require its construction contractor to adhere to state procedures for the inadvertent discovery of human remains during project construction. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the construction contractor shall immediately halt potentially damaging ground-disturbing activity in the area of the remains and within 100 feet of the find and notify the Placer County Coroner, the SMD 1 WWTP representative, the State Water Resources Control Board Division of Financial Assistance (SWRCB) lead, and a professional archaeologist specializing in human osteology who is approved by the SWRCB to determine the nature of the remains.

The coroner shall examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Section 7050.5[b] of the Health and Safety Code). If the coroner determines that the remains are those of Native American origin, he or she shall contact the Native American Heritage Commission by telephone within 24 hours of making that determination (Section 7050[c] of the Health and Safety Code). Following the coroner's findings, the County, the SWRCB, the construction contractor, the archaeologist, and the Native American Heritage Commission-designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting on notification of a discovery of Native American human remains are identified in Section 5097.9 of the California Public Resources Code.

The County and the SWRCB shall ensure that the area of the discovery and the immediate vicinity in a radius of 100 feet of the find (according to generally accepted cultural or archaeological standards and practices) is cordoned off and not damaged or disturbed by further ground-disturbing activity (including pedestrian traffic) until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendents, or other culturally appropriate treatment may be discussed. The concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains.

Mitigation Measure HYD-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Implement Best Management Practices.

The County will file a Permit Registration Document to obtain coverage from the SWRCB under the NPDES Stormwater General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ/NPDES Permit No. CAS000002). As required by this General Permit, the County will have a SWPPP prepared and implement the specified erosion control and pollution prevention BMPs that will be used to avoid and minimize potential adverse construction-related water quality impacts. The SWPPP will identify the BMPs that must be incorporated during construction and will describe BMP inspection and monitoring activities. All water quality, erosion, and sediment control measures included in the SWPPP will be implemented in accordance with the SWPPP. The SWPPP will identify the responsibilities of all parties, contingency measures, agency contacts, and training requirements and documentation for those personnel responsible for installation, inspection, maintenance, and repair of BMPs. Key categories of BMPs that will be described in the SWPPP, to the degree appropriate for this project, include Pollution Prevention, Erosion Control, Good Housekeeping Measures, and BMP Inspection and Monitoring. Compliance with the SWPPP will be required in the contract specifications.

Specifically, the standard construction-related BMPs and practices required to be considered for inclusion in the SWPPP and implemented during and after construction include the following:

- ▶ *Good Site Management BMPs:* Identify all construction sites and staging activities, work schedules, temporary storage and borrow areas, construction materials handling and disposal, dewatering and treatment

and disposal of groundwater removed from excavations, discharge locations and methods, and final stabilization and clean-up measures.

- ▶ *Erosion and Sediment Control BMPs:* Identify BMPs designed to stabilize exposed soils, minimize off-site sediment runoff, remove sediment from on-site runoff before it leaves the site, slow down runoff rates across construction sites; and identify post construction soil stabilization BMPs. Identify and implement appropriate temporary and long-term seeding, mulching, and other erosion control measures as necessary to minimize erosion.
- ▶ *Good Housekeeping Measures:* Identify BMPs designed to reduce exposure of construction sites and materials storage to stormwater runoff, including tracking control facilities; equipment washing; litter and construction debris; designated refueling and equipment inspection/maintenance practices; and spill control and response measures for hazardous materials.
- ▶ *Non-Storm Water Management Measures:* Implement measures to control all non-storm water discharges during construction.
- ▶ *Run-on and Run-off Control Management:* Effectively manage all run-on and run-off from the site.
- ▶ *BMP Inspection Monitoring, Maintenance and Repair:* In the SWPPP, provide clear objectives in the SWPPP for evaluating environmental compliance. Identify inspection and monitoring protocols, Qualified SWPPP Practitioner (QSP) responsible for SWPPP implementation, requirements for environmental awareness training, requirements for preparation of Rain Event Action Plans, contractor and agency roles and responsibilities, reporting procedures, and communication protocols.

Mitigation Measure NOI-1: Maintain and Equip Project Construction Equipment with Noise Control Devices.

The County will ensure that project construction equipment is properly maintained and equipped with all feasible noise control devices, such as mufflers, in accordance with manufacturers' specifications.

Mitigation Measure NOI-2: Limit Project Construction to County-Exempted Hours; Notify Neighbors Otherwise.

Construction activities shall be limited to the hours of 6 a.m. to 8 p.m., Monday through Friday, and 8 a.m. to 8 p.m., Saturdays and Sundays, the times such noise levels are exempted by Placer County standards. When construction activities require hours extending beyond those limited by Placer County the contractor shall give area residents within 750 feet of activities 48-hours notice of activities.

Mitigation Measure NOI-3: Manage Construction Equipment Movement on the Project Site to Minimize Disturbance to Occupied Residences and Limit Idling Times.

Moving construction equipment around the project site shall be managed to minimize noise disturbance to occupied residences. Equipment not in use shall not be left idling for more than 5 minutes. The construction staging area(s) shall be located as far from nearby residences as feasible.

Mitigation Measure NOI-4: Designate a Disturbance Coordinator to Receive All Public Complaints.

The County will designate a disturbance coordinator, such as an employee of the general contractor or the project manager for the County, post the coordinator's contact telephone number conspicuously around the project site, and provide the number to nearby sensitive receptors. The disturbance coordinator shall receive all public complaints, be responsible for determining the cause of the complaint, and implement any feasible measures to alleviate the problem.

Mitigation Measure NOI-5: Orient Structures and Provide Enclosures or Barriers to Reduce Noise from Mechanical Equipment and Electrical Generators.

The County will require the facility to be designed in accordance with the Placer County Noise Ordinance:

- ▶ Mechanical equipment and generators that could produce noise levels exceeding 45 dBA $L_{eq}[h]$ at adjacent residential property lines will be located within an enclosure or behind a barrier, or an intervening structure will be placed between the source and receiver to ensure a minimum attenuation of 20 dBA to meet the requirements of the Placer County Noise Ordinance.

Mitigation Measure NOI-6: Prohibit Operation of Large Bulldozers (Non-Rubber-Tired Dozers) and Trucks within 43 feet of Habitable Structures.

The County will prohibit operation of large bulldozers (non rubber-tired dozers) and trucks within 43 feet (the nearest distance that vibration could disturb area residents) of the nearest habitable structure to the project site at all times.

Mitigation Measure Trans-1: Prepare and implement a traffic control plan.

The project proponent shall prepare or shall require the construction contractor to prepare a traffic control plan for review and approval by the Placer County Department of Public Works prior to any construction in County public road right-of-way. The traffic control plan shall be submitted to the Placer County Department of Public Works no less than 45 days prior to construction in the County public road right-of-way. The traffic control plan shall be prepared in accordance with professional traffic engineering standards and in compliance with the requirements of Placer County's encroachment permit requirements. The traffic control plan shall require that at least one lane will remain open during construction and that there will be no road closure. The traffic control plan may include, but not be limited to, the following measures:

- ▶ Identify specific construction methods to maintain traffic flows on affected streets.
- ▶ Maintain the maximum amount of travel lane capacity during nonconstruction periods and provide flagger control at sensitive sites to manage traffic control and flows.
- ▶ Limit the construction work zones to widths that, at a minimum, shall maintain alternate one-way traffic flow past the construction zones.
- ▶ Post advanced warning of construction activities to allow motorists to select alternative routes in advance.
- ▶ Prepare appropriate warning signage and lighting for construction zones.
- ▶ Maintain steel trench plates at construction sites to restore access across open trenches to minimize disruption of access to driveway and adjacent land uses. Construction trenches in the street shall not be left open after work hours.

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1 INTRODUCTION

1.1 INTRODUCTION AND REGULATORY GUIDANCE

This document is the initial study/mitigated negative declaration (IS/MND) for the proposed Sewer Maintenance District 1 (SMD 1) Wastewater Treatment Plant (WWTP) Upgrade and Expansion Project located in Placer County. This IS/MND has been prepared in accordance with the California Environmental Quality Act (CEQA), Section 21000 et seq. of the California Public Resources Code; and the State CEQA Guidelines, Title 14, Section 15000 et seq. of the California Code of Regulations.

An IS is prepared by a lead agency to determine if a project may have a significant effect on the environment (State CEQA Guidelines, Section 15063[a]) and thus to determine the appropriate environmental document. In accordance with Section 15070 of the State CEQA Guidelines:

...[a] public agency shall prepare...a proposed negative declaration or mitigated negative declaration...when: (a) The initial study shows that there is no substantial evidence...that the project may have a significant effect on the environment, or (b) The initial study identifies potentially significant effects, but revisions in the project plans or proposal... agreed to by the applicant...would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur, and [t]here is no substantial evidence...that the project as revised may have a significant effect on the environment.

In this circumstance, the lead agency prepares a written statement describing its reasons for concluding that the proposed project would not have a significant effect on the environment and, therefore, does not require the preparation of an environmental impact report.

As described in this IS (in Chapter 3, “Environmental Checklist”), the proposed project would result in certain significant environmental impacts, but those impacts would be reduced to a less-than-significant level by implementation of revisions (in the form of mitigation measures) that have been agreed to and will be implemented by the County. Therefore, an IS/MND is the appropriate document for compliance with CEQA requirements. This IS/MND conforms to these requirements and to the content requirements presented in Section 15071 of the State CEQA Guidelines.

1.2 INTENDED USES OF THE IS/MND AND AGENCY ROLES AND RESPONSIBILITIES

This IS/MND will be used by the County and CEQA responsible agencies to fulfill the requirements of CEQA. It will also be used as an informational document by agencies that could have permitting or approval authority over aspects of the project and by other local and state agencies, including CEQA trustee agencies that may have an interest in the project.

The lead agency is the public agency with the primary responsibility over the proposed project. In accordance with Section 15051(b)(1) of the State CEQA Guidelines, “the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose....” In this case, the lead agency for the proposed project is the same as the project proponent, the Placer County Department of Facility Services.

A CEQA responsible agency is a state agency, board, or commission or any local or regional agency other than the lead agency that has a legal responsibility for reviewing, carrying out, or approving aspects of a project. Responsible agencies must actively participate in the lead agency’s CEQA process and review the lead agency’s

CEQA document. This IS/MND will be used by responsible agencies to ensure that the requirements of CEQA have been met before deciding whether to approve or permit project elements over which they have authority.

A CEQA trustee agency is a state agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California. The California Department of Fish and Game (DFG) is a trustee agency that has jurisdiction over resources (fish and wildlife resources) potentially affected by the proposed project. For this proposed project, DFG is a responsible as well as a trustee agency.

In addition, this IS/MND will be subject to the SWRCB Division of Financial Assistance's CEQA-Plus environmental review requirements for State Revolving Fund (SRF) loan program applicants. Refer to the discussion below under Section 1.5, "State Revolving Fund Loan Program Review."

The agencies that may have responsibility or jurisdiction over the implementation of components of the proposed project are listed below.

1.2.1 LEAD AGENCY

- ▶ Placer County Department of Facility Services: Ultimate responsibility for SMD 1 WWTP operations and overall project approval.

1.2.2 RESPONSIBLE AGENCIES

- ▶ Central Valley Regional Water Quality Control Board (Region 5): National Pollutant Discharge Elimination System (NPDES) waste discharge permit; NPDES general construction storm water permit pursuant to Section 402 of the federal Clean Water Act (CWA); general order for dewatering; Water Quality Certification pursuant to Section 401 of the CWA.
- ▶ SWRCB, Division of Financial Assistance, Environmental Services Division: Section 7 of the federal Endangered Species Act (ESA); Federal General Conformity Rule of the federal Clean Air Act; Section 106 of the National Historic Preservation Act.
- ▶ California Department of Fish and Game: California Endangered Species Act consultation; potential Section 2081 incidental take authorization; potential Section 1602 lake and streambed alteration agreement.
- ▶ State Office of Historic Preservation: California Register of Historical Resources; Section 106 of the National Historic Preservation Act.
- ▶ Placer County Air Pollution Control District: Authority to construct and permit to operate.
- ▶ Placer County: Minor Use Permit for land use entitlement; Minor Boundary Line Adjustment for merging four County-owned parcels, other possible construction authorizations/permits.

1.2.3 FEDERAL AGENCIES WITH PERMITTING/APPROVAL AUTHORITY

- ▶ U.S. Army Corps of Engineers: Permitting under Section 404 of the CWA for discharge of fill into waters of the United States, including wetlands.
- ▶ U.S. Fish and Wildlife Service: ESA consultation and possible incidental take authorization.

1.2.4 STATE REVOLVING FUND LOAN PROGRAM

The federal CWA, as amended in 1987, provides for establishment of an SRF loan program funded by federal grants, state funds, and revenue bonds. The purpose of the SRF loan program is to facilitate implementation of the CWA and various state laws by providing financial assistance for the construction of facilities or implementation of measures necessary to address water quality problems and to prevent pollution of waters of the state. The SRF loan program provides low-interest loan funding for construction of publicly owned wastewater treatment facilities, local sewers, sewer interceptors, and water reclamation facilities, as well as expanded-use projects such as implementation of nonpoint source projects or programs, development and implementation of estuary Comprehensive Conservation and Management Plans, and storm water treatment.

The SRF loan program is partially funded by the U.S. Environmental Protection Agency (EPA) and is subject to federal environmental regulations, including the federal Endangered Species Act, the National Historic Preservation Act, and the General Conformity Rule for the Clean Air Act, among others. EPA has chosen to use CEQA as the compliance base for California's SRF loan program, in addition to compliance with the federal Endangered Species Act, the National Historic Preservation Act, and the federal Clean Air Act. Collectively, the SWRCB calls these requirements CEQA-Plus. Additional federal regulations may also apply.

Because the County may apply for an SRF loan to help defray the costs of the proposed project, environmental staff at the SWRCB Division of Financial Assistance will review this IS/MND for compliance with its CEQA-Plus requirements. The specific information required by the SWRCB Clean Water State Revolving Fund Program to comply with federal cross-cutting environmental regulations has been incorporated throughout this IS/MND; the SRF program's Evaluation Form for Environmental Review and Federal Coordination is included in Appendix A. SWRCB staff will also facilitate (1) federal consultation on Section 7 of the ESA, if needed; (2) a California Air Resources Board determination of conformity with the federal Clean Air Act; and (3) coordination with the State Historic Preservation Officer to ensure compliance with Section 106 of the National Historic Preservation Act.

1.3 PURPOSE OF THIS DOCUMENT

The Placer County Department of Facility Services, as the lead agency for the proposed SMD 1 WWTP Upgrade and Expansion Project, has directed the preparation of an IS/MND in compliance with CEQA. The purpose of this document is to present to decision makers and the public the environmental consequences of implementing the proposed project. The disclosure document is being made available to the public for review and comment. The IS/MND is available for a 30-day public review period from April 25, 2011, to May 24, 2011.

Comments should be addressed to:

Placer County
Department of Facility Services
Attn: Rebecca Lillis
11476 C Avenue
Auburn, CA 95603
Fax: (530) 889-6809
Email: rlillis@placer.ca.gov

Questions regarding the IS/MND should be directed to Rebecca Lillis at (530) 886-4984. If you wish to send written comments, (including via email), they must be received by close of business on May 25, 2011.

A copy of the IS/MND is available for public review at the following addresses:

Placer County
Department of Facility Services
2855 2nd St.
Auburn, CA 95603
(530) 886-4900

Community Development Resource Agency (CDRA)
3091 County Center Drive
Auburn, CA 95603

Auburn Public Library
350 Nevada Street
Auburn, CA 95603

Meadow Vista Public Library
16981 Placer Hills Road, Suite B6
Meadow Vista, CA 95722

Applegate Public Library
18018 Applegate Road
Applegate, CA 95703

A copy of the IS/MND is also available for public review online at <http://www.placer.ca.gov/Departments/CommunityDevelopment/EnvCoordSvcs/NegDec.aspx>.

After comments are received from the public and reviewing agencies, Placer County will consider those comments and may (1) adopt the MND and mitigation monitoring and reporting program, and approve the proposed project; (2) undertake additional environmental studies; or (3) abandon the project.

1.4 SUMMARY OF FINDINGS

Chapter 3 of this document contains the analysis and discussion of potential environmental impacts of the proposed project.

Based on the issues evaluated in Chapter 3, it was determined that the proposed project would have no impact or a less-than-significant impact in the following resource areas:

- ▶ agricultural resources,
- ▶ geology and soils,
- ▶ greenhouse gas emissions,
- ▶ hazards and hazardous materials,
- ▶ land use and planning,
- ▶ mineral resources,
- ▶ population and housing,
- ▶ public services,
- ▶ recreation,
- ▶ utilities and service systems, and
- ▶ mandatory findings of significance.

Impacts of the proposed project were determined to be less than significant with the implementation of mitigation measures described in Chapter 3 in the following resource areas:

- ▶ aesthetics,
- ▶ air quality,
- ▶ biological resources,
- ▶ cultural resources,
- ▶ hydrology and water quality,
- ▶ noise, and
- ▶ transportation and traffic.

Placer County has agreed to adopt each of the mitigation measures described in Chapter 3, “Environmental Checklist.” A Mitigation Monitoring and Reporting Program will be prepared and will include those mitigation measures that would reduce potentially significant environmental impacts to the resource areas stated above to less-than-significant levels.

1.5 DOCUMENT ORGANIZATION

This IS is divided into the following five chapters:

Chapter 1: Introduction. This chapter introduces the project and describes the purpose and organization of this document.

Chapter 2: Project Description. This chapter describes the details of the proposed project.

Chapter 3: Environmental Checklist. This chapter describes the environmental setting for each of the environmental subject areas; evaluates a range of impacts identified as “no impact,” “less than significant,” “less than significant with mitigation incorporated,” or “potentially significant” in response to the environmental checklist; and provides mitigation measures, where appropriate, to mitigate potentially significant impacts to a less-than-significant level. If any impacts were determined to be potentially significant after mitigation, an EIR would be required. For this project, however, mitigation measures have been incorporated where needed, to reduce all potentially significant impacts to a less-than-significant level.

Chapter 4: References. This chapter lists the references used in preparation of this IS.

Chapter 5: List of Preparers. This chapter identifies the preparers of this IS.

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2 PROJECT DESCRIPTION

This chapter describes the Sewer Maintenance District 1 (SMD 1) Wastewater Treatment Plant (WWTP) Upgrade and Expansion Project (proposed project). The project location and background are described along with project objectives, project characteristics, discretionary actions and approvals that may be required, and construction phases and methods.

2.1 OVERVIEW AND PROJECT LOCATION

2.1.1 SEWER MAINTENANCE DISTRICT 1 SERVICE AREA

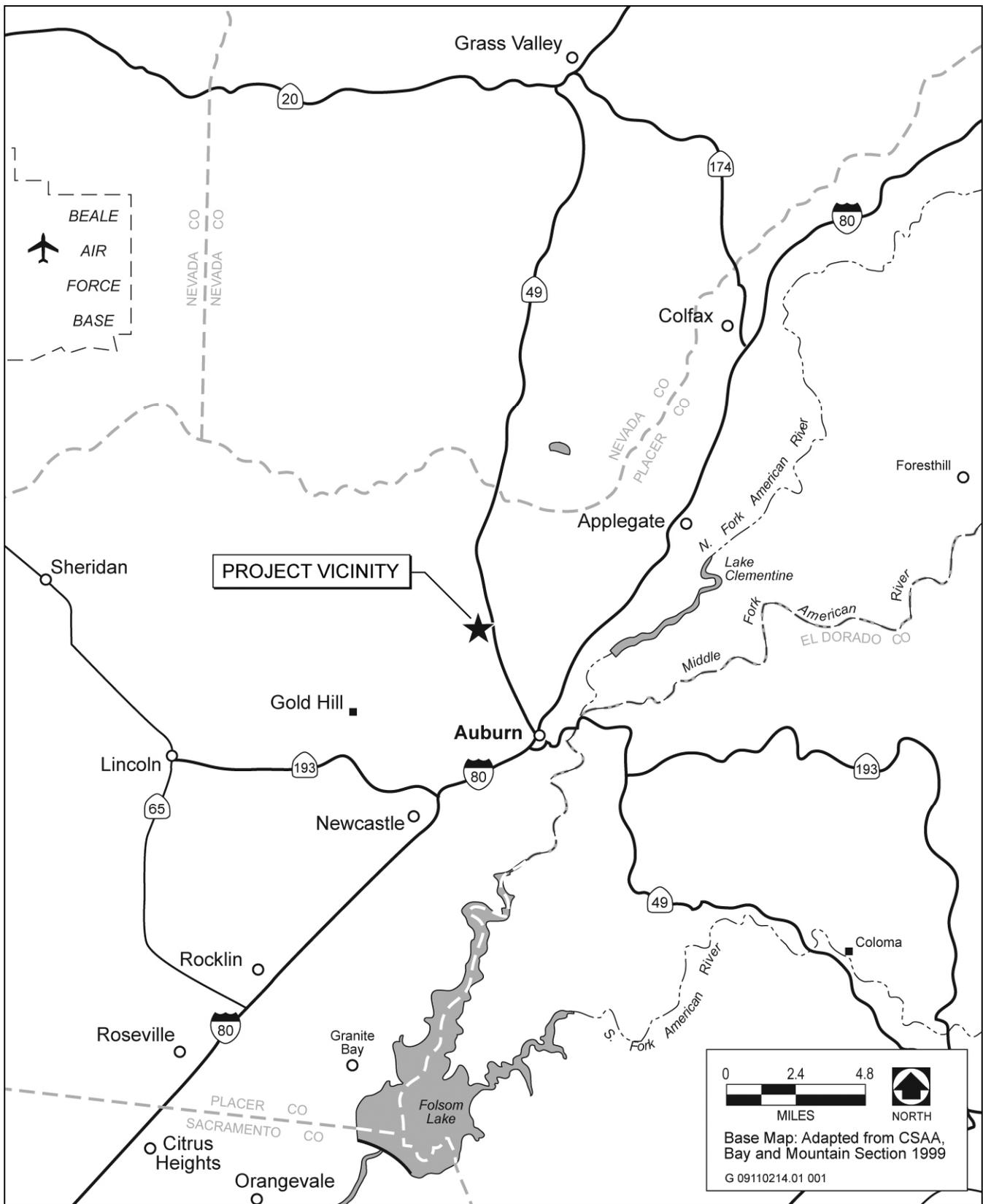
The Placer County (County) Department of Facility Services operates and maintains nine separate sanitary sewer systems within Placer County, all of which derive their operating revenue from sewer user fees. SMD 1 is one of these nine, and is governed by the County Board of Supervisors. The SMD 1 system includes wastewater collection, treatment, and disposal facilities that provide municipal sewage service to unincorporated portions of the county in North Auburn, and to the Auburn Airport Industrial Park, which is under the jurisdiction of the City of Auburn.

The SMD 1 service area is located in the Sierra Nevada foothills along State Route (SR) 49 in Placer County. The region's urban development is generally contained within population centers along SR 49 throughout the foothills, which extend north and south along the eastern edge of the Sacramento Valley. The SMD 1 WWTP is located in North Auburn, an area of single-family residences and a commercial corridor located along SR 49. The Auburn Airport Industrial Park, located approximately 2 miles east of the SMD 1 WWTP, is a small commercial area under the jurisdiction of the City of Auburn, but outside its boundaries. The entire project area is located in unincorporated Placer County (Exhibit 2-1).

Within the service area of the SMD 1 WWTP, wastewater is collected in buried pipelines and conveyed to the WWTP for treatment and disposal. The WWTP is permitted for treatment and discharge of up to 2.18 million gallons per day (mgd) average dry-weather flow (ADWF) of wastewater. The existing service area of the SMD 1 WWTP encompasses approximately 3,300 acres and approximately 7,900 equivalent dwelling units (EDUs) (approximately 5,100 residential and 2,800 commercial or industrial users); approximately 175 EDUs are allocated to the Auburn Airport Industrial Park. The remaining WWTP capacity is not reserved for any specific areas; service is provided on a first-come, first-served basis. Current wastewater influent flows to the WWTP average approximately 1.7 mgd ADWF.

The SMD 1 WWTP presently operates and discharges treated effluent to Rock Creek under waste discharge requirements (WDRs) set forth in a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley Regional Water Quality Control Board (RWQCB) as Order No. R5-2010-0092 (NPDES Permit No. CA 0079316). The NPDES permit includes final effluent limitations for biochemical oxygen demand, total suspended solids, total coliform organisms, and ammonia, and requires full compliance with these final effluent limitations by September 1, 2015. In addition, the Central Valley RWQCB has adopted Cease and Desist Order (CDO) No. R5-2010-0093 because the SMD 1 WWTP is not able to consistently comply with effluent limitations for aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite. The CDO No. R5-2010-0093 requires full compliance with final effluent limitations for these constituents by September 1, 2015.

Improvements planned for the WWTP under the proposed project are necessary to achieve compliance with the requirements for effluent quality specified in the NPDES permit, and with the schedules in the NPDES permit and CDO. The proposed project would also be necessary to accommodate growth that is planned and defined in the *Auburn/Bowman Community Plan* (Placer County 1994a).



Source: Adapted by AECOM in 2010

Regional Location

Exhibit 2-1

The proposed expansion would include upgrades throughout most of the facility, including new facilities for biological removal of nutrients and a new ultraviolet (UV) disinfection system. The upgraded and expanded SMD 1 WWTP would be designed to accommodate influent wastewater flows up to 2.7 mgd ADWF.

2.1.2 SEWER MAINTENANCE DISTRICT 1 WASTEWATER TREATMENT PLANT

The existing SMD 1 WWTP is located approximately 0.2 mile west of SR 49 at the intersection of Joeger Road and Meadow Glen Road (Exhibit 2-2). Undeveloped foothills lie to the north of the existing SMD 1 WWTP, while rural residential development is located to the south, east, and west. The existing WWTP is located on two County-owned parcels (Assessor's Parcel Numbers 076-080-007 and 076-080-003). The County also owns two parcels (Assessor's Parcel Numbers 076-080-012 and 076-080-029) to the east and directly adjacent to the site of the existing WWTP. To facilitate expansion of the WWTP site under the proposed project, all four parcels would be merged. To accomplish this, the Planning Department's Parcel Review Committee would consider a request to approve a minor boundary line adjustment.

The SMD 1 WWTP currently discharges into Rock Creek, a water of the United States within the Upper Coon–Upper Auburn watershed, at two locations. Rock Creek is tributary to Dry Creek, which flows into the Bear River and ultimately into the Sacramento River. The primary discharge point is located 200 feet upstream of the confluence of Dry Creek and Rock Creek. A secondary discharge point, used only when the primary discharge is taken out of service for regular cleaning and maintenance, is located on Rock Creek another 200 feet upstream of the primary discharge location. After the upgrade and expansion, the secondary discharge point would no longer be required.

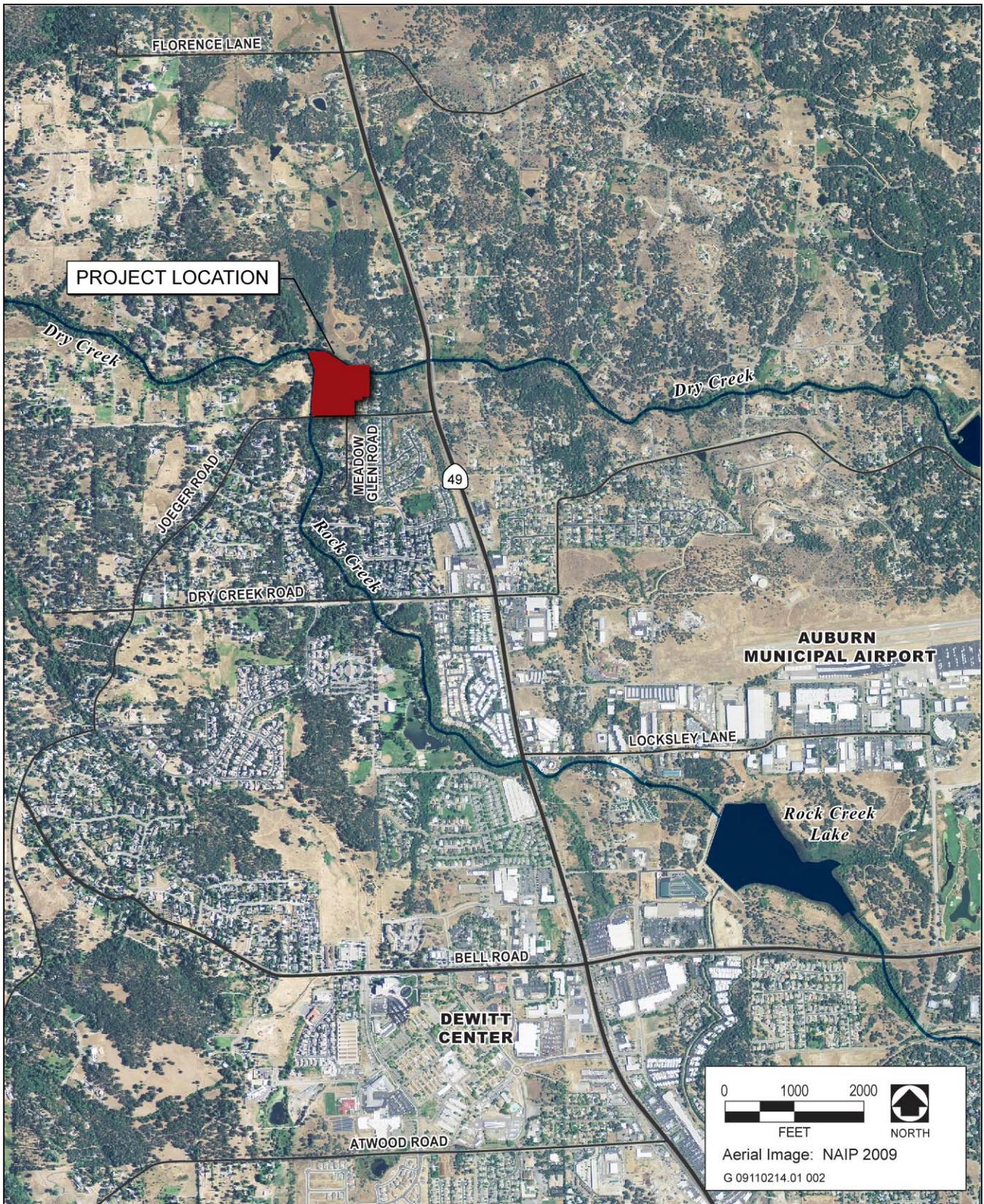
2.2 PROJECT OBJECTIVES

The objectives of the proposed project are as follows:

- ▶ Provide wastewater treatment facilities that consistently comply with the discharge standards, operational requirements, and project delivery milestones included in NPDES Permit Order No. R5-2010-0092 issued by the Central Valley Regional Water Quality Control Board in September 2010 as well as reasonably predicted future discharge requirements.
- ▶ Provide wastewater treatment facilities that utilize proven processes and technologies, include adequate operational safeguards, and are efficient to operate.
- ▶ Provide wastewater treatment facilities that accommodate growth and economic development in the North Auburn area for the next 20 years consistent with the *Auburn Bowman Community Plan*.
- ▶ Provide cost effective wastewater service for current and future rate payers that gives full consideration to community sentiment regarding cost control and governance.
- ▶ Protect and/or enhance the environment by improving overall water quality of effluent, preserving existing riparian habitat, protecting beneficial aquatic uses, improving stormwater drainage and management, enhancing odor control, and increasing energy efficiency.

2.3 PROJECT BACKGROUND AND REGULATORY SETTING

In the late 1950s, development started in the North Auburn area, outside the Auburn city limits. Because North Auburn had no sewer system, the first developments were approved by the County with individual on-site septic systems. By 1959 many of the septic systems were failing, and it was determined that a public sewer system was needed. The County Board of Supervisors approved the formation of Placer County SMD 1. Bonds were sold to pay for design and construction of a North Auburn sewer system and a WWTP located on Joeger Road. By 1961



Source: Adapted by AECOM in 2010

Project Location

Exhibit 2-2

both the sewer system and treatment plant were complete, and Placer County SMD 1 began maintenance and operation of these facilities. The earliest recorded design capacity of the SMD 1 WWTP was 0.95 mgd in 1984. All existing structures located within the district that met established criteria were required to connect to the sewer, along with all new commercial and residential development (Placer County 2008).

The SMD 1 sewer system was expanded to serve new development as it progressed. Land developers within the North Auburn area were required to install sewer collection systems in new developments that connected to the SMD 1 system. This land was then annexed into the district. Through grants and assessment districts, sewer service was extended to several areas of existing homes on septic systems that were not served by the original district. The design capacity of the WWTP was increased to 1.44 mgd in 1988, 1.62 mgd in 1991, and 2.18 mgd in 1997 (Placer County 2008).

Much of the SMD 1 service area is located within the North Auburn Census-designated place (CDP), an unincorporated area for which U.S. Census data are available at the community level. The current SMD 1 service area is shown in Exhibit 2-3.

Any WWTP that discharges to surface waters is issued an NPDES permit that sets specific discharge requirements to ensure protection of public health, environmental health, and water quality. These permits are renewed every 5 years by the appropriate RWQCB (in this case, the Central Valley RWQCB). At each renewal, the permits may incorporate new treatment objectives and discharge regulations that may require upgrades or modifications to the facility.

Point-source discharges of effluent from WWTPs to surface waters require establishment of effluent and receiving limitations, which are included as WDRs that also serve as NPDES permits. Numeric and narrative limits are placed on the quality and quantity of the waste discharge or effluent, based on water quality objectives for the receiving waters and applicable federal and state policies and effluent limits. In addition, numeric and narrative water quality objectives and policies are based on beneficial uses established for the receiving waters.

The current WDRs, which are set forth in Order No. R5-2010-0092 (NPDES Permit No. CA 0079316) and were adopted by the Central Valley RWQCB on September 22, 2010, regulate discharges of up to 2.18 mgd ADWF of treated effluent from the SMD 1 WWTP to Rock Creek, a water of the United States. The WDRs include a time schedule for compliance with ammonia-nitrogen effluent limits and interim effluent limits for ammonia, BOD, total suspended solids and total coliform organisms. On September 22, 2010, the Central Valley RWQCB also adopted Cease and Desist Order No. R5-2010-0093, which establishes additional time schedules for compliance with aluminum, chlorodibromomethane, chloroform, dichlorobromomethane, nitrate plus nitrite, and nitrite effluent limits and interim effluent limitations for those constituents.

2.4 EXISTING WASTEWATER TREATMENT PLANT FACILITIES

Exhibit 2-4 shows the site of the existing SMD 1 WWTP. As described previously, the plant's design capacity is 2.18 mgd ADWF. The peak wet-weather flow is not limited, although the filters at the SMD 1 WWTP have a peak capacity of 3.5 mgd. The plant currently provides a tertiary level of treatment when influent flows are 3.5 mgd or less and a mixture of secondary and tertiary treatment when flows are greater than 3.5 mgd. Secondary treatment involves biological treatment to remove organic wastes. Tertiary treatment incorporates additional filtration to further improve effluent quality.

The SMD 1 WWTP currently consists of headworks that include comminution (pulverization) and aerated grit removal, four primary clarifiers, three rotating biological contactor (RBC) trains, four secondary clarifiers, two trickling filters, six tertiary gravity filters with anthracite media, three chlorine contact chambers, primary and secondary anaerobic digesters, a belt press, and sludge drying beds, which can be used when the belt press is not in operation. Dewatered sludge is disposed at the Western Regional Sanitary Landfill near Lincoln. After dechlorination, treated effluent is discharged to Rock Creek at one of two locations. Discharge Point 001, located

200 feet upstream of the confluence of Dry Creek and Rock Creek, is the regular discharge point. Discharge Point 002, located approximately 200 feet upstream of Discharge Point 001, is only used when Chlorine Contact Basin No. 3 is offline for maintenance. Maintenance is allowed only when daily average plant flows are at or below 2.18 mgd ADWF (see Exhibit 2-4).

A more detailed description of the processing of liquids and solids at the existing SMD 1 WWTP facilities is provided below.

2.4.1 LIQUIDS PROCESSING

Two main sewer trunks, pipelines 15 inches and 21 inches in diameter, combine to become a 30-inch-diameter pipeline, through which influent enters the WWTP and is conveyed through a flume to the headworks. The headworks consist of comminutors and a manually cleaned bar screen in a bypass channel that is used when the mechanical comminutors are out of service. Grit is removed using two air-lift grit pumps and a rotary grit washer.

Influent is conveyed to the four primary clarifiers from the headworks. During wet weather the primary clarifier tanks operate as clarifiers, and during dry weather two of the four primary clarifiers act as recycle equalization basins. The purpose of the recycle equalization basins is to level the ammonia loading to the RBCs and trickling filters. These basins were constructed as a temporary fix, in anticipation that the SMD 1 WWTP would be abandoned by 2007. Recycle flows are mixed using a combination of influent and air.

The primary clarifier effluent flows to three RBC trains. RBC effluent flows by gravity to the secondary flow splitter box, which diverts the wastewater to two intermediate clarifiers. The intermediate clarifier effluent is conveyed to two trickling filters for further ammonia removal, and then to two final clarifiers. The final clarifier effluent is then directed to the filter splitter box, where flow is divided equally among six tertiary filters.

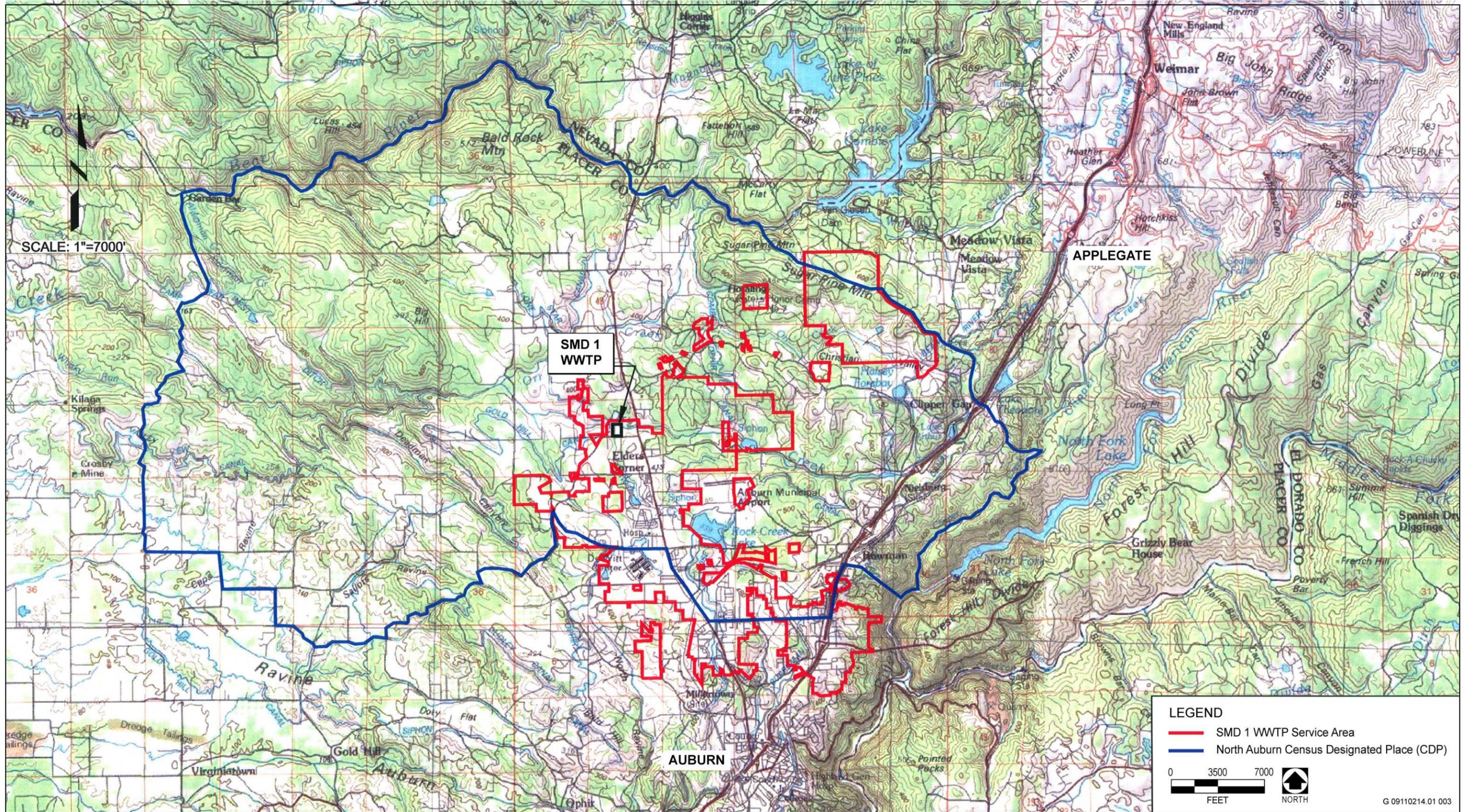
Before discharge to Rock Creek, the filtered effluent is disinfected and dechlorinated. The disinfection facilities consist of three chlorine contact basins that are operated in series. Chlorine gas and sulfur dioxide are currently used for chlorination and dechlorination, respectively.

2.4.2 SOLIDS PROCESSING

Scum and sludge from intermediate and final clarifiers are pumped back to the primary clarifiers for collection and settling. The combined sludge and skimmings from the primary clarifiers are then pumped to anaerobic digesters. Sludge then flows to a belt press where digested solids are separated from supernatant liquor. A boiler, heat exchanger, and pump are used to heat the sludge. Supernatant from the secondary digester is conveyed to the influent of the primary clarifier/equalization tanks during dry weather or back to the headworks during wet weather. Sludge from the anaerobic digesters is dewatered, then transferred to sludge hauling containers. County personnel and trucks transport the dewatered sludge to the Western Regional Sanitary Landfill, located between Lincoln and Roseville. Methane gas generated from the anaerobic digestion process is sent to a conventional gas flare, where it is wasted by burning. Natural gas is used to heat the digester.

2.5 EXISTING WASTEWATER TREATMENT PLANT OPERATIONS AND STAFFING

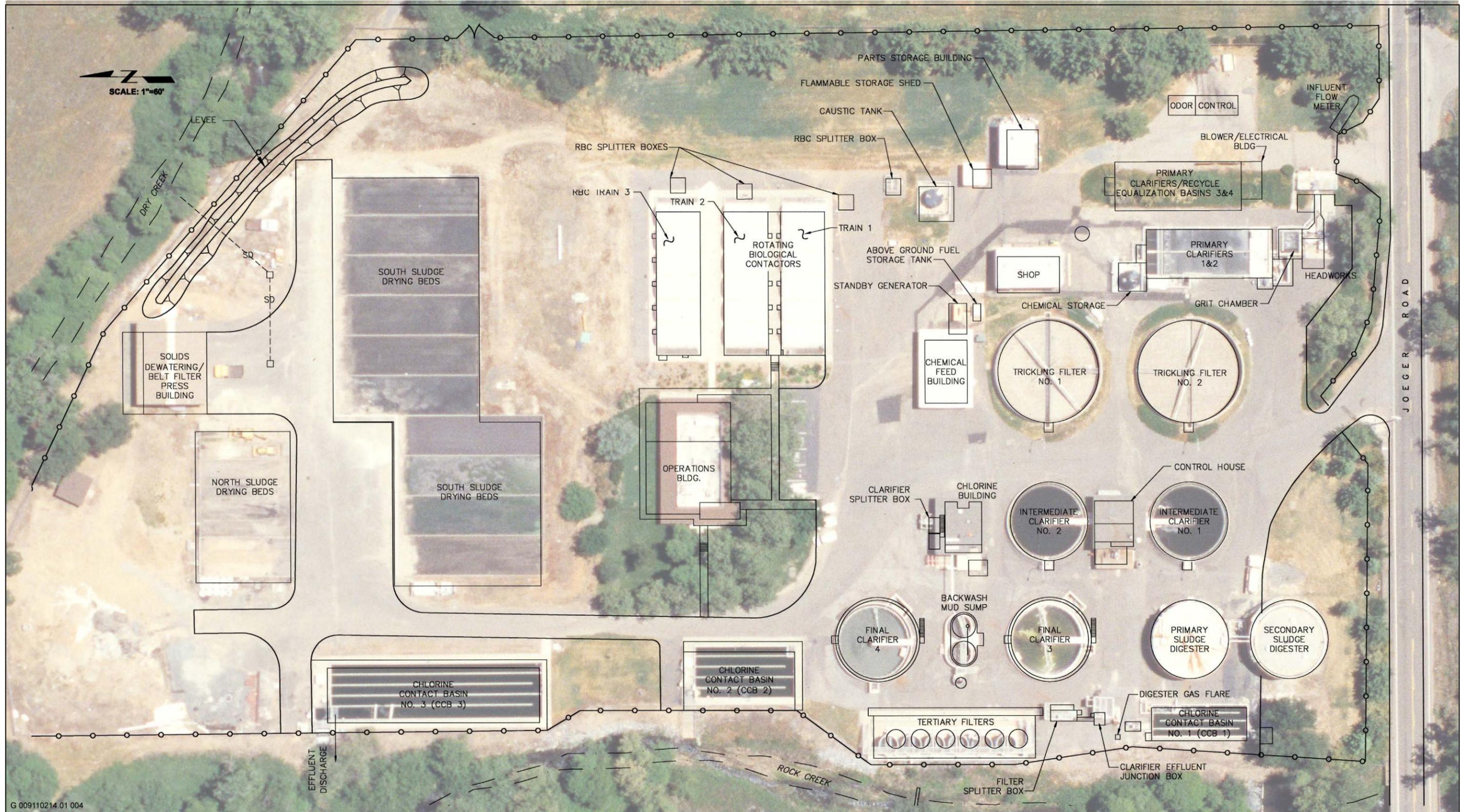
The existing SMD 1 WWTP is designed to allow normal operational work to be completed during a 5-day, 8-hour-per-day work shift. On-site staff members are present from 7 a.m. to 3:30 p.m. Monday through Friday and 6 a.m. to 2:30 p.m. on Saturday and Sunday. The WWTP may eventually move to a 4-day, 10-hour-per-day work shift Monday through Friday, but this change would not be a result of the proposed project. Staffing requirements for the existing facility include 7.5 full-time equivalent employees.



Source: Placer County 2010

Service Area

Exhibit 2-3



G 009110214.01 004

Source: Placer County 2010

Existing Site Plan

Exhibit 2-4

Currently staff members generate approximately 12 employee vehicle round trips per day. Trash is removed from the plant's dumpsters once per week. A tanker truck delivers a 1-ton cylinder of chlorine to the SMD 1 WWTP approximately once every 25 days on a 40-foot flatbed trailer. A 4,000-gallon tanker delivers magnesium hydroxide approximately once every 3 weeks and polymer every 2 months. Delivery of laboratory equipment and/or other supplies used at the WWTP occurs at least once per week by any one of the usual parcel delivery services (e.g., UPS).

2.6 DESCRIPTION OF RECEIVING WATER AND BENEFICIAL USES

The SMD 1 WWTP currently discharges effluent to Rock Creek. This receiving water and its designated beneficial uses are described below.

2.6.1 ROCK CREEK

Rock Creek is a small, perennial creek, the headwaters of which originate at an elevation of approximately 1,600 feet near Interstate 80. The entire length of Rock Creek is located in unincorporated Placer County north of the Auburn city limits, within the Coon Creek watershed. The main stem of Rock Creek originates just above, or to the southeast of, Rock Creek Lake in the foothills, west of the community of Bowman. The stream course continues below the Rock Creek Lake dam, then passes under SR 49 and progresses northwesterly through the Auburn Recreation District's regional park to its confluence with Dry Creek, a tributary to Coon Creek. The distance from Rock Creek's headwaters to its confluence with Dry Creek is approximately 29,700 feet. Much of the property immediately adjacent to Rock Creek is undeveloped; however, urban land uses exist, including residential development, local roads, SR 49, and commercial shopping centers.

Rock Creek is used by Nevada Irrigation District for delivery of untreated surface water to downstream farmers. The creek's discharge is increased seasonally by inflow from small, unnamed tributaries and releases of irrigation water from Rock Creek Lake by Nevada Irrigation District. In addition, discharges from the SMD 1 WWTP contribute to flows in Rock Creek year round. Between June 2006 and July 2009, Rock Creek flows were monitored upstream of the SMD 1 WWTP outfall at the RSW-001 monitoring station. The lowest mean monthly flow of Rock Creek during this period was 3.78 mgd and the highest was 6.72 mgd.

2.6.2 BENEFICIAL USES

The project area is located within the Sacramento River Basin. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) (Central Valley RWQCB 2009) defines beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for waters of the Sacramento River and San Joaquin River Basins. State law defines beneficial uses of waters of the state that may be protected against water quality degradation as domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves (California Water Code, Section 13050[f]).

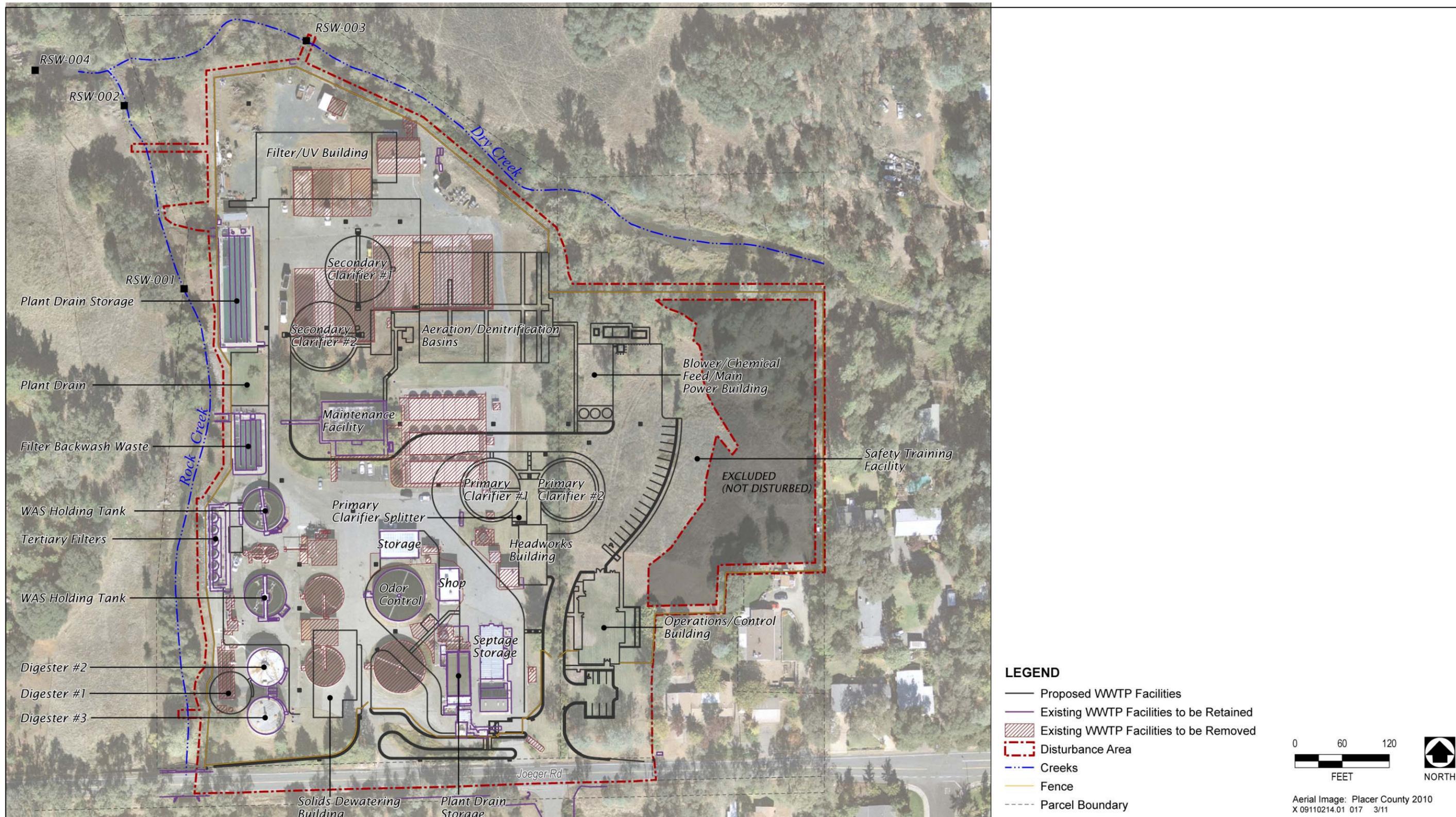
The Central Valley RWQCB has determined that the following beneficial uses apply to Rock Creek:

- ▶ **Municipal and Domestic Supply (MUN)**—water uses for community, military, or individual water supply systems, including drinking water supply. In accordance with the Basin Plan, surface water bodies that do not have beneficial uses designated in the Basin Plan are assigned MUN designations.
- ▶ **Industrial Service Supply (IND)**—water uses for industrial activities that do not depend primarily on water quality, such as mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well repressurization.

- ▶ **Industrial Process Supply (PRO)**—water uses for industrial activities that depend primarily on water quality.
- ▶ **Agricultural Supply (AGR)**—water uses for farming, horticulture, or ranching, including irrigation of crops, stock watering, or support of vegetation for range grazing.
- ▶ **Wildlife Habitat (WILD)**—water uses that support terrestrial or wetland ecosystems, including preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, and invertebrates), or water and food sources for wildlife.
- ▶ **Migration of Aquatic Organisms (MIGR)**—water uses that support habitats necessary for migration or other temporary activities by aquatic organisms, such as anadromous fish.
- ▶ **Spawning, Reproduction, and/or Early Development (SPWN)**—water uses that support high-quality aquatic habitats suitable for reproduction and early development of fish.
- ▶ **Warm Freshwater Habitat (WARM)**—water uses that support warm-water ecosystems, including preservation or enhancement of aquatic habitats, vegetation, fish, or other wildlife, including invertebrates.
- ▶ **Cold Freshwater Habitat (COLD)**—water uses that support cold-water ecosystems, such as preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- ▶ **Water Contact Recreation (REC-1)**—recreational uses of water (e.g., wading and fishing) that could result in body contact with the surface water body.
- ▶ **Noncontact Water Recreation (REC-2)**—water uses for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingesting water. Among these uses are picnicking, sunbathing, hiking, beachcombing, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- ▶ **Groundwater Recharge (GWR)**—water uses for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.

2.7 CHARACTERISTICS OF THE WASTEWATER TREATMENT PLANT UPGRADE AND EXPANSION PROJECT

While some components of the current wastewater treatment process would remain, the proposed project would replace many of the process components. Improvements would include new headworks, a septage receiving facility, primary clarifiers, aeration basins, secondary clarifiers and tertiary filters, a UV disinfection system, a post-disinfection effluent aeration system, a new control and supervisory control and data acquisition (SCADA) system, sludge thickening and dewatering facilities, and a new operation and control building, as well as other miscellaneous elements (e.g., storm drainage system, flood protection, and chemical storage tanks) (Exhibit 2-5). The project would be designed to achieve compliance with requirements for effluent quality specified in the existing NPDES permit. The new WWTP would be constructed with a capacity to treat up to 2.7 mgd ADWF to accommodate planned growth in accordance with the *Auburn/Bowman Community Plan*.



Source: Data provided by Psomas in 2011. Adapted by AECOM in 2011.

Proposed Site Plan

Exhibit 2-5

2.7.1 PROJECTED INFLUENT WASTEWATER FLOWS AND LOADS

A description of projected influent wastewater flows and loads is provided below.

INFLUENT FLOWS

The current unused capacity of the SMD 1 WWTP is approximately 0.5 mgd ADWF. Taking into consideration existing flows and unused allocations as well as planned growth detailed in the *Auburn/Bowman Community Plan*, the future demand for SMD 1 was estimated. The projected population in the service area was assumed to increase at 1.9% per year until buildout. Per capita flows and loading were assumed to remain constant. Residential and nonresidential flows were assumed to grow at the same rate until they reached maximum density based on current County land use designations. Projected demand in 2020 was estimated to be approximately 2.1 mgd ADWF; in 2030, it is estimated to be 2.6 mgd ADWF; and in 2034, 2.7 mgd ADWF. Estimates of demand using additional metrics are provided in Table 2-1.

Flow and Unit Types	Current	Design Year (2034)
Average dry-weather flow	1.7 mgd	2.7 mgd
Average annual flow	2.0 mgd	3.2 mgd
Maximum monthly flow	3.6 mgd	5.7 mgd
Maximum daily flow	8.4 mgd	9.9 mgd
Peak-hour flow	10.4 mgd	11.9 mgd
Equivalent dwelling units	7,931 EDUs	12,652 EDUs

Notes: EDU = equivalent dwelling unit; mgd = million gallons per day
Source: Placer County 2010

INFLUENT LOADS

Wastewater loads are the amount of specific constituents present within the wastewater flow. Loads of biochemical oxygen demand, total suspended solids, and total Kjeldahl nitrogen (sum of organic nitrogen and ammonia) associated with projected population increases are used to size secondary processes and solids handling facilities. Anticipated future influent loads are summarized in Table 2-2.

	EDUs	Biochemical Oxygen Demand (AA lb/day) (MM lb/day)	Total Suspended Solids (AA lb/day) (MM lb/day)	Total Kjeldahl Nitrogen ¹ (AA lb/day) (MM lb/day)
Current	7,931	3,700 4,200	3,900 4,700	1,000 1,210
Design year (2034)	12,652	6,720 8,170	6,400 8,170	1,600 1,940

Notes: AA lb/day = average annual pounds per day; EDU = equivalent dwelling units; MM lb/day = maximum month pounds per day
¹ Kjeldahl nitrogen is the sum of organic nitrogen and ammonia.
Source: Placer County 2010

2.7.2 PROPOSED WASTEWATER TREATMENT PLANT FACILITIES

The facilities included in the proposed project are described below and summarized in **Table 2-3**.

Table 2-3 Proposed Improvements to the Sewer Maintenance District 1 Wastewater Treatment Plant	
Proposed Project Component	Description
New Project Components	
Headworks	Would include fine screens, flow measurement, and influent sample collection and degritting equipment.
Primary clarifiers	Would include two new clarifiers, including sludge pump stations.
Equalization tank	May include tank capacity of 1–2 million gallons.
Aeration basins	Would include two basins with anoxic zones, fine-bubble aeration diffusers, a centrifugal blower, and recycle pumps.
Secondary clarifiers	Would include two clarifiers using a waste-activated sludge pump station, splitter box, and high-rate sludge transfer system (spiral scrapers).
Secondary clearwell and pump station	To control flow to the filters.
Filters	Would include filters.
UV disinfection system	Would include UV light disinfection and a post-aeration zone.
Sludge thickening equipment	To thicken waste-activated sludge.
Anaerobic digester	To be operated in series with two existing digesters.
Boiler	Would include an approximately 1-million-BTU boiler that uses methane (digester gas or natural gas) to heat a circulation water system that would then heat the sludge in each digester.
Sludge dewatering equipment	To be used in conjunction with existing belt press to accomplish dewatering.
SCADA system	To allow operators to monitor and control all critical functions and alarms even from off-site, as appropriate.
Monitoring equipment	To allow continuous streamflow and water quality monitoring of receiving water.
Septage receiving station	To facilitate disposal of trucked septage from septic tank effluent pump systems connected to sewer. Would include septage metering and screening.
Cogeneration system	May include a turbine or combustion engine generator, gas scrubber, compressors, and gas storage tanks.
Solar power system	May include rooftop panels to generate electricity.
New Buildings	
Blower/chemical feed/and power building	To house chemicals (including sodium hydroxide, magnesium hydroxide, sodium hypochlorite, sodium bisulfate (or calcium thiosulfate) and polymer or polymer derivatives (coagulant)); aeration blowers; and main power service.
Dewatering/thickening building	To house the solids thickening and dewatering equipment..
Operations and control building	To provide adequate space for the operator’s laboratory and control system, and to provide security to the entire WWTP site.
Filter/UV building	To house effluent filters and UV disinfection system.

**Table 2-3
Proposed Improvements to the Sewer Maintenance District 1 Wastewater Treatment Plant**

Proposed Project Component	Description
Safety training facility	To allow training of staff regarding safe entry into confined spaces.
Waste-activated sludge pump building	To house waste-activated sludge pumps.
Anaerobic digester building	To house anaerobic digester equipment.
Headworks building	To house headworks.
Proposed Renovations, Relocations, and Upgrades to Project Components	
Anaerobic digesters	Two existing digesters, including pumps and mixing, heating, and digester gas systems, to be renovated and upgraded.
Gas piping	To be replaced with modern safety equipment, connected to the boiler, and piped to a new flare.
Belt press	May be relocated to the new dewatering/thickening building.
Other Project Features	
Grading, road work, fencing, and site lighting	Would include access roads for all major process and maintenance centers.
Fill and retaining wall	To raise building pads above 100-year flood elevation.
Notes: BTU = British thermal units; SCADA = supervisory control and data acquisition; UV = ultraviolet Source: Data provided by Psomas and compiled by AECOM in 2010	

WET-STREAM TREATMENT FACILITIES

The major components proposed for processing liquids are described below.

Headworks with Screening, Degritting, and Metering

The proposed project would include the installation of new headworks, including fine screens, flow measurement, and influent sample collection and degripping equipment. Screening equipment would be fully automated. Nested (two-units-in-one) flow measurement flumes would be used. Flow measurement, totalizing, and flow-paced influent sampling would be provided to quantify the sewage to be treated. A grit removal system with a grit washer would be incorporated to remove grit. This equipment would be controlled in a manner similar to the grit removal equipment. A grit washer would wash the organics and bag the screenings.

Primary Clarifiers

The proposed project would include the construction of two new circular primary clarifiers, including sludge pump stations. These clarifiers would use high-rate sludge transfer systems with spiral scrapers, and specifically designed bent scum draw-off systems.

During very high-dilute peak-flow periods, some of the influent would bypass the clarifiers to prevent organics from being washed into the remainder of the treatment facilities. The primary sludge and scum pumps would draw thickened sludge and pump it to the digesters. During low flows, the units would transfer sludge into one clarifier for thickening.

Equalization Tank

One new equalization tank may be constructed with related pumps to trim the daily peak flows. The primary effluent would be stored during storm events. The tank would be between approximately 1 and 4 million gallons of storage, capable of filling by gravity, and would be used to help attenuate the diurnal peak flows during storm events.

The tank would be designed to be used during storm events. During dry periods, the operator could choose to use the tank to optimize energy consumption by attenuating flows through the WWTP.

Removal of Biological Nutrients, Aeration Basins

Two new aeration basins, each with anoxic zones, fine-bubble aeration diffusers, a centrifugal blower, and recycle pumps, would be installed as part of the proposed project. Aeration zones would be aerated with the fine-bubble diffusers. The centrifugal blowers would provide the air to the aeration basins and would be housed in the proposed Blower/Chemical Feed/Main Power Building. This building would also house the chemical feed systems and main power service. Aeration tanks would be able to hydraulically pass all the flow, including the plant drain return flows. The aeration system would use the Bardenpho-type process for activated sludge, which uses multiple chambers to biologically treat the waste and provide nutrient removal. Denitrification would take place in the anoxic zones, causing the nitrate-nitrogen to be converted to nitrogen gas that is expelled to the atmosphere. The return activated sludge (RAS) flow rate would also be adjusted to control the nitrification process. The biological basins would be engineered to accommodate future additions, because future NPDES permits may require removal of phosphorous and even greater nitrogen removal.

Secondary Clarifiers

The proposed project would include construction of two new secondary clarifiers. A return activated sludge (RAS)/waste-activated sludge (WAS) pump station and proposed splitter box would remove the secondary solids and provide high-quality secondary effluent. The high-rate sludge transfer system (spiral scrapers) would allow the activated sludge to travel to the pumps rapidly and avoid holding the solids too long, thereby causing denitrification and solids carry-over. The weirs and launders would be covered to reduce algae growth.

The proposed RAS/WAS pump station would be controlled by variable-speed pumps. RAS would be pumped to the aeration basins and combined with the primary effluent for treatment. Wasting pumps would be set to continually pump to the WAS storage. Skimmings would be collected in a pump station to then be combined with the WAS for solids processing. In addition to the high-rate scum draw-off, concentrated chlorine spray boxes would be used if necessary to kill filamentous bacteria.

Tertiary Filters

The secondary clarifier effluent may be screened through a 2-millimeter screen. A secondary clearwell and pump station would be built as part of the proposed project to control flow to the filters. Tertiary treatment would be provided by filters housed in a filter complex. During very high storm flow conditions, the operators would be able to partially bypass secondary effluent around the tertiary filters to the existing filters. The existing filters would be renovated to use for peak shaving in storm events.

The filter backwash system would use the final effluent to backwash. The backwash waste would be conveyed to the plant drainage pump station and bled back into the plant after going through the clarifiers.

Ultraviolet Light Disinfection System

The proposed project would include the installation of a new UV disinfection system designed to comply with Title 22 requirements for reuse of treated wastewater in California. The primary disinfection system would use

UV lights and include two channels for redundancy to inactivate organisms for reproduction, thereby effectively sterilizing the effluent. A small post-aeration zone would be provided downstream of the UV disinfection system to aerate the disinfected effluent. Dedicated blowers would provide air to fine-bubble diffusers. As with the plant's influent system, the final quantity and quality of effluent would be measured by a flow meter and composite sampler.

New Primary Outfall

The proposed project would also involve construction of a new primary outfall in approximately the same location as the existing primary outfall on the northwestern edge of the proposed project site. It would be located up to 30 feet north of the existing primary outfall location to ensure construction of the new outfall would not disrupt effluent discharge and continued operation of the WWTP during construction. The existing secondary outfall would be abandoned and removed once construction of the new outfall is complete. In addition, an abandoned concrete pipe that is located on the bank west of existing Final Clarifier No. 3 would also be removed. The existing primary outfall would continue to be periodically used for discharges of storm runoff resulting from major precipitation events.

SOLIDS PROCESSING FACILITIES

The major components proposed for processing solids are described below.

Sludge Thickener

Under normal conditions, the primary sludge would be thickened in the primary clarifiers by transferring sludge from one clarifier to the other. The primary sludge would be pumped directly to the digesters. During storm events, the primary clarifiers would be used in parallel to handle the peak hydraulic loads. The WAS would be pumped to aerated holding tanks. The WAS would then be thickened using a new gravity belt thickener (or rotary drum thickener) located in the solids dewatering building.. Aeration would be provided in the holding tanks to keep the sludge fresh and avoid odors. After thickening, the sludge would be pumped to the digesters.

Anaerobic Digesters and Dewatering Units

The proposed project would include a new anaerobic digester; the two existing anaerobic digesters, including pumps and mixing, heating, and digester gas systems, would be renovated and upgraded. All three digesters would operate in series. For the sludge to be digested, the thickened solids would be placed in a mixed and heated anaerobic digester that would allow the anaerobic bacteria to degrade the waste. The existing digesters would be renovated to be similar to the new digester. The primary sludge and thickened WAS would be pumped to the digesters in a common pipe. From the digesters, the sludge would be pumped to the solids dewatering building for dewatering. All three digesters would be converted to a completely mixed pumping system. A large, open impeller pump would be dedicated to each digester to mix the contents.

A new, approximately 1-million-British-thermal-unit (BTU) boiler would be installed as part of the proposed project. This boiler would burn digester gas to heat a circulation water system that would then heat the sludge in each digester. The existing gas piping would be replaced with modern safety equipment and connect to the boiler and pipe to a new flare.

The dewatering would be accomplished by using a new belt press (or screw press). The filtrate would be returned to the WWTP via the plant drain.

Existing primary clarifiers would also be used to store and treat septage waste before metering the flow into the main process.

RENOVATION, EXPANSION, AND CONSTRUCTION OF BUILDINGS

Some of the existing buildings on the site would be renovated and then used for maintenance and storage. A new approximately 5,600-square-foot lab and operation control building would be built to provide adequate space for offices, a control room, lockers and a laboratory, as well as to provide security to the entire WWTP site. New buildings would also be necessary to house the gravity belt thickener, sludge dewatering equipment, RAS/WAS pumps, anaerobic digester equipment, headworks, and filters. The Blower/Chemical Feed/Main Power Building would include storage facilities to store sodium hydroxide, magnesium hydroxide, sodium hypochlorite, sodium bisulfate, and polymer or polymer derivatives (coagulant). In addition, a Safety Training facility would be constructed for staff training regarding safe entry into confined spaces. New buildings would be constructed using masonry block and would have split-faced block exteriors to match the existing blower and solids buildings.

WASTEWATER TREATMENT PLANT SUPPORT FACILITIES

Electrical power and natural gas would be provided by Pacific Gas and Electric Company. Standby generators would be used to provide standby power, which would be necessary to reliably operate critical components of the plant. Select equipment, such as blowers and pumps, would be provided standby power, based on the need to operate during power outages. The proposed project would include the installation of a SCADA system, which would be designed so that the operators can monitor all critical functions and alarms even from off-site, as appropriate. Natural gas would be used to heat buildings at the site and provide the backup supply for heating the boiler.

Potable water would be provided by Nevada Irrigation District. Project improvements may include upsized pipelines and fire hydrants for emergency situations. The water pipeline improvements would be located in Joeger Road adjacent to the WWTP. Similarly, the project may require improvements to the County sanitary sewer in Joeger Road adjacent to the WWTP. The demand for potable water at the WWTP would not increase due to the proposed project (Schmidt, pers. comm., 2011).

Nonpotable water would be provided using the effluent for process water, wash water, possibly seal water, and belt wash water. Potable water would be provided by a local water purveyor for fire protection, drinking, emergency eyewash and showers, seal water for pumps, and general and laboratory usage. The on-site plant drainage would be handled in one of a combination of three systems. First, stormwater that is not exposed to potential on-site pollutants would be diverted around the treatment facilities. Second, the proposed plant drain pump station would collect all process drainage, floor drains, sanitary sewage, backwash waste, and filtrate. This return flow would be piped to the primary clarifiers, equalization tank, or septage equalization tanks. The third system would only collect on-site storm drainage. This flow would be diverted to a flow control box that would allow operators to either treat the runoff or divert it to the creek.

Equipment would be installed to allow continuous stream flow and daily water quality monitoring for receiving water.

Septage Receiving Station

The County also is considering construction of a septage receiving station to facilitate disposal of tank septage from septic tank effluent pump systems connected to the sewer. Septage includes grit, rags, and floatables, as well as a substantial quantity of water.

If constructed, the septage receiving station would include septage metering and screening, and would reuse the existing grit basin for grit removal. The existing primary clarifiers would be used to pretreat the septage (aerate and settle the septage), and then it would be metered into the main process train.

In addition to septic tank effluent pump systems, individual on-site septic systems generate septage that must be pumped periodically from the septic tank to ensure proper operation of the septic systems. The County is responsible for septic tank effluent pump system septage pumping. Commercial haulers also operate in the County, pumping out septic tanks. Currently, septage haulers are required to haul to approved disposal sites that are located a considerable distance from the majority of the septic systems. Initially, use of the septage receiving station would be limited to disposal of septic tank effluent pump system septage by County staff, but access to the receiving station might be provided to commercial septage haulers in the future. County septage deliveries to the existing WWTP currently average approximately one haul truck every 2 weeks. With access for commercial haulers to the septage receiving facility, septage deliveries could increase an estimated three- to four-fold by 2034 (Lillis, pers. comm., 2010).

Cogeneration Electrical Generator

Additional methane gas that could be used to fuel cogeneration would be produced by the proposed project. Cogeneration is the process of simultaneously generating useful electrical (or mechanical) energy and heat energy from fuel. A cogeneration system may be constructed that would include a turbine or combustion engine generator, gas scrubber, compressors, and gas storage tanks.

Solar Power

A solar power system may be constructed on some of the new building rooftops and would generate 80,000–160,000 kilowatt-hours per year.

Monitoring Equipment

To allow continuous streamflow and water quality monitoring for daily monitoring of receiving water, monitoring equipment would be placed in two locations in Rock Creek and one location in Dry Creek. A staff gauge (4-inch vertical ruled pipe) would be placed in the creek channel at each monitoring location with pH and pressure sensors secured to the gauge near the creek bottom. Wiring to power the sensors and provide data transmission would be placed in buried conduit (4-inch pipe) that would be installed either with a small trencher or using hand tools.

OTHER FEATURES

In addition to the specific process components included in the proposed project, the general site would be modified and buildings would be provided for specific areas. The site work would include grading, placement of fill and construction of retaining walls along the north side of the site for flood protection, paving of a parking area on the east side of the site, roadwork, fencing, and site lighting. Access roads would be provided to all major process and maintenance centers. The main plant gate would be lockable to limit access to authorized personnel only. Removal or abandonment of existing facilities would be determined on a case-by-case basis.

2.8 PROPOSED WASTEWATER TREATMENT PLANT OPERATIONS AND STAFFING

The upgraded and expanded SMD 1 WWTP would be designed to have the same normal operating hours and work shifts as the existing WWTP. The number of staff at the SMD 1 WWTP is anticipated to increase to eleven full-time equivalent employees as a result of the proposed project. The number of employee vehicle round trips per day is expected to increase by three.

2.9 CONSTRUCTION OVERVIEW

2.9.1 CONSTRUCTION PERSONNEL AND VEHICLES

The number of construction personnel, employee vehicle round trips per day, and construction-related truck round trips per day that would be required to construct each phase of the proposed project would depend on the type of construction activities, the number of simultaneous construction jobs, and the construction schedule.

Approximately 60 construction workers would likely be needed. No soil imports are anticipated for the proposed project. At the peak of construction, 20 concrete delivery trucks, 20 material delivery trucks, six subcontractor work pickup trucks, and four general contractor work pickup trucks could be on-site, and project construction would result in a maximum of approximately 90 one-way daily trips. In addition, at the peak of construction as many as two bulldozers, two cranes, four forklifts, two excavators, and two backhoes could be in operation on the project site.

Material for construction of proposed improvements would be transported to the project site via truck and trailer using the public road system. Off-site staging areas would not be used. All staging areas for construction equipment and materials would be located on the project site. Project design features would not be located in existing roadways. Emergency access and parking capacity would be designed to meet proposed project needs.

2.9.2 CONSTRUCTION SCHEDULE

Construction would occur after completion of the CEQA and permitting processes, and is anticipated to begin immediately after all necessary permits and approvals are received. Construction of the proposed project likely would be completed in one phase. Construction is expected to be bid in July 2011. All construction is expected to be completed by December 2014, with complete operational commissioning in March 2015, and full compliance with waste discharge requirements occurring by September 2015.

The facilities would need to be constructed in such a manner that the existing facilities could be effectively operated in the interim and, as much as practical, meet current discharge requirements. Work would be sequenced. Some existing facilities would be demolished as part of the proposed project. With the exception of the sludge beds, demolition would not occur until after the proposed treatment processes were upgraded to ensure continued operation of existing facilities during construction. To the extent possible, existing structures would be renovated and/or converted to new use. Other facilities that are in the way of new construction (the RBCs) would be demolished.

3 ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION		
1. Project Title:	SMD 1 WWTP Upgrade and Expansion	
2. Lead Agency Name and Address:	Placer County Department of Facility Services 11476 C Avenue Auburn, CA 95603	
3. Contact Person and Phone Number:	Rebecca Lillis, Environmental Resource Specialist (Phone: 530-886-4984)	
4. Project Location:	The project site (APNs 076-080-007, 076-080-003, 076-080-012, and 076-080-029) is located approximately 0.2 mile west of SR 49 at the intersection of Joeger Road and Meadow Glen Road in unincorporated Placer County.	
5. Project Sponsors Name and Address:	Rebecca Lillis Placer County Department of Facility Services 11476 C Avenue Auburn, CA 95603	
6. General Plan Designation:	Placer County: Rural Low-Density Residential	
7. Zoning:	Placer County: RS-AG-B-43-SP (single-family residential)	
8. Description of Project: Please refer to Chapter 1, Project Description.		
9. Surrounding Land Uses and Setting: Please refer to Chapter 1, Project Description.		
10. Other public agencies whose approval is required:	U.S. Army Corps of Engineers, Placer County Air Pollution Control District, State Office of Historic Preservation, California Department of Fish and Game, SWRCB, Central Valley Regional Water Quality Control Board (Region 5)	
ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:		
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.		
<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Agriculture Resources	<input type="checkbox"/> Air Quality
<input type="checkbox"/> Biological Resources	<input type="checkbox"/> Cultural Resources	<input type="checkbox"/> Geology / Soils
<input type="checkbox"/> Hazards & Hazardous Materials	<input type="checkbox"/> Hydrology / Water Quality	<input type="checkbox"/> Land Use / Planning
<input type="checkbox"/> Mineral Resources	<input type="checkbox"/> Noise	<input type="checkbox"/> Population / Housing
<input type="checkbox"/> Public Services	<input type="checkbox"/> Recreation	<input type="checkbox"/> Transportation / Traffic
<input type="checkbox"/> Utilities / Service Systems	<input type="checkbox"/> Mandatory Findings of Significance	<input checked="" type="checkbox"/> None With Mitigation

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project **COULD NOT** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.

I find that although the proposed project **COULD** have a significant effect on the environment, there **WILL NOT** be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.

I find that the proposed project **MAY** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.

I find that the proposed project **MAY** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Will Dickinson

Deputy Director, Department of Facility Services

Printed Name

Title

Placer County

Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an EIR is required.
4. “Negative Declaration: Less Than Significant With Mitigation Incorporated” applies where the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less-Than-Significant Impact.” The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from “Earlier Analyses,” as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are “Less than Significant with Mitigation Measures Incorporated,” describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project’s environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
the significance criteria or threshold, if any, used to evaluate each question; and
the mitigation measure identified, if any, to reduce the impact to less than significance.

3.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. Aesthetics. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

3.1.1 ENVIRONMENTAL SETTING

The project site is located north of Joeger Road and south of Dry Creek, approximately 0.2 mile west of State Route (SR) 49. Rock Creek borders the western edge of the project site. Single-family residences are located to the south, east, and west of the SMD 1 Wastewater Treatment Plant (WWTP), and undeveloped land is located to the north. The expansion of the WWTP would occur to the east of the existing facility. The expansion area includes small trees, grasses, shrubs, and some landscaping. Views from the project site are dominated by single-family residences, the roadway, and oak woodland hills. Views from nearby residences are dominated by ornamental trees, gray pines, shrubs, landscaping, fencing, and the variety of WWTP facilities currently located on the project site. These facilities are industrial in nature, constructed with concrete and steel, and primarily between 5’ and 15’, with the tallest structure approximately 22’.

3.1.2 DISCUSSION

a) Have a substantial adverse effect on a scenic vista?

No Impact. A scenic vista is generally considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. Vistas in the project area include views of Rock Creek and the oak woodland hills to the north as well as views of the WWTP and surrounding woodland and residences from the north. No designated scenic vistas are in the project area, and no proposed project component would have a substantial effect on any vistas in the project area. Because no designated scenic vistas would be affected by the proposed project, **no impact** would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less-than-Significant Impact. The project site is located approximately 0.2 mile west of a portion of SR 49 that is a designated state scenic highway. The WWTP is not visible from SR 49 because many fully grown trees, shrubs, and a small hill between the WWTP and SR 49 block the view. Implementing the proposed project could raise the height of existing structures or construct new structures to a height greater than that of currently existing

structures. Currently, the highest structure at the existing WWTP is approximately 22', while the highest structure included in the proposed expanded and upgraded WWTP would be a maximum of 32' (Lillis, pers. comm., 2011). Therefore, no building associated with the proposed project would exceed the 36-foot height maximum allowed by the Placer County zoning ordinance, which ensures compatibility between the heights of new or renovated structures with surrounding structures, including adjacent residential uses (Placer County 1994). Although additional height could potentially cause buildings associated with the proposed project to become visible from SR 49, this change would not substantially alter views from SR 49 because only a small portion of the new or heightened structures might be visible. Therefore, the impact on scenic resources within a state scenic highway would be **less than significant**.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less-than-Significant Impact with Mitigation Incorporated. Views of the project area are available from approximately seven single-family residences located immediately adjacent to the existing WWTP, to the east, west, and south. The closest two residences are both approximately 160 feet away, to the east and south. Views also are available from one single-family residence that is located approximately 0.40 mile northwest of and at a slightly higher elevation than the existing WWTP. The proposed project would upgrade existing structures on two developed parcels where the WWTP is currently located, as well as include new construction on two undeveloped parcels located immediately east of the existing WWTP.

Views near the SMD 1 WWTP include single-family residences and open space. The upgrades and expansion proposed on the parcels that currently contain the SMD 1 WWTP are consistent with the existing uses of the site. As stated above, the highest structure at the existing WWTP is approximately 22', while the highest structure included in the proposed expanded and upgraded WWTP would be a maximum of 32' (Lillis, pers. comm., 2011). Modification of existing structures and introduction of new similar structures would not significantly degrade the visual character or quality of local views, as no building associated with the proposed project would exceed the 36-foot height maximum allowed by the Placer County zoning ordinance, which ensures compatibility between the heights of new or renovated structures with surrounding structures, including adjacent residential uses. Proposed project construction of modified and new facilities and demolition of structures on the existing SMD 1 WWTP site would temporarily alter existing views in the project area during these activities. The changes that would occur to improve some facilities and remove others would neither improve nor diminish the existing visual quality of views in the area.

The construction of new facilities and structures on the two undeveloped parcels located east of the existing WWTP would alter the visual character of these parcels. Although these new facilities and structures would be consistent with existing uses located immediately adjacent to the east, expansion of WWTP facilities onto these parcels would reduce the distance from several nearby residences that were formerly more than 100 feet away from the SMD 1 WWTP to within 20 feet of the new WWTP facilities. Expansion of the SMD 1 WWTP into an existing area of shrubs, trees, and grass would also degrade the visual character and quality of views of this area from residences that formerly would have had a view of the undeveloped parcels. This change in the site's visual character would be **potentially significant**.

Mitigation Measure AES-1: Include Landscaping in the WWTP Design Plans that is Adequate to Screen Views of New Facilities from Nearby Residences.

Design plans for the site will include a landscaping plan that will adequately screen views of new facilities, including heightened structures, from nearby residences. Should solar panels be located in an area that increases daytime glare experienced by adjacent residences, particular attention shall be given to ensuring adequate screening of adjacent residences from solar panels to limit daytime glare to the greatest extent possible. Landscaping can include establishing vegetated berms and planting trees, shrubs, and

ground cover. Effective visual screening with landscaping also can include planting of vegetation that will grow to cover perimeter fences.

Mitigation will be considered successful when the County implements a landscaping plan that is adequate to visually screen views of the new WWTP facilities from nearby residences. All landscaping will be maintained by the County, and plants that fail to thrive will be replaced.

Implementation of Mitigation Measure AES-1 would reduce the impact to a **less-than-significant** level because implementing a landscaping plan would minimize the anticipated changes in the site's visual character experienced by the adjacent residents.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less-than-Significant Impact with Mitigation Incorporated. The existing SMD 1 WWTP has lighting that affects nighttime views in the area. Upgrading existing WWTP structures would not substantially increase the amount of existing lighting on those structures, and such upgrades would be consistent with the existing uses of the project site.

However, expanding the SMD 1 WWTP onto the adjacent parcels would involve installation of new lighting systems, which would create a new source of light that could adversely affect nighttime views of the area for nearby residents. In particular, those residents immediately adjacent to the proposed project would be exposed to additional lights that could adversely affect nighttime views. In addition, the proposed project would include the construction of solar panels, which would create a new source of glare that could adversely affect daytime views for those residents located immediately adjacent to the proposed project. Construction of these new sources of light and glare would cause a **potentially significant** impact.

Mitigation Measure AES-2: Practice Best Management Practices when Installing New or Upgraded Lighting.

Design plans for the site will include all reasonably available best management practices (BMPs), and these BMPs available will be implemented to ensure minimal adverse impacts to nighttime views for adjacent residents. BMPs may include, but are not limited to:

- ▶ Identifying where, and when, lighting is needed and confining and minimizing lighting to the extent necessary to meet safety purposes;
- ▶ Choosing light fixtures that direct light downward;
- ▶ Select compact fluorescent (2300K) or High Pressure Sodium as light sources (bulb types), unless the light is motion sensor activated, in which case incandescent or the instant start compact fluorescent bulbs may be used;
- ▶ Utilizing "shut off" controls such as sensors, timers, and motion detectors, etc.;
- ▶ Limiting the height of fixtures, the amount of light crossing property lines, and overall light levels where possible.

Implementation of Mitigation Measure AES-1 and AES-2 would reduce this impact to **less than significant** because implementing a landscaping plan and BMPs for new lighting would minimize potential light and glare effects of the proposed project on adjacent residents.

3.2 AGRICULTURAL AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. Agricultural and Forest Resources.				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p>				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.2.1 ENVIRONMENTAL SETTING

The project site includes the existing SMD 1 WWTP and two adjacent parcels that are primarily grassland, with some small trees, shrubs, and landscaping. No agricultural activities take place on the project site and no part of the project site is designated or zoned for large-scale agricultural production or the production of agricultural resources for commercial purposes. No timber is present on the project site; some oaks are located north of the site, but they are dispersed and commercial timber harvesting is not practiced on the project site or in the project vicinity. The entire project site is located on land owned by Placer County.

3.2.2 DISCUSSION

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. As detailed on the California Department of Conservation's 2008 Placer County Important Farmland Map, the project site is not located on Prime Farmland, Unique Farmland, Farmland of Statewide Importance, Farmland of Local Importance, or Grazing Land. The project site is located on Urban and Built-Up Land, which is land occupied by structures with a building density of at least one unit per 1.5 acres (California Department of Conservation 2008). Because the proposed project would not affect farmland, **no impact** would occur.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. No lands within the project site or in the project vicinity are under Williamson Act contracts. Therefore, the proposed project would not impact any land under a Williamson Act contract.

The proposed project is zoned RS-AG-B-43-SP, which is a district intended for residential development characterized by detached single-family homes in standard subdivision form. This particular zoning designation also includes a Special Purpose combining district, which allows such uses as community sewage treatment plants (current use), and waste disposal facilities as well as other uses in primarily residential areas because of the importance of these uses in supporting the health, safety, economy, and general welfare of the public (Placer County 1994). In addition to these uses, the current zoning designation includes an agricultural combining district, meaning that again, while residential single-family is the primary intended land use for this district, agricultural uses also are allowed. The agricultural combining district is intended for residential areas where parcel sizes and neighborhood conditions are suitable for raising and keeping a variety of farm and exotic animals, in addition to household pets, without compatibility problems with surrounding residential uses. This combining district is not an agricultural designation intended for large-scale agricultural production or the production of agricultural resources for commercial purposes (Placer County 1994). Because the uses associated with the proposed project would be consistent with the site's existing zoning with the issuance of a minor use permit; because expansion of the WWTP facility would not restrict agricultural uses allowed on adjacent parcels that are zoned for such use; and because there are no Williamson Act contracts in the project area, **no impact** would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The proposed project is located on developed land (the existing SMD 1 WWTP) and two adjacent undeveloped parcels containing mature ornamental trees and native gray pine (*Pinus sabiniana*) trees, and two adjacent parcels that are undeveloped and characterized by annual grassland, oak woodland, and some riparian forest and wetland vegetation associated with Dry Creek. The narrow band of riparian forest adjacent to the creek includes Valley oak (*Quercus lobata*) and willow (*Salix* spp.). While there is forested land on the site, it is not

managed and none of these trees is suitable for timber harvesting. No commercial timber production is practiced on the project site or in the project vicinity, and the forested land located to the north of the project area contains sparse oak woodlands that are unsuitable for commercial timber production. The project site is located in an area zoned for residential use, and no timberland zones are located in the project vicinity. Accordingly, **no impact** would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The proposed project is located on disturbed land (the existing SMD 1 WWTP) that includes landscaped vegetation consisting of mature ornamental trees and native gray pine (*Pinus sabiniana*) trees, and two adjacent parcels that are undeveloped and characterized by annual grassland, oak woodland, and some riparian forest and wetland vegetation associated with Dry Creek. The narrow band of riparian forest adjacent to the creek includes Valley oak (*Quercus lobata*) and willow (*Salix* spp.).

Implementation of the project would require removal of up to 33 valley oak trees on parcel 076-080-012 at the northern end of the annual grassland on the project site. The project footprint also would impact up to 0.4 acre of the riparian forest along Dry Creek. Therefore, construction of the proposed project would likely result in the removal of a substantial number of valley oak trees and some riparian forest. However, because the site is in a rural residential area, the trees are not suitable for timber harvesting, and no timberland zones are located in the project vicinity, no forest land, as defined in Public Resources Code section 12220(g) would be lost or converted to non-forest use, and there would be **no impact**.

Impacts related to the loss of riparian habitat and oak woodlands is provided in Section 3.4, “Biological Resources.”

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. No designated farmland is located on the project site or in the project area. Furthermore, no agricultural or commercial timber harvesting activities occur on or near the project site. Therefore, implementing the proposed project would not convert farmland to a nonagricultural use or forest land to non-forest use. **No impact** would occur.

3.3 AIR QUALITY

THRESHOLDS OF SIGNIFICANCE	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. Air Quality.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				
Short-Term Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-Term Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				
Short-Term Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-Term Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				
Short-Term Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-Term Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?				
Short-Term Emissions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-Term Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3.1 ENVIRONMENTAL SETTING

The project site is located in North Auburn, which lies in the Mountain Counties Air Basin and is under the jurisdiction of the Placer County Air Pollution Control District (PCAPCD). PCAPCD was established to develop rules, regulations, policies, and/or goals to comply with applicable air quality legislation.

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: ozone; carbon monoxide; nitrogen dioxide; sulfur dioxide; respirable and fine particulate matter, PM₁₀ (respirable particulate matter with an aerodynamic diameter of 10 micrometers or less) and PM_{2.5} (fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less); and lead. These pollutants are commonly referred to as

“criteria air pollutants” because they are the most prevalent pollutants known to be deleterious to human health; extensive documentation is available on health effects criteria for these pollutants.

Criteria air pollutant concentrations are measured at three sites in Placer County. The Auburn Dewitt–C Avenue Station is the closest station to the project site with recent data for ozone. PM₁₀ and PM_{2.5} are measured at the North Sunrise Boulevard Station in the city of Roseville. The Colfax station would not have any measurements relevant to the project. In general, the ambient air quality measurements from these stations are representative of the air quality near the project site.

Table 3.3-1 summarizes the air quality data from 2007 through 2009. Both the California Air Resources Board (ARB) and U.S. Environmental Protection Agency (EPA) use these monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify areas with air quality problems and initiate planning efforts for improvement.

Table 3.3-1 Summary of Ambient Air Quality Monitoring Data (2007–2009)			
	2007	2008	2009
Ozone^a			
Maximum concentration (1-hour/8-hour , ppm)	0.097	0.124	0.108
Number of days state standard exceeded (1-hour/8-hour)	1	14	5
Number of days national standard exceeded (8-hour)	0	0	0
Respirable Particulate Matter (PM₁₀)^c			
Maximum concentration (µg/m ³)	45.0	73.9	33.6
Number of days state standard exceeded (measured/estimated ^b)	0/0	1/6	0/0
Number of days federal standard exceeded (measured/estimated ^b)	0/0	0/0	0/0
Fine Particulate Matter (PM_{2.5})^c			
Maximum concentration (µg/m ³)	48.7	149.7	38.5
Number of days national standard exceeded (measured/estimated ^b)	0/0	1/6.5	0/0
National/California annual average (µg/m ³)	8.3/12.2	10.0/13.8	8.5/10.8
Notes: µg/m ³ = micrograms per cubic meter; ppm = parts per million			
^a Measurements from the Auburn–DeWitt C Avenue Station.			
^b Measurements are usually collected every 6 days. Measured days counts the days that a measurement was greater than the level of the standard; estimated days mathematically estimates how many days concentrations would have been greater than the level of the standard had each day been monitored.			
^c Measurements from the Roseville North Sunrise Boulevard Station.			
Source: ARB 2010a			

The largest source of criteria air pollutants in the project vicinity would include any large roadways (e.g., SR 49). No large PCAPCD-permitted stationary sources are within 2 miles of the project site (ARB 2010b). The nearest sensitive receptors to the project site are the six single-family residences located to the east of Joeger Road (the closest being approximately 20 feet from the project site). The next closest sensitive receptors include the single-family residences located approximately 300 feet west of the project site on Joeger Road.

With respect to ozone, Placer County is designated as a nonattainment area for the national and state 1-hour standards and the national 8-hour standard (ARB 2010c). Placer County also is designated as an

unclassified/attainment area with respect to the national PM₁₀ and state PM_{2.5} standards. However, the county is designated as a nonattainment area for the state PM₁₀ ambient air quality standard. The county is designated as attainment or unclassified for the other criteria air pollutants.

Air quality in Placer County is regulated by EPA and ARB at the federal and state levels, respectively, and locally by PCAPCD. PCAPCD seeks to improve air quality in the county through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. PCAPCD's clean-air strategy includes development of programs to attain ambient air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. PCAPCD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the federal Clean Air Act and Clean Air Act Amendments of 1990, and the California Clean Air Act.

As discussed in Section 1.2.4, "State Revolving Fund Loan Program," Placer County may seek a State Revolving Fund (SRF) loan from the SWRCB Division of Financial Assistance to help defray the costs of the proposed project. Because the SRF loan program is partially funded by the U.S. Environmental Protection Agency (EPA) it is subject to federal environmental regulations, and therefore, is subject to compliance with the General Conformity Rule for the Clean Air Act. To comply with this rule, Placer County has prepared a Federal Air Conformity Applicability Analysis. The results of this analysis are included in Appendix B.

PCAPCD Rule 502 "New Source Review" would apply to any new or modified criteria air pollutant emission sources created by the project. Relevant excerpts from Rule 502 are provided below.

RULE 502.101 "PURPOSE"

The purpose of this rule is to provide for the review of new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct for such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

RULE 502.102 "APPLICABILITY"

This rule shall apply to all new stationary sources and emissions units and all modifications to existing stationary sources and emissions units that, after construction, emit or may emit any pollutant regulated under the New Source Review (NSR) Rule within the District. This rule shall not apply to prescribed burning of forest, agriculture or range land; open burning in accordance with District Regulation 3, Open Burning; road construction, or any non-point source common to timber harvesting or agricultural practices. The regulations in effect at the time any application for an Authority to Construct for a new or modified source is deemed complete shall apply to that source except when a new federal requirement not yet incorporated into this Rule applies to the new or modified source.

RULE 502.302 "REQUIREMENT TO APPLY BEST AVAILABLE CONTROL TECHNOLOGY"

An applicant shall apply Best Available Control Technology (BACT) to a new emissions unit or modification of an existing emissions unit, except cargo carriers, if the change would result in an increase in quarterly emissions of a NSR regulated pollutant from the new or modified emissions unit and if the Potential To Emit the new or modified emissions unit equals or exceeds the levels specified below.

RULE 502.408 "DENIAL, FAILURE TO MEET STANDARDS"

The Air Pollution Control Officer (APCO) shall deny any Authority to Construct or Permit to Operate if the APCO finds that the subject of the application would not comply with the standards set forth in District, state, or federal rules or regulations.

RULE 502.409 “DENIAL, FAILURE TO MEET CEQA”

The APCO shall deny any Authority to Construct or Permit to Operate if the APCO finds that the subject of the application would not comply with the standards set forth in CEQA.

PCAPCD promotes active public involvement, enforcement of compliance with district rules and regulations, public education in the public and private sectors, development and promotion of transportation and land use programs designed to reduce vehicle miles traveled within the region, and implementation of stationary- and mobile-source control measures. In compliance with the California Clean Air Act, the district creates air quality attainment plans that primarily address ozone nonattainment. Because Placer County is designated as a nonattainment area for both national and state ozone standards, PCAPCD is required to prepare and submit its air quality attainment plans, and the plans become part of the State Implementation Plan in accordance with the requirements of the Clean Air Act Amendments of 1990.

The California Clean Air Act also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plans must be reviewed and, if necessary, revised to correct deficiencies in progress and incorporate new data or projections. The air quality attainment plans stress attainment of ozone standards and focus on strategies for reducing emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_x). ROG and NO_x are ozone precursors that are generated by combustion of fossil fuels. In the presence of sunlight, ROG and NO_x are converted to ozone by a series of chemical reactions.

The significance of criteria established by PCAPCD is used to make significance determinations. Thus, as identified by PCAPCD (Chang, pers. comm., 2010), implementing the proposed project would result in significant air quality impacts if:

- ▶ construction-generated emissions of ROG, NO_x, or PM₁₀ would exceed the PCAPCD-recommended mass emissions threshold of 82 pounds per day (lb/day);
- ▶ long-term operational (regional) emissions of ROG, NO_x, or PM₁₀ would exceed PCAPCD’s mass emissions threshold of 82 lb/day;
- ▶ long-term operational (regional) emissions of ROG or NO_x would exceed PCAPCD’s cumulative mass emissions threshold of 10 lb/day;
- ▶ sensitive receptors would be exposed to substantial pollutant concentrations (i.e., result in exposure to a toxic air contaminant [TAC], as identified by ARB and/or EPA, at a level for which the risk of contracting cancer exceeds 10 in one million or the noncancer-risk hazard index exceeds 1 for the maximally exposed individual); or
- ▶ objectionable odors would be created that would affect a substantial number of people in the short or long term.

3.3.2 DISCUSSION

a, b, c) Conflict with or obstruct implementation of the applicable air quality plan?

Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality

standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

SHORT-TERM CONSTRUCTION EMISSIONS

Less-than-Significant Impact with Mitigation Incorporated. Construction emissions are described as “short-term” or temporary in duration and have the potential to represent a significant impact with respect to air quality, especially fugitive dust emissions (PM₁₀ and PM_{2.5}). Fugitive dust emissions are associated primarily with heavy site preparation activities and vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on- and off-site. ROG and NO_x emissions are associated primarily with gas and diesel equipment exhaust. With respect to the proposed project, demolition of old facilities and construction/renovation of new facilities would result in the temporary generation of ROG, NO_x, PM₁₀, and PM_{2.5} emissions from site preparation (e.g., clearing and grading), demolition, material transport, building construction, utility routing, and other miscellaneous activities. At the peak of construction, two bulldozers, two cranes, four forklifts, two excavators, and two backhoes would be operating on the project site. In addition, material delivery would include 20 concrete delivery trucks, 20 material delivery trucks, six subcontractor work pickup trucks, and four general contractor work pickup trucks, resulting in a maximum of approximately 90 one-way daily trips.

Short-term, construction-generated emissions of ROG, NO_x, PM₁₀, and PM_{2.5} were modeled using the PCAPCD-recommended URBEMIS 2007, Version 9.2.4 computer program (Rimpo 2008). Input parameters were based on default model settings and project-specific information where available (e.g., number and type of equipment, amount of material transport). The modeled maximum daily construction emissions are summarized in Table 3.3-2 and described in more detail below and Appendix B, “Air Quality Modeling Calculations.”

Table 3.3-2 Summary of Modeled Maximum Short-Term Construction-Generated Emissions				
Source	ROG (lb/day)	NO_x (lb/day)	PM₁₀ (lb/day)	PM_{2.5} (lb/day)
Construction Activities (2012)				
Mobile Equipment Exhaust ¹	8.5	69.6	3.5	3.3
Fugitive Dust	–	–	9.2	1.9
Construction Activities (2013)				
Mobile Equipment Exhaust ¹	1.6	13.1	0.8	0.6
Fugitive Dust	–	–	0.0	0.0
Construction Activities (2014)				
Mobile Equipment Exhaust ¹	1.5	11.8	0.7	0.5
Fugitive Dust	–	–	0.0	0.0
Total Maximum Daily Unmitigated	8.5	69.6	12.7	5.2
Notes: lb/day = pounds per day; NO _x = oxides of nitrogen; PM ₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PM _{2.5} = fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less; ROG = reactive organic gases				
¹ Accounts for employee commute trips, on-site heavy-duty construction equipment operations, and material transport (e.g., soil and aggregate base).				
See Appendix B for modeling results and assumptions.				
Source: Data modeled by AECOM in 2010				

Based on the modeling conducted, project construction would result in worst-case, maximum unmitigated daily emissions of approximately 8.5 lb/day of ROG, 69.6 lb/day of NO_x, and 12.7 lb/day of PM₁₀. Daily unmitigated construction-generated emissions would not exceed PCAPCD's significance threshold of 82 lb/day for ROG, NO_x, and PM₁₀.

However, PCAPCD requires that standard equipment exhaust (i.e., ROG and NO_x) and fugitive dust (i.e., PM₁₀ and PM_{2.5}) control measures be incorporated into project design and implemented during project construction. Therefore, because PCAPCD-recommended mitigation measures for control of equipment exhaust and fugitive dust emissions are not currently incorporated into the project description, emissions of criteria air pollutants and precursors could conflict with or obstruct implementation of the applicable air quality plan, violate, or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the Sacramento Valley Air Basin's nonattainment status. This impact would be **potentially significant**.

Mitigation Measure AQ-1: Reduce Temporary Construction Emissions of ROG, NO_x, and PM₁₀ (Dust)

In accordance with PCAPCD Rule 228, the County will implement the following recommended mitigation measures during construction of the proposed project.

1. Prepare and submit a construction emission/dust control plan to PCAPCD for approval before groundbreaking. This plan will address the minimum administrative requirements found in Sections 300 and 400 of District Rule 228, (Placer County 2010).
2. Ensure that fugitive dust on-site will not exceed 40% opacity and not go beyond the boundary of the project site at any time. If lime or other drying agents are utilized to dry out wet grading areas, they will be controlled so as to not exceed Rule 228 limitations.
3. Ensure that construction equipment exhaust emissions will not exceed Rule 202 limitations. Operators of vehicles and equipment that exceed opacity limits will be immediately notified and the equipment shall be repaired within 72 hours.
4. Prohibit open burning of vegetation removed during infrastructure improvements.
5. Enforce a 5-minute maximum idling time for all diesel-power equipment.
6. Require the construction contractor to use ARB-recommended low sulfur diesel fuel for all diesel-powered equipment.
7. Ensure that water is applied to control dust as needed to prevent dust impacts off-site. Operational water truck(s) shall be on-site, as required, to control fugitive dust. Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt from being released or tracked off-site.
8. Require that effective soil cover (e.g., mulch, approved chemical soil stabilizers, vegetative mats, or other appropriate material) be applied to all inactive construction areas (previously disturbed areas which remain inactive for 14 days), following best management practices to manufacturer's specifications.
9. Require the construction contractor to implement effective wind erosion control measures (e.g., applying water and/or other dust palliatives) as necessary to prevent or alleviate erosion by the forces of wind on unpaved roads and employee/equipment parking areas. Sediment and other construction related materials shall be removed from paved roadways by vacuuming or sweeping.

10. Use existing power sources (e.g., power poles) or use clean fuel where feasible or low-sulfur fuel in diesel-powered generators.

Implementation of applicable PCAPCD dust and exhaust control measures outlined under Mitigation Measure AQ-1 would reduce this impact to a **less-than-significant** level.

LONG-TERM OPERATIONAL EMISSIONS

Less-than-Significant Impact. Although the proposed project would not generate any new mobile or area sources of criteria air pollutants, the project could generate new stationary source emissions.

As discussed in Section 3.16, “Transportation/Traffic,” with long-term project operation SMD 1 WWTP employee levels would increase from 7 to 11, resulting in an increase of 4 trips per day. The proposed project would also include the construction of a septage receiving station that would result in a maximum of two deliveries per week. These additional 8.5 vehicle trips per day would be negligible and not result in a substantial increase in regional criteria air pollutants. Thus, operation of the project would not increase long-term regional emissions of ROG, NO_x, and PM₁₀, local carbon monoxide emissions, or vehicle miles traveled associated with increases in mobile sources.

The proposed project would likely include stationary sources of criteria air pollutant and ozone precursor emissions. These stationary sources would be required to obtain permits to operate under PCAPCD Rule 501 (General Permit Requirements) and Rule 502 (New Source Review). Rule 502 requires that any new or modified stationary emission source be permitted and controlled pursuant to the requirements of PCAPCD. As stated in the environmental setting above, Rule 502.302 requires that all Best Available Control Technology (BACT) be incorporated into new emission source operations. Rule 502.408 and 409, also provided above, require that the APCO deny a permit to any new or modified emission source that does not meet Federal, State, or Local emission standards and thus by direct correlation, CEQA standards. Therefore, the PCAPCD permit process outlined under Rule 502 would ensure that these sources would be equipped with the required emission controls, and that they would not cause a significant environmental impact.

Because no substantial mobile and area or unpermitted stationary-source emissions would be created by operation of the project, no PCAPCD mass emission thresholds would be exceeded. Thus, long-term emissions would not conflict with or obstruct implementation of the applicable air quality plan, would not result in a violation of an existing air quality standard, and would not cumulatively contribute to a net increase of criteria air pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard. As a result, this impact would be **less than significant**. No mitigation is required.

d) Expose sensitive receptors to substantial pollutant concentrations?

SHORT-TERM CONSTRUCTION EMISSIONS

Less-than-Significant Impact with Mitigation Incorporated. Project construction, including site preparation and building construction, would result in short-term generation of diesel exhaust emissions from the use of off-road diesel equipment required for site grading and other construction activities. Particulate exhaust emissions from diesel-fueled engines (diesel particulate matter [diesel PM]) were identified as a TAC by ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential for all other health impacts. The dose to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project (Salinas, pers. comm., 2004).

The period when sensitive receptors may be exposed to construction emissions from the proposed project would be short (3 years). In addition, diesel PM is highly dispersive; studies have shown that measured concentrations of vehicle-related pollutants, including ultrafine particles, decrease dramatically within approximately 300 feet of the source (Zhu et al. 2002). Because the use of mobilized equipment would be temporary, and because primary construction activities would not be active within 300 feet of any sensitive receptors for any substantial length of time, construction-related TAC emissions would not be anticipated to expose sensitive receptors to substantial pollutant concentrations.

According to *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California* (Higgins and Clinkenbeard 2006) and *Naturally Occurring Asbestos Hazard—North Auburn and Vicinity* (California Geological Survey 2008), the project site is located in an area that is likely to contain serpentine and ultramafic rocks that could contain naturally occurring asbestos (NOA). However, in 2001 and 2010, excavation and soil sample borings were taken across the project site and no NOA was found (PSOMAS 2011).

If soil containing NOA is disturbed as part of project construction, nearby sensitive receptors and construction workers could be exposed to NOA. People exposed to low levels of asbestos may be at elevated risk (e.g., above background rates) for lung cancer and mesothelioma. The risk is proportional to the cumulative inhaled dose (number of fibers), and also increases with the time since first exposure. Although several factors influence the disease-causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens. Soil surveys indicate that NOA is not likely to be located on the project site. However, because disturbance of NOA by project construction activities may still be possible, exposure of sensitive receptors to substantial pollutant concentrations could occur. This impact would be **potentially significant**.

Mitigation Measure AQ-2: Survey Project Area for Naturally Occurring Asbestos and Implement Asbestos Air Toxic Control Measures as required by PCAPCD and ARB.

If NOA is found at the site during any ground disturbing activities, the County will report any discovery of NOA, serpentine, or ultramafic rock to the PCAPCD Air Pollution Control Officer no later than the next business day, and will comply as required by PCAPCD with all requirements outlined in the ARB *Asbestos Air Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations* to reduce potential impacts from exposure to NOA to a less-than-significant level. These requirements include (1) an asbestos dust mitigation plan that must be approved by PCAPCD before construction restarts, and must be implemented at the beginning and maintained throughout the duration of construction and grading activities; and (2) an asbestos health and safety program (if required under 8 CCR Section 1529[4]).

In accordance with 17 CCR Sections 93105(e)(2) and 93105(e)(4), the asbestos dust mitigation plan prepared by the County will specify dust mitigation practices that are sufficient to ensure no equipment or operation emits dust that is visible crossing property lines. The plan will also include track-out prevention and control measures, control measures for disturbed surface areas, and storage piles that will remain inactive for more than 7 days, postconstruction stabilization, and asbestos monitoring, if required. Examples of control measures may include but will not be limited to surface wetting, surface covering, surface crusting, application of chemical dust suppressants or stabilizers, installation of wind barriers, construction area speed limits, truck spillage controls, and establishment of vegetative covers. In addition, the County's asbestos dust mitigation plan will include recordkeeping and reporting requirements that document the results of any air monitoring, geologic evaluation, and asbestos bulk sampling.

The County will implement the asbestos health and safety program if permissible exposure limits for airborne asbestos are found to be exceeded within the project site. Implementation will include applicable construction worker protection measures as defined under 8 CCR Section 1529(g), and any additional measures required under the California Occupational Safety and Health Administration, to reduce exposure of construction workers to airborne asbestos.

The impact of NOA disturbance from the proposed project would be reduced to a **less-than-significant** level with implementation of Mitigation Measure AQ-2.

LONG-TERM OPERATIONAL EMISSIONS

Less-than-Significant Impact. The project would result in an increase of four employee vehicle round trips per day. The proposed project would also include the construction of a septage receiving station that would result in a maximum of two deliveries per week. These additional 8.5 vehicle trips per day would be negligible and not result in an increase in substantial pollutant concentrations. In addition, no area sources, or unpermitted stationary sources would be operated by project implementation and, therefore, no exposure to substantial pollutant concentrations would occur. This impact would be **less than significant**.

e) Create objectionable odors affecting a substantial number of people?

Less-than-Significant Impact with Mitigation Incorporated. The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress, and often generating citizen complaints to local governments and regulatory agencies. However, the County has not received any odor complaints associated with facility operations over the last several years (Kangas pers. comm., 2011).

Construction of the project would result in diesel exhaust emissions from on-site construction equipment. The diesel exhaust emissions would be intermittent and temporary and would dissipate rapidly from the source with an increase in distance. Thus, the proposed project would not create short-term, construction-generated objectionable odors affecting a substantial number of people.

Odors from domestic wastewater are typically a result of anaerobic biological activity in the sewer collection and wastewater treatment systems. The anaerobic decomposition of compounds containing nitrogen and sulfur results in a number of gases, including hydrogen sulfide, ammonia, carbon dioxide, methane, nitrogen, oxygen, and hydrogen. Although many different combinations of gases can occur at any given time, the most offensive odors associated with domestic wastewater are typically the result of emissions of hydrogen sulfide. Odors are most prevalent during warm weather conditions of approximately 70 degrees Fahrenheit (°F) and higher that favor a more rapid multiplication of the anaerobic bacteria, and/or when calm wind conditions exist, which limit dispersion.

The elements of a wastewater treatment facility most likely to generate odors typically include storage areas in which wastewater influent (e.g., untreated wastewater) or solids are open to the air and/or stored for extended periods. Major sources of odors typically include influent pump stations, mechanical screens, and grit removal chambers. Additional sources of minor odors also include sludge handling activities, as well as stockpiled materials from the mechanical screen and grit removal chambers, and wastewater transport and recycling. During high winds, odors generated at treatment plants and related infrastructures are usually diluted. However, during light or calm wind conditions, potential odor impacts are high because dilution is minimized. When these odors are strong, or when a slight breeze exists, odors can be transmitted over long distances. Potential increases in odors may be offset by design and/or operational procedures, including the use of chemicals and incorporation of additional treatment technologies.

A buffer zone was previously created around the SMD 1 WWTP to prevent odors from disturbing adjacent residents. The County purchased an easement around the entire WWTP, wherein landowners gave up their ability to build habitable structures within a radius around the WWTP. The buffer zone was complete, including each parcel bordering the WWTP. These included parcels on the north side of Dry Creek and on the south side of Joeger Road. Because the buffer zone included almost all land on the two undeveloped parcels within the project site (Assessor's Parcel Numbers [APNs] 076-080-012 and 076-080-029), the County decided to purchase these

two parcels. The buffer zone purchase was a voluntary decision, not mandated by the state and not a mitigation measure for any upgrade/expansion project. Therefore, expansion of the proposed WWTP into the buffer zone would not be considered a significant impact.

However, the proposed upgrade and expansion of the existing SMD 1 WWTP would include new headworks, primary clarifiers, aeration basins, secondary clarifiers and tertiary filters, an ultraviolet (UV) disinfection system, a postdisinfection effluent aeration system, a new control and Supervisory Control and Data Acquisition system, and a new operation and control building, as well as other miscellaneous elements (such as a storm drainage system and chemical storage tanks). Although no odor generating facilities would be located closer to existing residences and the improvements would include odor control mechanisms that are not currently in place, the operation of such elements could increase the potential for the exposure of sensitive receptors to objectionable odors, especially when unfavorable meteorological conditions were present. Therefore, this impact would be **potentially significant**.

Mitigation Measure AQ-3: Implement All Feasible Odor Control Measures on Any New or Upgraded Odor-Producing Treatment Plant Elements.

The County will implement the following mitigation measures:

- ▶ Ensure that appropriate engineering controls have been incorporated into the design of the proposed project to minimize the production of unpleasant odors. Engineering controls to diminish odors may include, but will not be limited to, covering headworks, use of chemical additives to remove unpleasant odors, and installing systems to remove odiferous air (e.g., odor scrubbers).
- ▶ To the extent feasible, locate potential sources of odors as far from sensitive receptors as possible or provide systems to collect and treat the odiferous air.
- ▶ After project improvements are completed, operate the controls designed to suppress odors and periodically evaluate adjacent odor levels. If offensive odors are found to be present, take appropriate actions to mitigate them to the extent practical.
- ▶ If possible, conduct all cleaning or other activities that may produce major odors under meteorological conditions that are effective in mitigating odors. Meteorological parameters to consider include wind speed and direction, and air temperature.
- ▶ Notify nearby receptors before any of these potentially major odiferous activities are conducted.

Implementation of Mitigation Measure AQ-3 would reduce the exposure of receptors to odors with respect to frequency and magnitude from the proposed WWTP upgrade and expansion. With odor reduction measures in place, the potential for exposure of sensitive receptors to substantial odors from upgraded facilities beyond existing conditions is unlikely. This impact would be reduced to a **less-than-significant** level.

3.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. Biological Resources. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Cause changes to water quality in one or more water bodies by a sufficient magnitude, frequency, and geographic extent to cause lethality or adversely affect an aquatic species' long-term population level in these water bodies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Cause a reduction in habitat quantity via changes to creek/river flows or shaded riparian aquatic (SRA) cover or cause degradation in habitat quality, via changes to temperature, of sufficient magnitude, frequency and geographic extent such that it would adversely affect a species' long-term population level in one or more water bodies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i) Reduce or degrade habitat used by state or federal special-status species, including habitat designated as critical habitat, to an extent that could cause a reduction in species abundance or long-term population levels, or ability to sustain a population?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
j) Reduce benthic macroinvertebrate abundance within a water body by a sufficient magnitude and geographic extent as to adversely affect overall benthic macroinvertebrate (BMI) community structure or function, including the fish forage base that it provides within the water body.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.4.1 ENVIRONMENTAL SETTING

The discussion in this section is based on a review of existing information on biological resources in the project vicinity, the results of a reconnaissance-level field survey of the 10.9-acre project site conducted by AECOM biologists on July 29, 2010, a reconnaissance-level aquatic and riparian field survey conducted by an RBI fisheries biologist/water quality specialist on December 2, 2010, and a wetland delineation conducted by an AECOM ecologist on December 7, 2010. The purpose of the field survey was to characterize general biological resources and evaluate the potential for sensitive biological resources to occur. The purpose of the aquatic and riparian survey was to identify and delineate any sensitive aquatic or riparian areas along Rock Creek and Dry Creek. The purpose of the wetland delineation was to provide an accurate quantification and delineation of waters of the United States on the project site, including wetlands, as defined by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA).

GENERAL BIOLOGICAL RESOURCES

The project site consists of an operational WWTP and two adjacent undeveloped parcels. Acreages presented in this section represent the portions of the project site that are within the disturbance limits of the project. The western portion of the project site includes the WWTP (parcel numbers 076-080-003 and -007). The majority of this parcel is surrounded by an approximately 8- to 10-foot chain-link fence. Landscaped vegetation, including mature ornamental trees and native gray pine (*Pinus sabiniana*) trees, is planted around the central office building, along the fence line that separates the WWTP from adjacent undeveloped parcels, and along Joeger Road.

The eastern portion of the project site, parcels 076-080-012 and 076-080-029, is undeveloped and includes annual grassland (2.1 acres), oak woodland, and some riparian and wetland vegetation associated with Dry Creek. The southern half of this grassland, mainly parcel 076-080-029, is mowed regularly, and the northern half, mainly parcel 076-080-012, is dominated by invasive weeds, including yellow starthistle (*Centaurea solstitialis*), and nonnative annual grasses (e.g., *Bromus diandrus*). The annual grassland is higher in elevation than the rest of the site and is relatively dry with hard soils. The northeastern corner of parcel 076-080-012 includes 0.1 acre of oak woodland, which is dominated by valley oak (*Quercus lobata*) and is directly adjacent to the white alder riparian forest along Dry Creek, described below.

Dry Creek flows east to west along the northern boundary of the site, and Rock Creek flows south to north along the western boundary of the site. The creek bed of Dry Creek and Rock Creek each encompass less than 0.1 acre. White alder riparian forest occupies 0.4 acre along Dry Creek, which is dominated by white alder (*Alnus rhombifolia*) and valley oak. Freshwater marsh occupies less than 0.1 acre along Dry Creek and Rock Creek, and this marsh is dominated by tall flatsedge (*Cyperus eragrostis*), common rush (*Juncus effusus*), and broadleaf cattail (*Typha latifolia*).

The WWTP discharges treated effluent to Rock Creek, approximately located 200 feet upstream of the confluence of Dry Creek and Rock Creek. No known fish surveys exist for these creeks. However, the results of fish

community surveys conducted over the last three decades for Coon Creek, formed by the convergence of Dry Creek and Orr Creek approximately 2 miles downstream of the SMD 1 outfall, indicate that these water bodies currently support a diverse warm-water resident fish community composed of native and introduced fish species (Table 3.4-1; Bailey 2003; Placer County 2002). Because of the similar habitats and interconnectivity of these creeks, combined with the widespread distribution of warm-water fish throughout foothill creeks of the Sierra Nevada range, the warm-water resident fish species occurring in Coon Creek likely occur in the upper watershed, including Dry Creek and Rock Creek.

As discussed in Section 2.6.2, Dry Creek and Rock Creek are each designated as having warm freshwater habitat (WARM), cold freshwater habitat (COLD), migration of aquatic organisms (MIGR), and spawning, reproduction, and/or early development (SPWN) as aquatic life beneficial uses. However, because neither of these water bodies is specifically identified in the *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan), last amended in 2009, their aquatic life beneficial use designations are based on the “tributary rule” for the Sacramento River between Colusa Drain and the I Street Bridge in Sacramento, rather than based on documented uses in each water body.

Although the WARM and SPWN beneficial uses are clearly demonstrated by the resident fish community, no evidence exists that these creeks support a naturally reproducing resident trout population or that the COLD beneficial use occurs in them. Available information indicates that the COLD and MIGR beneficial uses may be restricted to the lower reaches of Coon Creek.

**Table 3.4-1
Fish Species Expected to Occur in Upper Watershed of Lower Coon Creek**

Common Name	Scientific Name	Native/ Introduced	Status ¹ (federal/state)	Expected Occurrence in the Upper Watershed ²
Bluegill	<i>Lepomis macrochirus</i>	Introduced	-/-	Likely
Bullhead (species unknown)	<i>Ameiurus</i> spp.	Introduced	-/-	Likely
California roach	<i>Lavinia symmetricus</i>	Native	-/-	Likely
Common carp	<i>Cyprinus carpio</i>	Introduced	-/-	Likely
Chinook salmon (fall-run)	<i>Oncorhynchus tshawytscha</i>	Native	SC/SSC	Unlikely
Fathead minnow	<i>Pimephales promelas</i>	Introduced	-/-	Likely
Green sunfish	<i>Lepomis cyanellus</i>	Introduced	-/-	Likely
Golden shiner	<i>Notemigonus crysoleucas</i>	Introduced	-/-	Likely
Hardhead	<i>Mylopharodon conocephalus</i>	Native	-/SSC	Likely
Hitch (Central Valley)	<i>Lavinia exilicauda</i>	Native	-/-	Unlikely
Bigscale logperch	<i>Percina macrolepida</i>	Introduced	-/-	Unlikely
Pacific lamprey	<i>Lampetra tridentata</i>	Native	-/-	Likely
Sacramento pikeminnow	<i>Ptychocheilus grandis</i>	Native	-/-	Likely
Sacramento sucker	<i>Catostomus occidentalis</i>	Native	-/-	Likely
Western mosquitofish	<i>Gambusia affinis</i>	Introduced	-/-	Likely
White catfish	<i>Ameiurus catus</i>	Introduced	-/-	Likely

¹ SC = Species of Concern; SSC = California Species of Special Concern
² The upper watershed is defined as all reaches of Coon Creek and tributaries upstream (including Dry Creek and Rock Creek) of the impassible barriers near Garden Bar Road.
Sources: Bailey 2003; Placer County 2002

Researchers have conducted studies that show resident brown and rainbow are typically closely associated with elevations of approximately 1,900 feet above mean sea level (AMSL) and higher on the western slope of the Sierra-Nevada mountain range (May and Brown 2000). The SMD 1 discharge is located approximately 700 feet below this elevation range at an elevation of approximately 1,200 feet AMSL. Because of the elevation of the WWTP and the seasonal temperature regime that naturally occurs in Dry Creek and Rock Creek, the likelihood that these water bodies would support resident, naturally reproducing populations of brown or rainbow trout in the vicinity of SMD 1 is very low.

Coon Creek appears to support fall-run Chinook salmon (*O. tshawytscha*), a federal species of concern and California species of special concern. Access by anadromous fish species to the upper reaches of the Coon Creek watershed, which includes Dry Creek and Rock Creek, is prevented by numerous fish migration barriers approximately 8 miles downstream of the WWTP, including beaver dams, human-made dams, low-flow barriers, and a steep series of waterfalls/cascades located a short distance upstream of Garden Bar Road (Bailey 2003; Placer County 2002). The upper reaches of the Coon Creek Watershed are also not likely to support a self-sustaining population of spring-run Chinook salmon or Central Valley steelhead (*O. mykiss*) in part because of numerous passage barriers to the upper reaches, but also because the warm summertime temperatures and in-channel habitat conditions in the lower reaches of Coon Creek are not suitable for these species (Bailey 2003). Consequently, no anadromous salmonids are expected to occur in the upper reaches of the watershed, including Dry Creek and Rock Creek, in the vicinity of the SMD 1 WWTP.

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources include species and habitats that are protected by federal, state, or local resource conservation agencies and organizations. Within California, special-status plant and wildlife species are generally defined as those species that are legally protected or otherwise considered sensitive by the U.S. Fish and Wildlife Service (USFWS) and DFG. This includes species covered under the federal and California Endangered Species Act (CESA), those designated as species of concern by DFG, and those ranked as rare, threatened, or endangered by DFG as tracked in the California Native Plant Society (CNPS), Inventory of Rare and Endangered Plants. These California Rare Plant Ranks (CRPRs) include five categories:

- ▶ List 1A—plants presumed to be extinct in California;
- ▶ List 1B—plants that are rare, threatened, or endangered in California and elsewhere;
- ▶ List 2—plants that are rare, threatened, or endangered in California but more common elsewhere;
- ▶ List 3—plants about which more information is needed (a review list); and
- ▶ List 4—plants of limited distribution (a watch list).

Each CRPR category may include one of the following extensions, indicating the level of endangerment in California:

- ▶ 1—Seriously endangered in California (greater than 80% of occurrences are threatened and/or have a high degree and immediacy of threat);
- ▶ 2—Fairly endangered in California (20 to 80% of occurrences are threatened); or
- ▶ 3—Not very endangered in California.

DFG recommends—and local governments may require—that plants on List 1A, 1B, and 2 be addressed during CEQA review of proposed projects.

The USFWS online database (USFWS 2010), DFG's California Natural Diversity Database (CNDDDB 2010), and the CNPS Inventory (CNPS 2010) were reviewed for documented occurrences of sensitive biological resources, including sensitive habitats and special-status species, in the Auburn U.S. Geological Survey topographic

quadrangle and in the eight surrounding quadrangles. Species listed in the draft Placer County Conservation Plan (PCCP) and the Auburn/Bowman Community Plan also were included in this analysis.

SPECIAL-STATUS PLANTS

No special-status plants are likely to occur on the project site. A total of twelve special-status plants are documented in the CNDDDB and/or CNPS databases as occurring within the project vicinity. Four of the documented species are restricted to clay, serpentinite, or gabbroic soils, none of which are mapped on the project site (NRCS 2010). Therefore, these four species were eliminated from further consideration. A complete list of the special-status plants identified by the database searches is included in Appendix C. In addition to the remaining eight species identified from the database searches, four more species included on the PCCP also were analyzed for their potential to occur on the project site. The regulatory status, habitat associations, and likelihood of occurrence for all 12 of these special-status plant species are summarized in Table 3.4-2. Five of these species often occur on soil types not found on the project site, but can occasionally be found on other soils. Seven of the special-status plant species occur in chaparral, cismontane woodland, and/or lower montane coniferous woodland, and the other five species occur in vernal pools, lake margins, other seasonal wetlands, or mesic grassland—none of which exist on the project site.

SPECIAL-STATUS WILDLIFE AND FISH

Special-status wildlife and fish species that may be affected in the vicinity of the project site were identified from the CNDDDB, were included in the PCCP, or were listed by the USFWS. Species whose range is not within the project area were not analyzed; complete database search results are provided in Appendix C. The regulatory status, habitat associations, and likelihood of occurrence for special-status wildlife species whose range includes the project area are summarized in Table 3.4-3. No special-status fish species were identified in the CNDDDB from representative quads in the project area. Most of the species listed in Table 3.4-3 are not expected to occur within the project site because of unfavorable habitat conditions (the majority of the project site contains no special-status wildlife habitat). Eight wildlife species could occur within the undeveloped portion of the project site; or in riparian and aquatic habitat associated with Rock Creek and Dry Creek. These species are discussed below.

SENSITIVE HABITATS

Sensitive habitats include sensitive natural communities designated by DFG and inventoried in the CNDDDB. In addition, wetlands and other waters of the United States that are subject to the jurisdiction of the USACE and Regional Water Quality Control Board (RWQCB); waters of the state subject to the RWQCB's jurisdiction; and lakes, rivers, and streams subject to the DFG's jurisdiction are considered sensitive.

Rock Creek is a water of the United States within the Upper Coon–Upper Auburn watershed. Rock Creek is a tributary to Dry Creek and, furthermore, to Coon Creek, the Main Canal, Natomas Cross Canal, and Sacramento River. Rock Creek and the freshwater marsh adjacent to Rock Creek are subject to Section 404 and 401 of the CWA and Section 1602 of the DFG Code of Regulations. The SMD 1 WWTP presently discharges treated effluent to Rock Creek under waste discharge requirements set forth in a National Pollutant Discharge Elimination System (NPDES) permit issued by the Central Valley RWQCB (Order No. R5-2005-0074, NPDES Permit No. CA 0079316 and accompanying Cease and Desist Order No. R5-2005-0075).

Dry Creek also is a water of the U.S. and subject to Section 404 and 401 of the CWA and Section 1602 of the DFG Code of Regulations. White alder riparian forest, located above the ordinary high water mark of Dry Creek, is not likely subject to Section 404 and 401 of the CWA but is subject to Section 1602 of the DFG Code of Regulations.

**Table 3.4-2
Special-Status Plant Species Known to Occur or with Potential to Occur on the Project Site**

Species	Status ¹		Habitat, Elevation, and Blooming Period	Potential for Occurrence
	USFWS	DFG		
Jepson's onion <i>Allium jepsonii</i>	–	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; often on serpentinite or volcanic soils; 984 to 4,330 feet elevation; blooms April–August	Unlikely to occur. A documented occurrence is approximately 1 mile east of project site (CNDDB 2010; occ. no. 18), but no suitable habitat is present and no serpentinite or volcanic soils are documented on the project site.
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	–	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland, often on serpentinite soils; 295 to 4,600 feet elevation; blooms March–June	Unlikely to occur. Grassland on the project site is not suitable habitat because it is partly mowed and heavily invaded by yellow starthistle.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	–	1B.2	Chaparral, cismontane woodland, lower montane coniferous forest; often on serpentinite, gabbroic or other soils; 804 to 4,068 feet elevation; blooms May–June	Unlikely to occur. No suitable habitat is present, and no serpentinite or gabbroic soils are documented on site.
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	–	1B.2	Chaparral and cismontane woodland; often in road cuts; 240 to 3,000 feet elevation; blooms May–July	Unlikely to occur. No suitable habitat is on the project site.
Dwarf downingia <i>Downingia pusilla</i>	–	2.2	Mesic valley and foothill grassland; vernal pools; 3 to 1,460 feet elevation; blooms March–May	Unlikely to occur. Grassland on the project site is not suitable habitat; it is dry because of its position on a hilltop, it is partly mowed, and it is heavily invaded by yellow starthistle.
Bogg's Lake hedge hyssop <i>Gratiola heterosepala</i>	–	E, 1B.2	Lake margin marshes and swamps, vernal pools, and other seasonal wetlands; primarily in clay soils; 30 to 8,000 feet elevation; blooms April–August	Unlikely to occur. No suitable habitat is present and no clay soil is documented on the project site.
Parry's horkelia <i>Horkelia parryi</i>	–	1B.2	Chaparral, cismontane woodland; often on Ione formation soil; 262 to 3,396 feet elevation; blooms April–September	Unlikely to occur. No suitable habitat is present and no Ione formation soil is documented on the project site.
Ahart's dwarf rush <i>Juncus leiospermus</i> var. <i>ahartii</i>	–	1B.2	Vernal pools and swales in areas of low cover of competing vegetation; most often on gopher turnings along margins of pools (Witham 2006:38); 98 to 751 feet elevation; blooms March–May	Unlikely to occur. No suitable habitat is present on the project site.
Red Bluff dwarf rush <i>Juncus leiospermus</i> var. <i>leiospermus</i>	–	1B.1	Vernal pools or other seasonal wetlands in chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland; 115 to 3,346 feet elevation; blooms March–May	Unlikely to occur. Grassland on the project site is not suitable habitat because it is partly mowed and heavily invaded by yellow starthistle.
Legenere <i>Legenere limosa</i>	–	1B.1	Vernal pools; 3 to 2,887 feet elevation; blooms April–June	Unlikely to occur. No suitable habitat is present on the project site.
Layne's ragwort <i>Packera layneae</i>	T	R, 1B.2	Chaparral, cismontane woodland; often on serpentinite or gabbroic, rocky soils; 656 to 3,281 feet elevation; blooms April–August	Unlikely to occur. No suitable habitat is present and no serpentinite or gabbroic soils are documented on the project site.

Table 3.4-2 Special-Status Plant Species Known to Occur or with Potential to Occur on the Project Site				
Species	Status ¹		Habitat, Elevation, and Blooming Period	Potential for Occurrence
	USFWS	DFG		
Oval-leaved viburnum <i>Viburnum ellipticum</i>	–	2.3	Chaparral, cismontane woodland, lower montane coniferous forest; usually on north-facing slopes; 705 to 4,600 feet elevation; blooms May–June	Unlikely to occur. No suitable habitat is on the project site.
Notes: USFWS = U.S. Fish and Wildlife Service; DFG = California Department of Fish and Game; CESA = California Endangered Species Act; ESA = Federal Endangered Species Act ¹ Legal Status Definitions				
U.S. Fish and Wildlife Service:		California Rare Plant Ranks:		
E Endangered (legally protected)		1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)		
T Threatened (legally protected)		2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)		
California Department of Fish and Game:		CRPR Extensions:		
E Endangered (legally protected)		1 Seriously endangered in California (greater than 80% of occurrences are threatened and/or have a high degree and immediacy of threat)		
T Threatened (legally protected)		2 Fairly endangered in California (20 to 80% of occurrences are threatened)		
R Rare (legally protected)		3 Not very endangered in California		
Sources: USFWS 2010; CNDDDB 2010; CNPS 2010; data compiled by AECOM in 2010				

Table 3.4-3 Special-Status Wildlife Species Known to Occur or with Potential to Occur on the Project Site				
Species ¹	Status ²		Habitat	Potential for Occurrence
	USFWS	DFG		
Invertebrates				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T, X		Vernal pools.	Unlikely to occur. No suitable vernal pool habitat is on the project site.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T		Closely associated with blue elderberry, which is an obligate host for this beetle larvae.	Unlikely to occur. No elderberry shrubs were observed on the project site.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>	E, X		Vernal pools and swales.	Unlikely to occur. No suitable vernal pool habitat is on the project site.
Amphibians				
California tiger salamander <i>Ambystoma californiense</i>	T	CSC	Vernal pools and other seasonally ponded areas surrounded by grasslands.	Unlikely to occur. No suitable breeding habitat on the project site.
California red-legged frog <i>Rana aurora draytonii</i>	T, X	CSC	Found in a variety of aquatic, riparian, and adjacent upland habitats Critical habitat for this species is designated in the county, approximately 20 miles east of the project site.	Unlikely to occur. Dry Creek and Rock Creek could provide potentially suitable habitat however this species is known to occur only in six geographically separated locations in the Sierra Nevada foothills, the closest being over 20 miles from the project site.

**Table 3.4-3
Special-Status Wildlife Species Known to Occur or with Potential to Occur on the Project Site**

Species ¹	Status ²		Habitat	Potential for Occurrence
	USFWS	DFG		
Foothill yellow-legged frog <i>Rana boylei</i>		CSC	Found in middle to low elevations in perennial creeks and streams, usually with cobble bottoms.	Could occur. Potentially suitable habitat occurs in Dry Creek and Rock Creek; however, no known occurrences exist within 5 miles of the project site.
Western spadefoot <i>Spea hammondi</i>		CSC	Central valley and foothill locations with grasslands and shallow temporary pools.	Unlikely to occur. No suitable temporary pool habitat is found on the project site.
Reptiles				
Northwestern pond turtle <i>Emys (=Clemmys) marmorata marmorata</i>		CSC	Uses permanent or nearly permanent water bodies in a variety of habitat types.	Could occur. Potentially suitable habitat occurs in Dry Creek and Rock Creek; however, no known occurrences exist within 5 miles of the project site.
Coast horned lizard <i>Phrynosoma blainwillii</i>		CSC	Inhabits open habitats with friable soils, such as sandy areas, washes, flood plains, and wind-blown deposits.	Unlikely to occur. No suitable habitat with friable soils is found on the project site.
Birds				
Tricolored blackbird <i>Agelaius tricolor</i>		CSC	Nests in dense cattails and tules, riparian scrub, and other low dense vegetation; forages in grasslands and agricultural fields.	Unlikely to occur. Potentially suitable freshwater marsh habitat is found along Dry Creek, however this species' range does not typically extend past the 1,000-foot elevation in the Sierra Nevada foothills.
Grasshopper sparrow <i>Ammodramus savannarum</i>		CSC	Nests in grassland, upland meadow, pasture, hayfield, and old field habitats.	Could occur. Grassland habitat in currently undeveloped portions of the project site could provide low-quality habitat.
Long-eared owl <i>Asio otus</i>		CSC	Nests in woodlands; forages over open rangeland, clearings, and fallow fields.	Could occur. Potentially suitable nesting habitat occurs in oak woodland.
Burrowing owl <i>Athene cucularia</i>		CSC	Nests in burrows, areas of low-growing vegetation, grasslands, and agricultural fields.	Unlikely to occur. No suitable grassland habitat with active ground squirrel populations exists on the project site.
Swainson's hawk <i>Buteo swainsoni</i>		T	Nests in riparian forest and scattered trees; forages in grasslands and agricultural fields.	Could occur. Potentially suitable nesting habitat occurs in the riparian forest and oak woodland, but only low-value foraging habitat exists on the project site. Project site is near the edge of this species' range which is generally restricted to the Central Valley, and far northeastern California.
Northern harrier <i>Circus cyaneus</i>		CSC	Suitable habitat includes brackish and freshwater marshes, alpine meadows, grasslands, prairies, and agricultural lands.	Unlikely to occur. The freshwater marsh along Dry Creek does not provide typical open, low canopy habitat used for nesting by this species. Degraded grassland habitat found on the project site would not provide suitable foraging habitat. .
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	C	E	Nests in large blocks of riparian habitat (particularly woodlands with cottonwoods and willows) and forages in cottonwood trees.	Unlikely to occur. No suitable riparian forest habitat is found on the project site and the project site is out of the known range for this species.
White-tailed kite <i>Elanus leucurus</i>		FPS	Trees and shrubs in grasslands and savannas.	Unlikely to occur. No suitable grassland or savannah habitat is found on the project site.

**Table 3.4-3
Special-Status Wildlife Species Known to Occur or with Potential to Occur on the Project Site**

Species ¹	Status ²		Habitat	Potential for Occurrence
	USFWS	DFG		
Greater sandhill crane <i>Grus canadensis tabida</i>		FPS	Summers in open terrain near shallow lakes or freshwater marshes; winters in plains and valleys near bodies of fresh water.	Unlikely to occur. No suitable fresh water habitat such as extensive freshwater marsh, open wetlands, or irrigated wet fields occurs on or in the vicinity of the project site. Nesting for greater sandhill crane is limited to Modoc, Lassen, Sierra, and Plumas counties.
Bald eagle <i>Haliaeetus leucocephalus</i>	T	E, FPS	Found near aquatic habitats (rivers, lakes, reservoirs) with forested shorelines; nests in large trees that are open and accessible.	Unlikely to occur. No suitable foraging or nesting habitat is found on the project site.
California black rail <i>Laterallus jamaicensis coturniculus</i>		T, FPS	Nests in high portions of shallow freshwater marshes, wet meadows, and flooded, grassy vegetation, vegetated by fine-stemmed emergent plants.	Unlikely to occur. No suitable marsh habitat is found on the project site and the project site is out of the known range for this species.
Purple martin <i>Progne subis</i>		CSC	Summer resident in wooded, low-elevation habitats.	Unlikely to occur. No suitable breeding habitat (woodland, forest, or riparian) exists on the project site and the project site is out of the known range for this species.
American Perigrine falcon <i>Falco peregrinus</i>		E	Breeds near wetlands, lakes, or other water, usually on high cliffs.	Unlikely to occur. No suitable habitat is found on the project site.
Loggerhead shrike <i>Lanius ludovicianus</i>		CSC	Common resident in foothills and lowland habitats throughout California. Open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches.	Could occur. Suitable habitat adjacent to project site and in undeveloped portions of the site.
Yellow warbler <i>Dendroica petechia</i>		CSC	Riparian deciduous forests or other habitats with dense brush.	Could occur. May be seen infrequently during migration in riparian habitat on the project site.
Yellow breasted chat <i>Chaticteria virens</i>		CSC	Habitat includes dense, brushy thickets and tangles near water, and thick understory in riparian woodland.	Could occur. Potentially suitable riparian habitat is found on the project site.

Mammals

Pacific Townsend's big-eared bat <i>Corynorhinus townsendii townsendii</i>		CSC	Hibernates in caves, mines, and on old buildings.	Unlikely to occur. No suitable roost habitat is found on the project site. Buildings on the site are well maintained and, thus, would not provide suitable roost locations.
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Notes: USFWS = U.S. Fish and Wildlife Service; DFG = California Department of Fish and Game; DPS = distinct population segment; ESU = Evolutionarily Significant Unit

¹ Legal Status Definitions

U.S. Fish and Wildlife Service:

E	Endangered
T	Threatened (legally protected)
C	Candidate
X	Critical habitat is designated for this species by the USFWS

California Department of Fish and Game:

E	Endangered
T	Threatened (legally protected)
CSC	Species of Special Concern
FPS	Fully Protected Species

Sources: USFWS 2010; CNDDDB 2010; data compiled by AECOM in 2010

LOCAL PLANS AND POLICIES

Auburn/Bowman Community Plan

The Auburn/Bowman Community Plan (ABCP) covers the Auburn and Bowman communities in Placer County. The SMD 1 WWTP site is included within the ABCP boundaries and is subject to the plan.

The Environmental Resources Management Element of the ABCP contains several goals designed to protect or conserve environmental resources within the plan area. Policies related to these goals include:

- ▶ should not permit new construction (i.e., structures requiring building permits) within 100 feet of the centerline of permanent streams, within 50 feet of the centerline of intermittent streams, or within the future (fully developed) 100-year floodplain, whichever is greater;
- ▶ should maintain natural conditions within the 100-year floodplain of intermittent and permanent streams except where work is required to maintain the streams' drainage characteristics and where such work is done in accordance with the Placer County Flood Damage Prevention Ordinance;
- ▶ support the “no net loss” policy for wetland areas administered by USACE, USFWS, and DFG;
- ▶ require 100-foot building setbacks from the centerline of perennial streams and 50-foot building setbacks from the centerline of intermittent streams;
- ▶ protect oak woodlands, wildlife corridors, and other unique wildlife habitats critical to protecting and sustaining wildlife populations; and
- ▶ require mitigation for development projects where isolated segments of stream habitat are unavoidably altered pursuant to Section 1602 of DFG Code of Regulations and Section 404 of the CWA.

Placer County General Plan

The Placer County General Plan (Placer County 1994) includes goals and requirements for protecting sensitive habitat in Placer County. Elements relevant to the project include:

- ▶ requirements for buffers of 100 feet from the centerline of perennial streams, 50 feet from the centerline of intermittent streams, and 50 feet from the edge of sensitive habitats;
- ▶ a “no net loss” policy for wetland areas regulated by USACE, USFWS, and DFG;
- ▶ conservation of remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species;
- ▶ avoidance, minimization, and/or compensatory mitigation techniques when development may affect a wetland; and
- ▶ protection of significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations.

Placer County Code Article 12.16

Article 12.16 of the Placer County Code, Tree Preservation, generally outlines the policy to preserve trees wherever feasible. Section 12.16.020 defines “tree” as a tall woody plant native to California, with a diameter at breast height (dbh) for a single main stem or trunk of at least 6 inches, or an aggregate of at least 10 inches dbh

for a multiple trunk tree. The article includes any trees, regardless of size, within riparian areas in tree preservation zones (described in Section 12.16.040) and as a part of any discretionary project countywide. Gray pine and common shrubs such as manzanita (*Arctostaphylos* sp.) are excluded from this article, regardless of size. The SMD 1 WWTP is located within a tree preservation zone and is subject to this Article. Riparian forest is found along Dry Creek on parcels 076-080-012 and 076-080-003, and oak woodland with mature valley oak trees is found on parcel 076-080-012.

Draft Placer County Conservation Plan

The goal of the PCCP is to maintain Placer County's unique character, high quality of life, diverse ecosystems, and rare species, and to provide a vision to plan for and accommodate the area's projected growth, while at the same time protecting its many resources. The Agency Draft of the PCCP was released on February 1, 2011, and is currently under review by USFWS, NMFS, and DFG. The draft PCCP includes Biological Goals and Objectives at the landscape, natural and semi-natural community, and species level. While these goals and objectives do not apply to the proposed project, as the Draft PCCP has not yet been approved, they are discussed below for informational purposes to provide additional regulatory context regarding the project area.

The landscape-level goals and objectives are designed to protect, enhance, and restore ecological processes that occur on the scale of the PCCP area as a whole. Those relevant to the proposed project include:

- ▶ Protect and maintain landscapes of representative natural and semi-natural communities along a range of environmental gradients that are large enough to support ecosystem function, maintain and contribute to the recovery of populations of covered species and biological diversity, and that can accommodate shifting species distribution due to changing circumstances (e.g., climate change).
- ▶ Maintain and enhance the effective movement and interchange of native organisms (in a manner that maintains ecological integrity) between reserves within the Plan area, adjacent habitats outside the Plan area, and within the Potential Future Growth area.

Natural and semi-natural community-level goals and objectives are designed to protect, enhance, and restore native biodiversity and ecological processes that maintain representative natural and seminatural communities across a range of successional stages. Those relevant to the proposed project include:

- ▶ Protect and enhance functional oak woodland communities that benefit covered species and promote native biodiversity.
- ▶ Protect, enhance, and restore valley oak woodland communities that benefit covered species and promote native biodiversity.
- ▶ Improve the ecological health of riverine systems by protecting, enhancing, and restoring hydrologic, geomorphic, and botanical processes to maintain functional aquatic and riparian communities that benefit covered species and promote native biodiversity.
- ▶ Protect stream reaches within the Plan area to promote habitat function (i.e., water temperature and shade conditions suitable for covered fish), and movement of animals and plants (i.e., dispersal of seeds of riparian species) along riverine and riparian corridors that traverse the Plan area.
- ▶ Protect, maintain, enhance, restore and create fresh emergent wetlands, vernal pools and other seasonal wetlands, springs and seeps, and the hydrologic processes that support them to benefit covered species and promote native biodiversity. There should be no net loss of wetland area over the term of the permit.

Species-level conservation goals and objectives supplement conservation actions at the landscape and community-levels, with actions tailored to meet the needs of individual species. The biological goals and

objectives are directed to maintain and recover current populations of covered species in the PCCP area by protecting, enhancing, and restoring habitats.

Auburn Ravine/Coon Creek Ecosystem Restoration Plan

The Auburn Ravine/Coon Creek Ecosystem Restoration Plan (AR/CCERP) (Placer County 2002) focuses on three major watersheds in western Placer County: (1) Auburn Ravine, (2) Markham Ravine, and (3) Coon Creek. Dry Creek and Rock Creek are tributaries to Coon Creek and included in the AR/CCERP. No water bodies within the Auburn Ravine or Markham Ravine watersheds would be affected by the proposed project. The AR/CCERP was prepared in 2002. The plan identifies potential restoration opportunities for these watersheds, using an ecosystem-based approach, and includes approximately 300 actions designed to meet its goals and objectives. The primary goal of the AR/CCERP is to restore and protect water quality and fisheries habitat, with a major emphasis on protecting and restoring riparian and aquatic habitats (including anadromous and resident fish species), protecting watershed integrity, improving water quality, reducing the risk of catastrophic wildfire, improving wildlife habitat, and improving the ecological functioning of these watersheds. The overall intent of the AR/CCERP is to:

- ▶ develop an inter-jurisdictional, public and private, long-term view of aquatic and riverine habitats, water quality, and ecosystem conditions;
- ▶ identify achievable ecological restoration projects;
- ▶ identify restoration projects that conform to the AR/CCERP's objectives;
- ▶ develop channel, stream corridor, and watershed management recommendations necessary to maintain and/or achieve desired habitat/ecosystem conditions;
- ▶ maintain consistency with the planning and management objectives of the public/private entities of the Study Area;
- ▶ develop an ecosystem restoration approach through a consensus-building process with the public and private entities of the Study Area; and
- ▶ develop an ecosystem restoration strategy to implement the AR/CCERP.

The primary factors identified in the AR/CCERP to improve aquatic habitats, reduce flood potential, and improve water quality are: (1) a reduction in sediment delivery to the stream channel from unstable banks; (2) improving the transport of sediment (particularly in the middle and lower reaches of a particular stream) through the system, and (3) improving the quantity and quality of associated riparian vegetation for bank stability, improved terrestrial wildlife, and improved food production for anadromous salmonids in the lower watershed.

3.4.2 DISCUSSION

- a) **Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?**

Less-than-Significant Impact with Mitigation Incorporated. No suitable riparian or aquatic habitat exists for candidate, sensitive, or special-status fish species within the footprint of the project site. However, water discharged from the proposed project would flow into Rock Creek and, ultimately, into Dry and Coon Creeks. Downstream water bodies, for which Dry Creek and Rock Creek are tributaries, provide habitat for fall-run Chinook salmon, a federal species of concern and California species of special concern, and hardhead

(Mylopharodon conocephalus), a California species of special concern. The proposed project would result in more efficient and effective wastewater treatment, and thus overall water quality impacts to these downstream habitats would likely be beneficial, relative to existing aquatic habitat conditions, by incrementally increasing flows in water bodies downstream of the WWTP, particularly during the summer low-flow periods, and by improving the overall quality of wastewater discharges. The levels of some wastewater constituents would not be reduced by the proposed facility upgrades. Nevertheless, the overall project impacts on the quality of wastewater discharges would not result in substantial adverse effects on fall-run Chinook salmon or hardhead.

Portions of Dry Creek and Rock Creek or their tributaries could provide habitat for several special-status wildlife species, including foothill yellow-legged frog, Northwestern pond turtle, yellow breasted chat, and yellow warbler. Construction in and adjacent to Dry Creek and Rock Creek, including construction of a new primary outfall, removal of the secondary discharge outfall, construction of a new continuous flow and water quality monitoring station in Dry Creek, and construction of new RSW-001 and RSW-003 monitoring stations, located in Dry Creek and Rock Creek, respectively, could temporarily displace foothill yellow-legged frog, Northwestern pond turtle, yellow breasted chat, or yellow warbler if present. Because these species are all highly mobile, and none are likely to use the proposed outfall or monitoring locations for breeding, the temporary effects on these species would not harm individuals or populations, and this construction-related impact to these species would be **less than significant**.

Also, despite poor upland habitat conditions within the project site, various special-status bird species and raptors including Swainson's hawk, loggerhead shrike, long-eared owl, and grasshopper sparrow could nest in undeveloped portions of the project site, or in trees along the fence line on the east side of the existing WWTP. Other common raptors could be disturbed by construction activities if nesting close by, in higher quality habitat not on the project site. If special-status birds or raptors use the project site for nesting, tree or vegetation removal during the nesting season could disturb or destroy active nests and cause a permanent loss of nesting habitat. This would be a **potentially significant** impact.

Mitigation Measure Bio-1: Conduct Construction and Tree and Shrub Trimming and Removal Activities during the Nonbreeding Season for Special Status Birds and Raptors, or Retain a Qualified Biologist to Conduct a Nesting Bird Survey Before Commencing Construction or Tree and Shrub Removal Activities.

If feasible, the County will begin construction and conduct any tree and shrub trimming and removal activities during the non-breeding season (generally between August 16 and February 28) to avoid disturbing any active special-status species or raptor nests.

If construction or tree and shrub trimming and removal activities are initiated during the nesting season (generally between March 1 and August 15), a preconstruction survey to determine if there are active migratory bird or raptor nests located within 500 feet of the project site will be conducted by a qualified biologist retained by the County. This survey will be conducted no more than 14 days prior to the start of construction or tree and shrub trimming and removal activities. If the biologist determines that the area surveyed does not contain any active nests, then construction and trimming and removal activities can commence without any further mitigation.

If an active migratory bird or raptor nest is discovered during the nesting survey, a no-disturbance buffer will be established around the active nest to avoid disturbance or destruction of the nest. The size of the no disturbance buffer around the active nest will be determined by the biologist in coordination with DFG and will depend on the level of noise or construction activity, the level of ambient noise in the vicinity of the nest, and line-of-sight between the nest and disturbance. The no-disturbance buffer will remain in place until after the nesting season (March 1 through August 15) or until the qualified biologist retained by the County determines that the young have fledged from the nest.

Implementation of Mitigation Measure Bio-1 would reduce potential impacts to nesting special-status birds or raptors to a **less-than-significant** level because it would prevent disturbance of any nesting special-status birds or raptors within 500 feet of the project site.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

Less-than-Significant Impact with Mitigation Incorporated. Riparian forest is present along Dry Creek and disturbance of this forest within the stream corridor would require the issuance of a Streambed Alteration Agreement by DFG. Installation of probe conduits and staff gages in Dry Creek, changes to the fence along Dry Creek on parcel number 076-080-003, and construction of a new fence and building above Dry Creek on parcel number 076-080-012 could adversely affect 0.4 acre of riparian forest on the project site. This impact would be **potentially significant**.

Mitigation Measure Bio-2: Avoid, Minimize, and Mitigate Potentially Significant Impacts to Riparian Forest.

If the riparian forest can be avoided during project construction, a qualified botanist will clearly mark the habitat boundary in the field and the construction contractor shall erect temporary construction fencing outside the boundary to keep construction activities out of the area. Before ground disturbance, all on-site construction personnel shall be instructed about the presence of this habitat and the importance of avoiding the disturbance of this habitat. During construction, the qualified botanist shall periodically monitor construction crews to ensure that the riparian forest area is avoided.

If complete avoidance is not feasible and construction work requires encroachment into the riparian forest area, the County will develop a riparian habitat mitigation plan that will replace, restore, or enhance the ecological values of all riparian habitat that may be removed and/or degraded with project implementation at a minimum 1:1 ratio and achieve no net loss of riparian habitat functions and values. Compensation may be provided through the purchase of mitigation credits at approved mitigation banks, or through on-site and/or off-site preservation/restoration.

Implementation of Mitigation Measure BIO-2 would reduce any potential impacts to riparian forest associated with construction/removal of the outfalls, construction of the monitoring stations, and changes to, or construction of fencing to a **less-than-significant** level because the riparian forest would be avoided or replaced on a “no net loss” basis.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less-than-Significant Impact with Mitigation Incorporated. AECOM conducted a wetland delineation of the proposed project footprint in December 2010, to identify waters of the United States and California that would be affected by the proposed project. Dry Creek, Rock Creek, and freshwater marsh wetland were identified. The potential area of disturbance to these features is presented in Table 3.4-4.

Dry Creek, Rock Creek, and the associated freshwater marsh are subject to the USACE’s jurisdiction as waters of the United States, and to regulation by DFG under Section 1602 of the California Fish and Game Code and the Central Valley RWQCB under the Porter-Cologne Water Quality Control Act as a water of the State. Under the proposed project, five improvements or alterations to the SMD 1 WWTP facilities could impact these waters of the U.S. and State (Exhibit 2-5): (1) construction of a new primary outfall; (2) abandonment and removal of the secondary discharge outfall; (3) construction of a new continuous flow and water quality monitoring station in Dry Creek; (4) construction of new RSW-001 and RSW-003 monitoring stations, located in Dry Creek and Rock Creek, respectively; and (5) construction of a new fence along Dry Creek on parcel number 076-080-012.

**Table 3.4-4
Waters of the United States and State of California and Wetland Habitats
Potentially Affected by the Proposed Project**

Community	Type	Acres
Dry Creek	Waters of the U.S. and state	<0.1
Rock Creek	Waters of the U.S. and state	<0.1
Freshwater marsh	Wetland	<0.1

Source: Data compiled by AECOM in February 2011

The proposed project would involve construction of a new primary outfall in approximately the same location as the existing primary outfall located on the northwestern side of the proposed project site. The new outfall would be located up to 30 feet north of the existing primary outfall.

The existing secondary outfall would be abandoned and removed once construction of the new outfall is complete. In addition, an abandoned concrete pipe that is located on the bank west of existing Final Clarifier No. 3 would also be removed.

The existing primary outfall would continue to be periodically used for discharges of storm runoff resulting from major precipitation events. Construction of the new outfall and construction associated with abandonment and removal of the existing secondary outfall and abandoned pipe would require small areas of construction and excavation at each of these locations, both occurring along the east bank of Rock Creek and within the creek bed around the outfall locations. Construction at each of these locations is expected to require heavy machinery, working in a small area (e.g., less than 25 feet wide, extending from the fenced border of the WWTP property to Rock Creek) within the creek bed and in a small area at the outfall locations, which might have temporary, semi-permanent, or permanent impacts on the riparian area, bank, or creek bed.

The proposed project would involve installation of monitoring equipment in two locations in Rock Creek and one location in Dry Creek. A staff gauge (4-inch vertical ruled pipe) would be placed in the creek channel at each monitoring location with pH and pressure sensors secured to the gauge near the creek bottom. Wiring to power the sensors and provide data transmission would be placed in buried conduit (4-inch pipe) that would be installed either with a small trencher or using hand tools.

Construction of the trenches would be completed in a few days and any disturbance of the riparian, bank, or creek beds would be temporary and localized to the area lying within a few feet of the conduit and monitoring stations.

A new fence would be installed along Dry Creek on parcel number 076-080-012. Construction of this new fence would likely have temporary impacts on the freshwater marsh, riparian area, and bank of Dry Creek.

Because the project has the potential to result in adverse effects on the creek channels and freshwater marsh through construction-related activities, this impact would be **potentially significant**.

Mitigation Measure Bio-3: Ensure Construction of the Project Results in No Net Loss of Waters of the United States or State.

To mitigate impacts related to construction and removal of outfalls and/or other existing pipes, installation of stream monitoring equipment, and construction of a new fence in waters (i.e., Dry Creek, Rock Creek) and wetlands (i.e., freshwater marsh) in the project area, the County will undertake the following measures where feasible:

The County shall require construction contractors to conduct in-channel construction during the low-flow period, limit disturbance to the minimum extent practicable, implement Mitigation Measure HYD-2, “Prepare and Implement a Storm Water Pollution Prevention Plan and Implement Best Management Practices,” and stabilize all portions of the channel that are disturbed to prevent future scour or erosion. In addition, if required by the USACE and Central Valley RWQCB, the County will replace, restore, or enhance the ecological values of all wetlands and other waters of the United States and waters of the State that would be removed and/or degraded with project implementation (i.e., Dry Creek, Rock Creek, and adjacent freshwater marsh) at a minimum 1:1 ratio and on a “no net loss” basis. Compensation may be provided through the purchase of mitigation credits at approved mitigation banks, or through on-site and/or off-site preservation/restoration. The County shall also consult with DFG to determine if a streambed alteration agreement is required for the proposed project. The County shall comply with the requirements of the streambed alteration agreement, including implementing a habitat mitigation plan, if so required by DFG as a component of the streambed alteration agreement.

Implementation of Mitigation Measure BIO-3 would reduce any potential impacts to federally protected wetlands to a **less-than-significant** level because disturbances to the wetlands would be limited or would be replaced on a “no net loss” basis.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less-than-Significant Impact. As discussed under Section 2.1.1 (Environmental Setting), available information indicates that, while Coon Creek and its tributaries are designated as cold freshwater habitat via the “tributary rule”, the resident fish assemblage of Rock and Dry creeks is composed of a diverse community of native and non-native warmwater fishes. Anadromous fall-run Chinook salmon, a coldwater species, may occur seasonally in the lower reaches of Coon Creek; however, access to the upper watershed is precluded by several barriers. Numerous natural and human-made barriers (e.g., waterfalls, low-flow barriers, beaver dams, and human-made dams) exist in Coon Creek, several miles downstream from the SMD 1 WWTP outfall. The incremental increase to flows downstream of the SMD 1 WWTP resulting from the proposed project would neither improve nor reduce the potential for fish occurring downstream of these natural and human-made barriers to access upstream reaches. The proposed project would involve some limited construction along Dry Creek and Rock Creek, associated with the placement and relocation of flow and water quality monitoring stations, and with the building of a new primary outfall and abandonment and removal of the secondary outfall. The movement of resident fish might be temporarily affected by construction-related activities, particularly noise (e.g., from a small trencher) and the presence of construction workers and equipment, which might cause fish in the immediate vicinity of the construction site to be displaced and others residing upstream and downstream to avoid the affected portion of the creek channel during construction. However, construction associated with each of the proposed facility improvements/alterations is expected to be temporary, lasting no more than a few days, and would only occur during daylight hours, thereby leaving a period of unimpeded passage during the evening and nighttime hours. Furthermore, the affected area around each of these construction sites would be small and confined to within a few feet of the facility being constructed or altered and, therefore, would not be expected to displace a substantial number of fish. Finally, because the monitoring stations would occupy a small area (i.e., less than 4 square feet) and the new primary outfall would be located adjacent to the creek channel on the east bank, none of the proposed new or altered facilities are anticipated to measurably alter in-channel or riparian habitat, or create a permanent or semi-permanent barrier to the movement of fish.

Anadromous salmonids, which have the potential to occur in Coon Creek approximately 8 miles downstream of the WWTP, are the most sensitive of the fish species occurring downstream of the WWTP to low dissolved oxygen (DO) levels and elevated temperatures. Their migrations could potentially be blocked or delayed if they encountered sufficiently elevated river temperature and DO conditions while migrating to or from upstream

spawning areas (Bell 1986; Boles et al. 1988). As assessed in the antidegradation analysis (Table 10 in Appendix A; RBI 2009) and discussed in Impact g) below, oxygen demand is not expected to increase downstream of the WWTP as a result of increased effluent discharges under the proposed upgrade and expansion project because of improvements to the WWTP that would decrease ammonia levels in effluent discharged to Rock Creek. Moreover, the oxygen demand in discharges from the upgraded SMD 1 WWTP would be fully assimilated by Dry Creek within several miles of the discharge and, therefore, would have no measurable effect on DO levels in the lower Coon Creek reach, where fall-run Chinook salmon occur seasonally. Consequently, the proposed project would not create DO conditions in any location downstream of the discharge site that would be a barrier to fish movement, including fall-run Chinook salmon migrations, where this species occur in downstream water bodies.

Although the increased effluent discharges generated by the proposed project would exert an incrementally greater thermal effect on the downstream temperatures, the effluent temperatures, as shown in Table 3.4-5, would be within the range of warm-water creeks of the Sierra Nevada foothills, many of which often exceed instantaneously daily maximum temperatures of 85°F during the summer months and support a similar fish assemblage as Dry Creek, Rock Creek, and the downstream water bodies. Therefore, temperatures that would occur in Dry Creek and Rock Creek under the proposed project condition would not be expected to interfere with resident fish movement. Furthermore, the thermal effect of the effluent discharge would occur primarily within a short distance of the WWTP outfall and, because of the relatively small size and elevation of the downstream water bodies, the effect would be rapidly attenuated as ambient air temperatures and inflow from surface water and subsurface water sources exerted their influences on water temperatures. Consequently, the thermal and DO-related effects associated with the proposed project are not anticipated to have any substantial effects on the movement of resident fish species in Dry Creek or Rock Creek, or on anadromous fish occurring in downstream water bodies, nor would the construction-related effects or long-term operations of the project create a barrier to fish movement.

The majority of the project site is currently contained by an approximately 8- to 10-foot chain-link fence that would impede most wildlife from accessing or moving through the site. In addition, no wildlife habitat exists within the current WWTP site that would support migration or nesting/nursery sites. Wildlife could move through or breed within the undeveloped portion of the project site; however, this area would not likely function as a wildlife corridor because of the poor quality of its habitat, and very few wildlife species would use this area for breeding because of habitat degradation from yellow starthistle invasion and disturbing activities such as mowing or other vegetation management. Wildlife species would be likely to use the riparian corridors adjacent to the project site for migration, movement, and breeding; however, impacts in these areas would be limited to the new outflow and monitoring locations, would disturb these locations for only a few days, would leave habitat intact, and occur only during daylight hours. Thus, implementation of the project would not impact any wildlife migratory habitat or nursery sites for wildlife species.

For the reasons discussed above, this impact is considered **less than significant**.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less-than-Significant Impact with Mitigation Incorporated. New construction required by the project would be less than 100 feet from Dry Creek and Rock Creek and might occur within the 100-year floodplain in some places. Staff gages would be installed within Dry Creek and Rock Creek, which would impact less than 0.1 acre of freshwater marsh in each of the streams. The project footprint also would impact up to 0.4 acre of the riparian forest along Dry Creek. Therefore, implementation of the proposed project would conflict with the ABCP and the PCGP. Although Dry Creek, Rock Creek, and their associated riparian habitat could function as wildlife corridors, construction and disturbance in these areas would be limited and would not alter the function or quality of those areas as wildlife corridors. Because the proposed project would be designed in part to improve the overall quality

of effluent discharged to Rock Creek and downstream water bodies and would meet applicable water quality standards at end-of-pipe, it would not conflict with the AR/CCERP.

Implementation of Mitigation Measures Bio-2 and Bio-3 would eliminate conflicts with the ABCP and PCGP and reduce this impact to a **less-than-significant** level by resulting in no net loss of function or value of freshwater marsh, Rock Creek and Dry Creek, and riparian habitat.

Table 3.4-5 Summary of Water Temperatures Collected at Monitoring Stations (°F)													
Location	Statistic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Recorded Values ¹													
RSW-001	Count	93	85	93	90	93	90	93	93	90	93	90	93
	Minimum	35.6	39.7	45.0	46.9	49.5	55.9	58.6	62.1	61.5	51.8	44.6	41.0
	Maximum	52.0	54.5	59.2	66.4	70.2	74.8	79.7	76.6	78.8	65.5	60.8	53.2
	Average	44.2	47.7	51.9	55.2	60.5	63.7	68.5	69.4	66.7	59.1	54.6	46.7
Effluent	Count	93	85	93	90	93	90	93	93	90	93	90	93
	Minimum	50.0	54.0	53.1	59.0	61.7	68.0	71.6	71.6	68.0	64.2	59.0	53.6
	Maximum	62.8	61.3	64.8	69.8	80.6	76.6	81.9	81.3	81.5	74.3	68.5	64.4
	Average	57.1	57.9	60.7	63.6	68.8	72.2	75.6	76.0	74.1	68.4	65.0	59.3
RSW-002	Count	92	84	93	90	90	90	92	91	90	90	89	93
	Minimum	40.5	41.5	48.2	48.6	49.6	56.5	59.4	62.6	62.6	55.2	50.0	43.0
	Maximum	53.4	56.8	61.2	67.5	71.4	77.0	81.1	78.3	79.5	66.6	64.0	57.4
	Average	48.0	50.5	54.5	57.1	62.4	65.5	70.5	71.4	67.9	61.2	57.5	50.5
RSW-003	Count	93	85	93	90	93	90	93	93	90	93	90	93
	Minimum	34.5	39.7	45.3	53.1	55.6	63.7	61.2	66.0	58.6	48.0	41.9	38.8
	Maximum	50.7	55.0	63.1	73.0	79.0	79.0	83.1	79.3	80.2	64.9	59.5	53.4
	Average	42.70	47.7	54.1	59.9	66.8	71.1	74.6	73.1	66.7	56.6	52.4	44.5
RSW-004	Count	93	85	93	90	93	90	93	93	90	93	90	93
	Minimum	37.9	41.0	46.8	50.0	35.8	57.6	60.1	62.6	62.4	55.0	48.9	43.7
	Maximum	53.2	56.5	61.7	68.5	72.0	78.1	81.1	78.8	79.7	66.7	64.2	55.8
	Average	46.9	49.8	54.6	58.0	63.1	66.4	70.8	71.6	68.0	61.1	56.8	49.7
Notes: ¹ Temperature data collected daily from June 2006 through July 2009. RSW-001(Rock Creek upstream of the WWTP) RSW-002(Rock Creek downstream of the WWTP) RSW-003(Dry Creek upstream of the Rock Creek confluence) RSW-004(Dry Creek downstream of the WWTP and Rock Creek confluence)													

Implementation of the project would require removal of up to 33 valley oak trees on parcel number 076-080-012 at the northern end of the annual grassland on the project site, representing approximately 347 inches diameter at breast height total. The valley oak trees removed would be eligible for protection under Article 12.16 of the Placer County Code, Tree Preservation. Generally, if construction activities would harm, destroy, kill, or remove any protected trees, a discretionary project permit would need to be obtained from the County unless the proposed

project qualified for exemptions (outlined in Section 12.16.050). The proposed project would not likely qualify for an exemption to Article 12.16. Permit application requirements are outlined in Section 12.16.060 of the Article and are summarized below. Because construction of the proposed project would likely result in the removal of a substantial number of valley oak trees this impact would be **potentially significant**.

Mitigation Measure Bio-4: Submit Discretionary Project Permit Application to Placer County and Comply with Permit Conditions.

The proposed project will be subject to the provisions of the Tree Preservation Ordinance because the issuance of a Minor Use Permit is considered a discretionary action. Compliance includes the preparation of a justification statement that establishes how any remaining protected trees in the vicinity of the project site will be protected. The justification statement shall state that any construction or use within the protected zone of a protected tree shall be done with approved preservation methods. A site plan map and the locations of protected trees within 50 feet of any development activity shall be developed, including the location of the base and dripline for all protected trees, the tree number, and the location of the protected zone of a protected tree. An arborists report shall also be prepared by an individual certified as an arborist by the International Society of Arboriculture or a registered professional forester. This report shall contain specific information on the location, condition, potential impacts of development, recommended actions, and mitigation measures for trees on the project site. A survey showing the locations of the protected trees shall be conducted by a California professional engineer or California professional land surveyor.

The County shall replace the trees in kind, implement a vegetation plan or, if the project site is not capable of supporting all of the replacement trees, pay for replacement trees at the current market value, including cost of installation. The current market value shall be established by a certified arborist, a registered forester, or a registered landscape architect, with the funds to go into a tree preservation fund.

With implementation of Mitigation Measures Bio-2 and Bio-3, the proposed project would not conflict with the ABCP or the PCGP. Implementation of Mitigation Measure Bio-4 would reduce potential impacts to protected trees to a **less-than-significant** level because it would replace the oak trees on the project site or in similar habitat within Placer County.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. No existing habitat conservation plan or natural community conversation plan is applicable to the project site. The *Placer County Conservation Plan* was released in draft form on February 1, 2011. However, the plan has not yet been approved by the resource agencies. Accordingly, **no impact** would occur.

g) Cause changes to water quality in one or more water bodies by a sufficient magnitude, frequency, and geographic extent to cause lethality or adversely affect an aquatic species' long-term population level in these water bodies?

Less-than-Significant Impact. Water quality effects on Dry Creek and Rock Creek downstream of the WWTP are assessed in Section 3.9, Hydrology and Water Quality, with the exception of temperature and DO, which are addressed here because aquatic biological resources are the beneficial uses considered most sensitive to changes in these parameters.

Temperature: The temperature of Dry Creek and Rock Creek, downstream of the WWTP outfall, is dependent on upstream creek and effluent discharge flow rates and temperatures. The Basin Plan's temperature objective states, "At no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature." The COLD designation applies to Coon, Rock, and Dry creeks via the "tributary rule"; however, as indicated above, available information indicates that Rock and Dry creeks in the

vicinity of the SMD 1 discharge support a warmwater fish community. Although the WWTP has a high degree of compliance with this objective, the objective is not well supported by the current science on the protection of aquatic life, nor is it consistent with U.S. Environmental Protection Agency's (EPA's) recommendations for regulating thermal effects of discharges. The resulting downstream temperature regime within Dry Creek and Rock Creek is of interest in terms of assessing thermal effects of the discharge on downstream beneficial uses, the most sensitive of which is the aquatic life use. Consequently, this impact assessment is based on absolute temperature that would occur with implementation of the proposed project, and whether such temperatures would impact aquatic biological resources.

The proposed improvements to the WWTP would not include facilities to cool the effluent. Thus, temperature changes could occur in the receiving water as a result of an incremental increase in effluent flows generated by the proposed project, which would exert an incrementally greater impact on downstream water temperatures. Any changes in the seasonal temperature regime of the effluent resulting from WWTP improvements under the proposed project would be negligible, relative to existing conditions. Temperature increases in the receiving waters because of the project would occur primarily within the zone of initial mixing downstream of the WWTP outfall and for some distance downstream. However, because of the relatively small size and elevation of the downstream water bodies, the anticipated temperature effect of the project (e.g., 1-2°F) would be rapidly attenuated as ambient air temperatures and inflow from surface water and subsurface water sources exerted their influence on water temperatures. Therefore, the thermal effect of the proposed project would be negligible, and it likely would not be measurable in the downstream reaches in which anadromous salmonids occur (i.e., 8 miles downstream of the WWTP outfall).

Moreover, effluent temperatures, which reach approximately 76.0°F on a monthly average and 81.9°F as an instantaneous maximum (Table 3.4-5), are suitable for supporting the warm-water fish and benthic macroinvertebrate (BMI) communities that exist downstream of the WWTP. Likewise, temperatures upstream of the WWTP outfall at RSW-001 on Rock Creek reach approximately 79.7°F as an instantaneous maximum, and 69.4°F on a monthly average, while temperatures on Dry Creek at RSW-003 (i.e., unaffected by the WWTP discharge) reach a monthly maximum of 83.1°F and monthly averages up to 74.6°F (Table 3.4-5). These temperature ranges also are suitable for supporting the warm-water fish and BMI communities downstream and upstream of the WWTP. As discussed above, the effluent temperatures throughout the year would not be affected as a result of the proposed project. On the effluent mixing with the receiving water, the maximum temperature in the downstream receiving water would be no greater than that of the effluent or the receiving water, and would typically be between that of the effluent and the upstream receiving water. Because the seasonal temperature regime of the undiluted effluent, Dry Creek, and Rock Creek are all suitable for supporting the warm-water fish community that exists in Dry Creek and Rock Creek at the discharge location and for many miles downstream, temperatures downstream of the discharge location would be suitable for the resident aquatic communities no matter what ratio at which the effluent, Dry Creek, and Rock Creek were combined. In other words, Dry Creek and Rock Creek water temperature downstream of the discharge location would be suitable for supporting the creeks' aquatic species during all months and flow conditions with proposed project implementation. Consequently, the thermal effect of the proposed project on aquatic life resources would be **less than significant**.

Dissolved Oxygen (DO): The antidegradation report (RBI 2009; Appendix D) examines the impact of the proposed WWTP improvements on DO in the receiving waters. The components of wastewater with the potential to impact DO concentrations include biochemical oxygen demand (BOD) and ammonia. The NPDES permit contains monthly average (10 mg/l), weekly average (15 mg/l), and daily average (25 mg/l) effluent limits for BOD, and limits for ammonia, based on USEPA's recommended water quality criteria for aquatic life. The NPDES permit also has a DO limitation for Dry Creek and Rock Creek that states the discharge shall not cause the DO to fall below 7.0 mg/l, which is derived from the Basin Plan objective for DO. These values were derived for the protection of beneficial uses of Dry Creek and Rock Creek, which include WARM, COLD, MIGR, and SPWN and, therefore, compliance with these objectives would be protective of the aquatic communities supported by these water bodies.

The WWTP currently produces tertiary-treated effluent when influent flows are less than 3.5 million gallons per day (mgd) and provides a combination of secondary and tertiary treatment when influent flows are greater than 3.5 mgd. Although effluent ammonia levels have been elevated (average of 2.4 mg/l) and variable (maximum of 15.1 mg/l), the effluent has been characterized by low concentrations of BOD (typically less than 4.7 mg/l, average of 2.8 mg/l). Re-aeration of downstream waters because of physical processes and photosynthesis tends to offset the oxygen demand of effluent as it flows downstream.

As discharge rates increase in the future, the proportion of creek water constituted by effluent also would increase, thereby increasing the relative portion of BOD and ammonia load, if effluent concentrations for these parameters remained unchanged. Thus, the incremental increase in discharge, without improvement in effluent quality, could result in the lowering of water quality with respect to DO. However, as stated above, effluent ammonia levels are expected to decrease substantially to an average of less than 1 mg/l and a maximum of 2 mg/l. Thus, the proposed WWTP effluent would result in approximately a 58% decrease in average effluent ammonia concentrations and approximately a 48% decrease in average ammonia loading rate after factoring in the increased discharge rate and would, therefore, have a decreased demand for oxygen from ammonia in the receiving waters. Every mg/l of ammonia converted to nitrate in the creek consumes 4.6 mg/l of DO. Each mg/L BOD requires one mg/l oxygen to be assimilated. Therefore, ammonia levels in the effluent could exert the largest oxygen demand on the creek. Moreover, average nitrate concentrations would be reduced from 17.5 mg/l to equal to or less than 10 mg/l. Thus, a net reduction also would occur in loading of biologically available nitrogen downstream of the discharge, reducing potential for oxygen consumption from increased algae blooms resulting from nitrogen loading.

The existing SMD 1 facility provides effective oxidation and reduction in BOD load in the treated effluent and the new SMD 1 WWTP would provide comparable, or better, BOD removal. Therefore, effluent BOD concentrations are expected to be comparable to the existing discharge. However, a substantial reduction in effluent ammonia loading would result in a net decreased rate of oxygen demand downstream of the discharge. The proposed project is, therefore, anticipated to cause no increase in demand for oxygen in downstream water bodies and, in fact, could be expected to often have a lower DO demand, despite the increased effluent discharge rates that would occur. In addition, improvements include a reaeration basin to increase DO in the effluent. Consequently, the DO effect of the proposed project on aquatic life resources would be less than significant.

For the reasons described above, impacts to aquatic species related to changes in water quality would be **less than significant**.

h) Cause a reduction in habitat quantity via changes to creek/river flows or shaded riparian aquatic (SRA) cover or cause degradation in habitat quality, via changes to temperature, of sufficient magnitude, frequency and geographic extent such that it would adversely affect a species' long-term population level in one or more water body?

Less-than-Significant Impact. Water quality impacts on the long-term population levels of aquatic organisms were determined in the assessment of Impact g) above. The proposed project would impact in-channel habitat by increasing net flows in Dry Creek and Rock Creek as a result of increasing the effluent discharge rate from the existing 1.7 mgd flow rate to 2.7 mgd average dry weather flow (equivalent to a 2 cfs increase in effluent discharge). The increased effluent flow would likely have a small yet beneficial impact on aquatic habitat by increasing the overall amount of flow in the receiving waters, thereby incrementally increasing aquatic habitat availability in water bodies downstream of the WWTP. Consequently, any changes in aquatic habitat as a result of changes in creek flows would be **less than significant**.

As discussed in checklist question b) above, construction of the new primary outfall and removal of the existing secondary outfall might disturb a small amount of SRA habitat along the east bank of Rock Creek. However, the area of disturbance would be negligible (e.g., less than 15 feet in length at each location) relative to the overall amount of SRA habitat along Rock Creek and, therefore, would not be of sufficient magnitude to cause any adverse long-term effects on any aquatic species occurring in Rock Creek. Furthermore, the removal of the

secondary outfall would allow the riparian area and creek bank at this location to restore itself to a more natural condition over time. Consequently, this impact would be **less than significant**.

- i) **Reduce or degrade habitat used by state or federal special-status fish species, including habitat designated as critical habitat, to an extent that could cause a reduction in species abundance or long-term population levels, or ability to sustain a population?**

Less-than-Significant Impact. Special-status species are defined as those that are currently listed as endangered or threatened under the Endangered Species Act and/or CESA and species formally proposed for federal and/or State listing as threatened or endangered. No State or federally listed fish species, or fish species proposed for listing under the Endangered Species Act and/or CESA, occur in water bodies that would be directly affected by the proposed project. Furthermore, no critical habitat designations for water bodies would be directly affected by the proposed project. As discussed above, fall-run Chinook salmon, a federal species of concern, might occur seasonally in the lower accessible reaches of Coon Creek (Dry Creek's terminal drainage). However, under the proposed project, Coon Creek flows would be incrementally increased, thereby increasing the amount of available in-channel habitat. As discussed above, overall water quality would be improved relative to existing conditions with implementation of the proposed project. Any changes in water temperature or DO concentrations resulting from the incremental increase in SMD 1 WWTP discharges would be relatively minor and attenuated to a negligible effect as a result of ambient air temperatures, re-aeration, and inflow from numerous tributaries in the 8-mile reach between the SMD 1 WWTP outfall and the upstream limit of accessible habitat for fall-run Chinook salmon in Coon Creek near Garden Bar Road. Therefore, the impact on State or federal special-status fish species or critical habitat would be **less than significant**.

- j) **Reduce benthic macroinvertebrate (BMI) abundance within a water body by a sufficient magnitude and geographic extent as to adversely affect overall BMI community structure or function, including the fish forage base that it provides within the water body?**

Less-than-Significant Impact. The benthic macroinvertebrate (BMI) communities of streams include the aquatic insects and other invertebrate taxa residing in bodies of freshwater. BMI communities provide important ecosystem and food web roles, including the forage base for many fishes. No known surveys exist for the Dry Creek and Rock Creek BMI communities. However, as discussed above, the proposed project would provide a net increase in aquatic habitat availability in both creeks, downstream of the SMD 1 WWTP outfall. Furthermore, the proposed project would improve overall water quality in these water bodies. Such increases in flow and improvements in water quality might result in alterations of the taxonomic composition of the BMI communities in the affected water bodies, but any changes would likely be manifested as: (1) an increase in overall BMI abundance and taxonomic diversity resulting from increased habitat availability, and (2) a shift in BMI community composition to one represented by a proportionally greater abundance of invertebrates that characterize water bodies of high water quality, relative to the existing BMI community. Consequently, the proposed project would have beneficial effects on the structure and ecological function of the BMI community of downstream water bodies. No adverse changes to the BMI community structure or function are expected because of the proposed project. Consequently, the proposed project would not be anticipated to decrease the BMI forage base for the fish community of downstream water bodies and the impact would be **less than significant**.

3.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. Cultural Resources. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.5.1 ENVIRONMENTAL SETTING

CULTURAL RESOURCES REGULATORY REQUIREMENTS

Federal

The proposed project would utilize California state revolving funds, administered by the State Water Resources Control Board (SWRCB) under the State Revolving Fund (SRF) Loan Program, a program partially funded by the U.S. Environmental Protection Agency. Thus, the proposed project, like all projects seeking an SRF loan, are subject to federal environmental regulations, including Section 106 of the National Historic Preservation Act of 1966 as amended, and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800). Section 106 requires that, before beginning any undertaking, a federal agency or, in this case, the SWRCB must take into account the effects of the undertaking on historic properties and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment on these actions. The Section 106 review process involves a four-step procedure:

- ▶ Initiate the Section 106 process by establishing the undertaking, developing a plan for public involvement, and identifying other consulting parties.
- ▶ Identify historic properties by determining the scope of efforts, identifying cultural resources and evaluating their eligibility for inclusion in the NRHP [National Register of Historic Places].
- ▶ Assess adverse effects by applying the criteria of adverse effect to historic properties (resources that are eligible for inclusion in the NRHP).
- ▶ Resolve adverse effects by consulting with the State Historic Preservation Officer and other consulting agencies, including the ACHP if necessary, to develop an agreement that addresses the treatment of historic properties.

Specific regulations regarding compliance with Section 106 state that, although the tasks necessary to comply may be delegated to others, the federal agency (in this case, the SWRCB acting in lieu of a federal agency) is ultimately responsible for ensuring that the Section 106 process is completed.

Under federal regulations, a project has an effect on an historic property when the undertaking could alter the characteristics of the property that may qualify the property for inclusion in the NRHP, including alteration of location, setting, or use. An undertaking may be considered to have an adverse effect on an historic property when the effect may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to the following (36 CFR 800.9):

- ▶ physical destruction or alteration of all or part of the property;
- ▶ isolation of the property from or alteration of the property's setting when that character contributes to the property's qualifications for listing in the NRHP;
- ▶ introduction of visual, audible, or atmospheric elements that are out of character with the property or that alter its setting;
- ▶ neglect of a property resulting in its deterioration or destruction; or
- ▶ transfer, lease, or sale of the property.

State

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historic, architectural, archaeological, cultural, or scientific importance. Under CEQA, public agencies must consider the effects of their actions on "historical resources." CEQA defines a historical resource as any resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR), which includes resources listed in or formally determined eligible for listing in the NRHP. Pursuant to Section 21084.1 of the Public Resources Code, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

Under the State CEQA Guidelines, an impact on a cultural resource is considered significant if a project would result in an effect that may change the significance of the resource (Section 21084.1 of the Public Resources Code). Demolition, replacement, substantial alteration, and relocation of historic properties are actions that would change the significance of an historical resource (Title 14, Section 15064.5 of the California Code of Regulations). Before the level of significance of impacts can be determined and appropriate mitigation measures developed, the significance of cultural resources must be determined. The following steps are normally taken in a cultural resources investigation to comply with CEQA:

- ▶ Identify cultural resources.
- ▶ Evaluate the significance of the cultural resources based on established thresholds of significance.
- ▶ Evaluate the effects of a project on all cultural resources.
- ▶ Develop and implement measures to mitigate the effects of the project on significant cultural resources.

Because the proposed project would be located on nonfederal land in California, it also would be necessary to comply with state laws pertaining to the inadvertent discovery of human remains of Native American origin. The procedures that must be followed if burials of Native American origin are discovered on nonfederal land in California are described under the answer to question d), below.

CULTURAL RESOURCES IDENTIFICATION

Efforts to identify cultural resources in the project area consisted of a records search, a cultural resources survey, additional archival research, and coordination with the Native American community. A cultural resources records search (File No. PLA-10-72) was conducted in August 2010 at the North Central Information Center (NCIC) of the California Historical Resources Information System, located at California State University, Sacramento. At AECOM's request, NCIC staff reviewed the state's database for cultural resource studies and recorded cultural

resource sites for the project area and immediate vicinity. Other sources consulted included national and state inventories and registers of cultural resources, and pertinent historic maps. Additional archival research also was conducted at the Placer County Archives and Research Center and the California State Library, Sacramento.

On August 23, 2010, an AECOM archaeologist conducted a pedestrian survey of the existing SMD 1 WWTP facilities, buildings, grounds, and the parcels located immediately adjacent to the eastern edge of the existing facilities where the expansion is proposed. Ground surface visibility was excellent over approximately 90% of the project area. However, in the area proposed for parking and additional facilities (at APN 076-080-012), visibility was poor and ground visibility was almost nonexistent because of tall, mature grasses and weeds covering most of the parcel. In addition, on September 13, 2010, an AECOM architectural historian conducted a survey of the existing WWTP facilities, documenting the buildings and structures with digital photographs and notes.

Native American coordination is ongoing. The Native American Heritage Commission was contacted about the proposed project on August 10, 2010. A list of appropriate Native American representatives was requested, and each was contacted by letter on October 13, 2010. Follow-up phone calls were placed on November 3 and 4, 2010, to those individuals who did not respond to the initial contact letter. AECOM received only one response, from Mr. Guerrero. He commented that if ground-disturbing activities occurred and any resources were discovered, work in the area should stop until a qualified archaeologist assessed the area. Furthermore, on October 8, 2010, AECOM contacted local historical societies in writing, requesting information about known or potential historic resources within the study area. No responses were received.

HISTORIC-ERA CONTEXT

Placer County and the City of Auburn. Placer County is one of the earliest established counties in California and was formed in 1851 from parts of Sutter and Yuba Counties. Auburn, originally known as Wood Dry Diggings, was one of the earliest mining camps in California. It was settled in 1848, and became the county seat in 1851 (Kyle 1990). Because of its central location in gold country, Auburn became a major shipping and supply center for gold camps in the area. The city incorporated in 1860, and by 1865, the Central Pacific Railroad had established a depot there. For many years, Auburn was the center of the railroad's staging and freight operations. Gold mining remained a major industry in Auburn into the 1880s, but by the turn of the 20th century, agriculture and timber had replaced it as the main enterprises in the region. During this period, Auburn grew to more than 2,000 inhabitants. The city and surrounding area enjoyed moderate growth throughout the 20th century. Currently, 11,400 residents live within the Auburn city limits (Kyle 1990).

Wastewater Treatment. The collection of wastewater began as early as the 1800s, however, the treatment of wastewater in the United States did not begin until the mid-19th century (Tchobanoglous 1979:2). Early wastewater treatment was limited to the technology of dilution, wastewater farming, filtration, and chemical precipitation (Burian 2000:47). Eventually treatment evolved and commonly used filtration systems of sand and charcoal, with pumps driven by horses. These systems filtered the sewage rather than clean or purify it (Tarr 1976:46). Concern about water quality and public health drove the need for wastewater and water treatment facilities. However, the expense of constructing such systems and facilities often was cost prohibitive for many municipalities (Burian et.al. 2000:47). In the late 19th century, major improvements in water treatment took place, including the development of rapid sand filters as well as the use of chlorine and ozone for disinfection (American Water Works Association, Inc. 1969). By the turn of the 20th century, chlorination was a popular purification method, resulting in the profound decrease of typhoid dysentery and cholera cases (American Water Works Association, Inc. 1969). Over the next few decades, the use of filtration and chlorination nearly eliminated epidemics of waterborne diseases in the United States. Wastewater treatment was advanced by construction of large-scale, activated sludge treatment facilities, a new technology that was introduced in the first half of the 20th century (Burian et.al. 2000:51). In the late 1960s federal and state agencies worked towards more effective wastewater treatment and advanced treatment requirements for the removal of contaminants including nitrogen, toxic organic compounds, and dissolved inorganic solids. The passing of the federal Water Pollution Control Act Amendments in 1972 and the publication of the Environmental Protection Agency's definition of secondary

treatment (the use of biological and chemical processes to eliminate most organic matter) in 1973, forced treatment plants to comply with federal guidelines if federal funding was secured for the plant (Tchobanoglous 1979:2-3, 120-121).

It was during the post-World War II population boom when Auburn and Placer County's infrastructure systems were enhanced and expanded to accommodate a growing population. In 1959, North Auburn lacked a sewer system, but it was evident that the septic systems were failing and a public sewer system was needed (Placer County Maintenance District 1 Vol. 3 2009:1). During this period, Placer County was planning construction of Placer County Sewer Assessment District No. 1. In November 1959, the county received more than \$219,000 in federal aid for the construction of these facilities (Placer County Board of Supervisors Minutes 1959:212). By 1961 the new sewer system and wastewater treatment plant were complete (Placer County Maintenance District 1 Vol. 3 2009:1). Although improvements in wastewater treatment continued over time, the design of treatment plants remained relatively unchanged. Reductions in federal grant money, similar to the funding that Placer County received to construct its facility, forced local governments to develop cost-effective wastewater treatment and management plans (Burian et.al. 2000:54). Although money-saving design and construction changes were adopted, architectural and structural changes were few (Sanks 1979). The treatment plant in Placer County expanded and in the 1980s several clarifiers, shop buildings and administrative buildings were added to the plant (Kangas Pers. Comm. 2010).

PALEONTOLOGICAL RESOURCES

The project site is underlain by the Smartville complex (Wagner et al. 1981), a combination of metavolcanic and metasedimentary rocks. At the project site, the lower unit of the metavolcanic rocks is present. The Smartville complex is believed to have originated from a rifted volcanic arc, portions of the igneous basement rock associated with that arc, and fragments of the sedimentary rocks that were deposited on the arc. Radiometric data indicate that the Smartville complex is of Jurassic age, dating the volcanic arc to approximately 160 million years Before Present and the basement rock to approximately 200 million years Before Present (Beiersdorfer and Day 1992). No Jurassic-age fossils have been recovered in Placer County from the same rock formations that are present at the project site (UCMP 2010).

RECORDS SEARCH RESULTS

The NCIC findings for the project's records search indicate that no cultural resource studies were previously conducted and no cultural resources were previously recorded within the project area. Additionally, only one previous study, *Cultural Resources Inventory and Determination of Eligibility for the Proposed Auburn Ranch, Placer County, California* (NCIC Report # 2407), was conducted adjacent to the project area (Peak and Gerry, 1998). This study surveyed an area north of the project site, north of Dry Creek and extending south of Dry Creek along a narrow corridor bordering Rock Creek. Cultural resources were recorded during the 1998 survey; however, all of the cultural resources were located north of Dry Creek, outside the area of potential effect (APE).

3.5.2 DISCUSSION

a) Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5?

Less-than-Significant Impact with Mitigation Incorporated. The SMD 1 WWTP facility has two buildings and three structures that were constructed in 1960 (now more than 50 years old). Since then, the facility has undergone several changes including the addition of other buildings and structures. The remaining buildings and structures are less than 45 years old. Because the facility lacks integrity and historical significance, it does not appear to meet the criteria for the NRHP or the CRHR, and therefore, does not qualify as a significant resource for the purposes of CEQA.

No significant archeological resources were identified in the APE. However, previously undiscovered buried historical or archaeological materials, including human remains, could be exposed and damaged during proposed excavation and grading activities. Therefore, ground-disturbing activities associated with the proposed project would have the potential to result in the demolition or substantial damage to significant historical resources. This impact would be **potentially significant**.

Mitigation Measure CR-1: Implement a Plan to Address the Inadvertent Discovery of Buried Cultural Resources. The County's Construction Contractor will implement this Plan during Project Construction.

The County shall require that before the start of grading or excavation activities, construction personnel involved with earthmoving activities shall be informed of the possibility of encountering cultural resources, the appearance and types of cultural resources likely to be seen during construction activities, and proper notification procedures should any be encountered. This construction worker training shall be prepared and presented by a qualified archaeologist.

If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bones, or paleontological resources are inadvertently discovered during ground-disturbing activities, the construction personnel shall stop all work in the area and within 100 feet of the find until a qualified archaeologist or paleontologist, approved by the County, assesses the significance of the find and, if necessary, develops appropriate treatment measures in consultation with the County.

With implementation of Mitigation Measure CR-1, the proposed project would avoid or reduce potential effects on buried or otherwise unidentified historical resources. The impact would be **less than significant**.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Less-than-Significant Impact with Mitigation Incorporated. The proposed project would not cause a substantial adverse change in the significance of an archaeological resource; no archaeological resources were identified or previously recorded in the APE. Although the pedestrian survey represents a reasonable effort to determine the presence or absence of cultural resources, subsurface findings cannot be determined. Furthermore, most of the project site has been previously modified, altering the natural ground surface, and much of the undeveloped portion of the APE had poor visibility at the time of inventory. Thus, the possibility remains that archaeological resources now buried or obscured by vegetation that could not be identified during the field survey could be inadvertently unearthed during ground-disturbing activities, which could result in the demolition or substantial damage to significant archaeological resources. With implementation of Mitigation Measure CR-1, this potentially significant impact on buried or otherwise unidentified archaeological resources would be avoided or reduced. Thus, the impact would be **less than significant**.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact. Fossils have been reported from the upper volcanic unit of the Smartville Complex and associated sedimentary cover rocks (Beiersdorfer and Day 1992); however, neither of these units is present at the project site. A search of the University of California, Berkeley Museum of Paleontology database (2010) indicated that no fossils have been recovered from the project site or the immediate project vicinity. Although other Jurassic-age fossils have been recovered in Placer County, none have been recovered from the same rock formation that is present at the project site (UCMP 2010). During the site visit conducted by AECOM personnel on August 23, 2010 (described above), no evidence of fossil remains was observed at the project site. Therefore, the project site is considered to be of low paleontological sensitivity, and impacts to unique paleontological resources would be **less than significant**.

d) Disturb any human remains, including those interred outside of formal cemeteries?

Less-than-Significant Impact with Mitigation Incorporated. Based on the findings of the records search and the pedestrian survey of the project area, interred human remains are not known to be located within or near the project area, and thus no significant impact would be anticipated. However, ground-disturbing activities associated with the proposed plant upgrades and expansion potentially could result in the inadvertent discovery and destruction of buried human remains. This impact on human remains would be considered a **significant** impact. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and items associated with Native American interments from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in Sections 7050.5 and 7052 of the California Health and Safety Code and Section 5097 of the California Public Resources Code.

Mitigation Measure CR-2: Implement a Plan to Address the Discovery of Human Remains and Adhere to State Procedures for the Inadvertent Discovery of Human Remains during Project Construction.

The County will require its construction contractor to adhere to state procedures for the inadvertent discovery of human remains during project construction. In accordance with the California Health and Safety Code, if human remains are uncovered during ground-disturbing activities, the construction contractor shall immediately halt potentially damaging ground-disturbing activity in the area of the remains and within 100 feet of the find and notify the Placer County Coroner, the SMD 1 WWTP representative, the State Water Resources Control Board Division of Financial Assistance (SWRCB) lead, and a professional archaeologist specializing in human osteology who is approved by the SWRCB to determine the nature of the remains.

The coroner shall examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (Section 7050.5[b] of the Health and Safety Code). If the coroner determines that the remains are those of Native American origin, he or she shall contact the Native American Heritage Commission by telephone within 24 hours of making that determination (Section 7050[c] of the Health and Safety Code). Following the coroner's findings, the County, the SWRCB, the construction contractor, the archaeologist, and the Native American Heritage Commission–designated Most Likely Descendant (MLD) shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting on notification of a discovery of Native American human remains are identified in Section 5097.9 of the California Public Resources Code.

The County and the SWRCB shall ensure that the area of the discovery and the immediate vicinity in a radius of 100 feet of the find (according to generally accepted cultural or archaeological standards and practices) is cordoned off and not damaged or disturbed by further ground-disturbing activity (including pedestrian traffic) until consultation with the MLD has taken place. The MLD shall have 48 hours to complete a site inspection and make recommendations after being granted access to the site. A range of possible treatments for the remains, including nondestructive removal and analysis, preservation in place, relinquishment of the remains and associated items to the descendants, or other culturally appropriate treatment may be discussed. The concerned parties may extend discussions beyond the initial 48 hours to allow for the discovery of additional remains.

With implementation of Mitigation Measure CR-2, the proposed project would avoid or reduce potential effects on buried human remains, and the impact would be **less than significant**.

3.6 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. Geology and Soils. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.6.1 ENVIRONMENTAL SETTING

The project site is located in the western portion of Placer County, which is part of the Sierra Nevada geomorphic province. Soils in the project area include Auburn silt loam (2–15% slopes), Auburn-Rock outcrop complex (2–30% slopes), and Xerorthents (placer areas). The project site is underlain by the Smartville complex (Wagner et al. 1981), a combination of metavolcanic and metasedimentary rocks of the Jurassic Age.

3.6.2 DISCUSSION

a) **Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

- i) **Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**

Less-than-Significant Impact. The project site is not located in an Alquist-Priolo Earthquake Special Study Zone (California Geological Survey 2010). No active faults or earthquake fault zones are located on the project site, and no evidence exists on the site of recent or active faulting. The nearest mapped fault to the site is the inactive, Late Jurassic-Early Cretaceous Bear Mountains East Fault, approximately 400 feet to the east of the site. Other faults in the project vicinity are related to the Bear Mountains West Fault and the Melones Fault Zone, located approximately 2 miles west and 9 miles east of the site, respectively. These faults are all inactive. The nearest mapped active fault is the Dunnigan Hills Fault, located about 42 miles to the west of the site (Youngdahl 2000). Because surface ground rupture along faults is generally limited to a linear zone a few yards wide, and the nearest active fault is miles away, a low potential exists for fault ground rupture to occur at the project site. Therefore, impacts associated with fault ground rupture would be **less than significant**.

ii) **Strong seismic ground shaking?**

Less-than-Significant Impact. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site, the magnitude of the earthquake, site soil conditions, and the characteristics of the source. Ground motions from seismic activity can be estimated by probabilistic method at specified hazard levels. Data contained in the Probabilistic Seismic Hazard Assessment for the State of California (California Department of Conservation 2008) indicate that the ground-shaking hazard in the project area is low.

None of the five faults in the project area are rated as Class A or B faults by the U.S. Geological Survey (USGS). The USGS's Earthquake Hazards Program includes four fault classes (A through D), and Class A and B faults are the only faults for which there is demonstrable evidence of tectonic movement during the Quaternary (the previous 2 million years). The closest Class A or Class B faults are in the Coast Ranges, approximately 65 miles from the project site. Therefore, a low potential exists for seismic hazard in the project area.

Because the project site is not located in an area that would be subject to strong seismic ground shaking, and because project construction would be required to adhere to the earthquake design requirements for structures in Chapter 16 of the Universal Building Code, this impact would be **less than significant**.

iii) **Seismic-related ground failure, including liquefaction?**

Less-than-Significant Impact. Liquefaction is a process by which water-saturated materials (including soil, sediment, and certain types of volcanic deposits) lose strength and may fail during strong ground shaking. Liquefaction is most commonly induced by strong ground shaking associated with earthquakes. Factors that determine liquefaction potential are soil type, the level and duration of seismic ground motions, the type and consistency of soils, and the depth to groundwater. Saturated, loose to medium-dense sands with a silt content less than about 24%, located within the top four feet below ground surface, are the most susceptible type to liquefaction. Based on the relatively shallow bedrock conditions on the project site, little potential exists for liquefaction (Youngdahl 2000). In addition, the ground-shaking hazard in the project area is low. Accordingly, the potential for liquefaction-related impacts would be **less than significant**.

iv) Landslides?

Less-than-Significant Impact. The project site is proposed to have minor cuts and fill with a maximum slope orientation of 2 to 1, which is generally considered stable with the material types expected to be encountered on the site (Youngdahl 2000). In addition, the *Placer County General Plan Background Report* (Placer County 1994) defines the project area as having a low potential for erosion hazard and does not identify any active landslides having occurred in the project area. For these reasons, and considering the potential for ground-shaking hazard in the project area is low, potential impacts on people or structures resulting from landslides would be **less than significant**.

b) Result in substantial soil erosion or the loss of topsoil?

Less-than-Significant Impact. According to soil data from the U.S. National Resources Conservation Service (2009), Auburn silt loam (2 to 15% slopes) and Xerorthents (placer areas) have a slight potential for erosion, and Auburn-Rock outcrop complex (2 to 30% slopes) has a moderate potential for erosion. Project-related excavation and grading activities on the vacant parcels east of the existing SMD 1 WWTP would remove any vegetative cover and expose project site soils to erosion via wind and surface water runoff. Because construction would disturb more than 1 acre of land, a storm water pollution prevention plan (SWPPP) would be required for the proposed project construction activities as part of its National Pollutant Discharge Elimination System (NPDES) permit, administered by the SWRCB. The SWPPP would include a site map and description of construction activities, and would identify best management practices (BMPs) that would be employed to prevent soil erosion and discharge of other construction-related pollutants (e.g., petroleum products, solvents, paints, and cement) that could contaminate nearby water resources. A monitoring program generally is required to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of stormwater-related pollutants. Compliance with NPDES permit requirements would result in a **less-than-significant** impact related to soil erosion.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-than-Significant Impact. As described in item (a)(iii) above, relatively shallow bedrock conditions exist on the project site. Therefore, the potential for ground lurching, differential settlement, or lateral spreading is considered low. Based on the geologic conditions, subsidence and liquefaction are not risks in the project area. Therefore, this impact would be **less than significant**.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

Less-than-Significant Impact. Expansive soils shrink and swell as a result of changes in soil moisture content. These volume changes can result in damage over time to building foundations, underground utilities, and other subsurface facilities and infrastructure if they are not designed and constructed appropriately to resist the changing soil conditions. The silts, sands, and rock materials expected to be encountered on the project site would be non-plastic materials, considered to be relatively nonexpansive. Therefore, this impact would be **less than significant**.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed project would not involve the use of septic systems or include land disposal of treated effluent; therefore, **no impact** would occur.

3.7 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. Greenhouse Gas Emissions. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.7.1 ENVIRONMENTAL SETTING

Certain gases in the earth’s atmosphere, classified as greenhouse gases (GHG), play a critical role in determining the earth’s surface temperature. A portion of the solar radiation that enters earth’s atmosphere is absorbed by the earth’s surface, and a smaller portion of this radiation is reflected back toward space. Infrared radiation is absorbed by GHGs; as a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead “trapped,” resulting in a warming of the atmosphere. This phenomenon, known as the “greenhouse effect,” is responsible for maintaining a habitable climate on Earth. Without the naturally occurring greenhouse effect, Earth would not be able to support life as we know it.

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The following are the gases that are widely seen as the principal contributors to human-induced global climate change:

- ▶ carbon dioxide (CO₂),
- ▶ methane (CH₄),
- ▶ nitrous oxide (N₂O),
- ▶ hydrofluorocarbons (HFCs),
- ▶ perfluorocarbons (PFCs), and
- ▶ sulfur hexafluoride (SF₆).

GHG emissions related to human activities are responsible for intensifying the greenhouse effect and have led to a trend of unnatural warming of the earth’s atmosphere and oceans, with corresponding effects on global circulation patterns and climate (IPCC 2007).

Global warming potential (GWP) is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas; the global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere (“atmospheric lifetime”). The GWP of each gas is measured relative to CO₂, the most abundant GHG. GHGs with lower emissions rates than CO₂ may still contribute to climate change because they are more effective at absorbing outgoing infrared radiation than CO₂. The concept of CO₂-equivalents (CO₂e) is used to account for the different GWP potentials of GHGs to absorb infrared radiation.

In September 2006, California Governor Arnold Schwarzenegger signed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions, and is the first of its kind worldwide. AB 32 applies to major stationary sources of emissions only, but acknowledges the urgency of this potential threat to the environment. Additional laws related to climate change are summarized in Table 3.7-1, below.

**Table 3.7-1
Summary of State Laws and Executive Orders that Address Climate Change**

Legislation Name	Signed into Law/ Ordered	Description	CEQA Relevance
SB 1771	09/2000	Establishment of California Climate Registry to develop protocols for voluntary accounting and tracking of GHG emissions.	In 2007, DWR began tracking GHG emissions for all departmental operations.
AB 1473	07/2002	Directs ARB to establish fuel standards for noncommercial vehicles that would provide the maximum feasible reduction of GHGs.	Reduction of GHG emissions from noncommercial vehicle travel.
SB 1078, 107, EO S-14-08	09/2002, 09/2006, 11/2008	Establishment of renewable energy goals as a percentage of total energy supplied in the State.	Reduction of GHG emissions from purchased electrical power.
EO S-3-05, AB 32*	06/2005, 09/2006	Establishment of statewide GHG reduction targets and biennial science assessment reporting on climate change impacts and adaptation and progress toward meeting GHG reduction goals.	Projects required to be consistent with statewide GHG reduction plan and reports will provide information for climate change adaptation analysis.
SB 1368	9/2006	Establishment of GHG emission performance standards for base load electrical power generation.	Reduction of GHG emissions from purchased electrical power.
EO S-1-07	01/2007	Establishment of Low Carbon Fuel Standard.	Reduction of GHG emissions from transportation activities.
SB 97*	08/2007	Directs OPR to develop guideline amendments for the analysis of climate change in CEQA documents.	Requires climate change analysis in all CEQA documents.
SB 375	09/2008	Requires metropolitan planning organizations to include sustainable communities strategies in their regional transportation plans.	Reduction of GHG emissions associated with housing and transportation.
EO S-13-08*	11/2008	Directs the Natural Resources Agency to work with the National Academy of Sciences to produce a California Sea Level Rise Assessment Report and directs CAT to develop a California Climate Adaptation Strategy.	Information in the reports will provide information for climate change adaptation analysis.

Key:

AB = Assembly Bill
 ARB = California Air Resources Board
 CAT = Climate Action Team
 CEQA = California Environmental Quality Act
 DWR = California Department of Water Resources
 EO = Executive Order
 GHG = greenhouse gas
 OPR = Office of Planning and Research
 SB = Senate Bill

3.7.2 DISCUSSION

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less-than-Significant Impact. In September 2006, then Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006, which requires statewide GHG emissions be reduced to 1990 levels by 2020. To meet the goals of AB 32, California would need to generate fewer GHG emissions than current

levels. AB 32 requires 1990 GHG emission levels to be achieved by the year 2020, or about a 28% reduction from “business as usual” (BAU) emissions levels in 2020 (ARB 2008).

At the time of this analysis, the PCAPCD has not adopted a significance threshold for GHG emissions. Therefore, in order to establish context, other regional guidance has been applied to the proposed project. Within the Sacramento Valley, the SMAQMD released updated CEQA guidance, *Guide to Air Quality Assessment in Sacramento County*, in December 2009 (SMAQMD 2009b). SMAQMD includes recommendations for GHG emissions in the guidance, which states that thresholds of significance for GHG emissions should be related to AB 32’s GHG reduction goals. For example, a possible threshold of significance could be to determine whether a proposed project’s emissions would substantially hinder the State’s ability to attain the goals identified in AB 32 (i.e., reduction of statewide GHG emissions to 1990 levels by 2020). Neither state legislation nor executive order suggests that California intends to limit population growth to reduce the state’s GHG emission levels. Therefore, the intent is to accommodate population growth in California, but achieve a lower *rate* of GHGs despite this larger population. In other words, California jurisdictions must become more GHG *efficient*.

SMAQMD allows the CEQA lead agency to develop the specific methodology for making this determination of significance. While SMAQMD has not adopted specific quantitative thresholds for global climate change, other air districts in the State have developed specific thresholds. The most conservative threshold was adopted by the Bay Area Air Quality Management District (BAAQMD) in June 2010. The BAAQMD recommends a threshold of 1,100 metric tons of CO₂e per year for operational emissions and 10,000 metric tons of CO₂e per year for stationary source emissions (BAAQMD 2010). Other proposed or adopted thresholds for GHG emissions for both land use and stationary sources range from 3,000 to 25,000 metric tons of CO₂e per year.

The proposed project would generate GHG emissions as a result of short-term construction activities and long-term operational activities. Construction-generated GHG emissions and operational GHG emissions are discussed separately below.

Construction-Generated Greenhouse Gas Emissions

Emission factors and calculation methods for estimating GHG emissions associated with the development of wastewater treatment plant projects have not been formally adopted for use by the State of California, PCAPCD, or any other air district. Therefore, the construction-related GHG emissions associated with the proposed facility upgrades were calculated using URBEMIS 2007 Version 9.2.4.

Construction activities associated with construction of the SMD 1 WWTP upgrades would occur over a 3-year period, beginning in 2012. The construction would occur in separate phases so that ongoing WWTP operations could continue during construction of proposed improvements. During this time, a net increase in GHG emissions would result from various construction activities. Construction-related GHG emissions would be associated with engine exhaust from heavy-duty construction equipment, material (e.g., building materials, soil) transport trucks, and worker commute trips. Although any increase in GHG emissions would add to the quantity of emissions that contribute to global climate change, emissions associated with project construction would occur over a finite period. Following full project buildout, all construction emissions would cease.

Table 3.7-2 shows the annual GHG emissions associated with construction of the proposed project. Detailed calculations and related assumptions are presented in Appendix B.

Facilities (i.e., stationary, continuous sources of GHG emissions) that generate greater than 25,000 metric tons of CO₂ per year are mandated to report their GHG emissions to ARB, pursuant to AB 32. PCAPCD has not established a GHG threshold methodology for construction activities. As shown in Table 3.7-2, estimated GHG emissions associated with construction of the entire project would be a maximum of approximately 638 metric tons of CO₂ for each phase, totaling 1,482 metric tons over the estimated 3-year construction schedule. Absent any air quality regulatory agency-adopted threshold for GHG emissions for construction, the proposed project would generate substantially fewer emissions than 25,000 metric tons of CO₂ per year. This information is presented for informational purposes only, and it is not the intention of PCAPCD to adopt 25,000 metric tons of

CO₂ per year as a numeric threshold. Rather, the intention is to put project-generated construction GHG emissions in the appropriate statewide context to evaluate whether the proposed project’s contribution to the global impact of climate change would be considered substantial. Because construction-related emissions would be temporary

**Table 3.7-2
Summary of Modeled Construction-Generated Emissions of Greenhouse Gases**

Source	Total Mass CO ₂ Emissions (metric tons) ¹
Construction Emissions ²	
2012	638
2013	422
2014	422
Total construction emissions (2012–2014)	
	1,482
<p>Note: CO₂ = carbon dioxide. See Appendix B for detailed model input, assumptions, and threshold calculations.</p> <p>¹ The values presented do not include the full life-cycle of greenhouse gas (GHG) emissions that occur over the production/transport of materials used during project construction, solid waste that occurs over the project life, and the end of life of the materials and processes that indirectly result from the project. Estimation of the GHG emissions associated with these processes would be speculative, would require analysis beyond the current state of the art in impact assessment, and might lead to a false or misleading level of precision in reporting of project-related GHG emissions. Further, indirect emissions associated with in-state energy production and management of solid waste would be regulated under Assembly Bill (AB) 32 directly at the source or facility that would handle these processes. The emissions associated with off-site facilities in California would be closely controlled, reported, capped, and traded under AB 32 and California Air Resources Board programs. Therefore, GHG emissions associated with these life-cycle stages likely would be consistent with AB 32 requirements.</p> <p>² Building construction emissions were modeled with the URBEMIS 2007 computer model.</p> <p>Source: Modeling conducted by AECOM in 2010</p>	

and finite and would be below the minimum standard for reporting requirements under AB 32, the project’s GHG emissions would not be a considerable contribution to the cumulative global impact. Therefore, this impact would be **less than significant**.

Operational GHG Emissions

As discussed in Section 3.16, “Transportation/Traffic,” with long-term project operation SMD 1 WWTP employee levels would increase from 7 to 11, resulting in an increase of 4 trips per day. The proposed project would also include the construction of a septage receiving station that would result in a maximum of two deliveries per week. These additional 4.5 vehicle trips per day would be negligible and not result in a substantial increase in GHG emissions.

The proposed project would likely include stationary sources that would be required to obtain permits to operate under PCAPCD Rule 501 (General Permit Requirements) and Rule 502 (New Source Review). Emissions from wastewater processing were modeled using emission factors from the *Intergovernmental Panel on Climate Change Guidelines for National Greenhouse Gas Inventories* (IPCC 2006) and are presented in Table 3.7-3. As shown, GHG emissions from methane, nitrous oxide, and CO₂ would be a maximum of 3,213 metric tons of CO₂e per year without the proposed cogeneration turbine and 509 metric tons of CO₂e per year with the proposed cogeneration turbine. This would represent increases in GHG emissions from the SMD 1 WWTP expansion of approximately 81% without cogeneration and 73% with cogeneration, over 2010 levels. The lower values associated with incorporation of cogeneration are due to the conversion of methane to CO₂ and energy by the cogeneration turbine, and the lower global warming potential of CO₂ (1 CO₂e) compared to methane (21 CO₂e).

As stated above, facilities (i.e., stationary, continuous sources of GHG emissions) that generate greater than 25,000 metric tons of CO₂ per year are mandated to report their GHG emissions to ARB, pursuant to AB 32. PCAPCD has not established a GHG threshold methodology for stationary source emissions. As shown in Table 3.7-3, absent any air quality regulatory agency–adopted threshold for GHG emissions, the proposed project would generate substantially fewer emissions than 25,000 metric tons CO₂ per year with or without the proposed cogeneration facility. Although emissions with the cogeneration facility would be substantially lower than without cogeneration, both project scenarios generate GHG emissions below reporting thresholds.

Table 3.7-3 Summary of Modeled Stationary Source-Generated Emissions of Greenhouse Gases		
Source	Total Mass CO ₂ e Emissions (metric tons)	
	2010	2034
Stationary Source Emissions without Cogeneration Turbine		
Methane	1,691	3,071
Nitrous Oxide	92	142
Total emissions	1,783	3,213
Stationary Source Emissions with Cogeneration Turbine		
Carbon Dioxide	202	367
Nitrous Oxide	92	142
Total emissions	294	509
Notes: CO ₂ e = carbon dioxide equivalent. See Appendix B for detailed model input, assumptions, and calculations. Source: Modeling conducted by AECOM in 2010		

As above, this information is presented for informational purposes only, and it is not the intention of PCAPCD to adopt 25,000 metric tons of CO₂ per year as a numeric threshold. Rather, the intention is to put project-generated operational GHG emissions in the appropriate statewide context in order to evaluate whether the project’s contribution to the global impact of climate change is considered substantial. Because stationary source–related emissions would be below the minimum standard for reporting requirements under AB 32 and mobile and area (natural gas, landscaping) source emissions would remain the same as under existing conditions, the project’s operational GHG emissions would not be a considerable contribution to the cumulative global impact and therefore would be **less than significant**.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less-than-Significant Impact. As discussed above, under (a), the short-term construction and long-term operational GHG emissions from the proposed project would be less than cumulatively considerable, and because they are much lower than any reporting limits or adopted GHG thresholds of significance for stationary sources, the proposed project would not conflict with AB 32 or any other climate-change related plans, policies, or regulations. There are currently no applicable local climate-change related plans, policies, or regulations. This impact is considered **less than significant**.

3.8 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. Hazards and Hazardous Materials. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.8.1 ENVIRONMENTAL SETTING

EXISTING HAZARDOUS MATERIALS

A computerized database search of various agency lists was conducted for the SMD 1 WWTP to identify any known sites of hazardous material contamination. Search results revealed no known hazardous materials site located within the project site.

SCHOOLS WITHIN 0.25 MILE OF THE PROJECT SITE

The State CEQA Guidelines require that initial studies and environmental impact reports assess whether a project will emit hazardous air emissions or involve the handling of extremely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (see Sections 21151.2 and 21151.4 of the Public Resources Code; Appendix G of the State CEQA Guidelines). No schools are located within one-quarter mile of the project site.

AIRPORT AND AIRSTRIP WITHIN 2 MILES

Safety hazards associated with airports generally are related to construction of tall structures and the creation of wildlife attractants (e.g., wetlands, golf courses, and waste disposal operations) that could interfere with airplane flight paths. The State CEQA Guidelines (Section 21096 of the Public Resources Code) require analysis of airports within 2 nautical miles of a proposed project. The project site is located approximately 1 mile from the Auburn Municipal Airport, and is within Compatibility Zone C2 of the *Placer County Airport Land Use Compatibility Plan* (Shutt Moen Associates 2000).

WILDLAND FIRE RISK

The severity of wildland fires is influenced primarily by vegetation, topography, and weather (temperature, humidity, and wind). The California Department of Forestry and Fire Protection (CAL FIRE) has developed a fire hazard severity scale that considers vegetation, climate, and slope to evaluate the level of wildfire hazard in all State Responsibility Areas. A State Responsibility Area is defined as the part of the state where CAL FIRE is primarily responsible for providing basic wildland fire protection assistance. Areas under the jurisdiction of other fire protection services are considered to be Local Responsibility Areas.

CAL FIRE designates three levels of Fire Hazard Severity Zones (Moderate, High, and Very High) to indicate the severity of fire hazard in a particular geographical area. State Responsibility Areas are rated as moderate, high, and very high hazard zones. The project site is located within a State Responsibility Area and is considered to have Moderate and High fire hazard severity ratings. Fire hazard zoning is used to indicate both the likelihood for a fire (e.g., prevalence of fuels) and the potential for damage (e.g., proximity to residences). While Fire Hazard Severity Zone maps do not provide specific reasons for each rating given to specific areas, aerials indicate that portions of the project site that are closer to residential areas, southeast of the project site, are generally designated as High fire hazard severity zones; whereas, areas located adjacent to undeveloped land, in the northwestern portion of the project site, are generally rated as Moderate fire hazard severity zones (CAL FIRE 2007).

EMERGENCY RESPONSE PLANS

Placer County Office of Emergency Services is responsible for maintaining the County's Local Hazard Mitigation Plan (LHMP). The most recent version of the LHMP was approved on July 13, 2010, and is currently awaiting Federal Emergency Management Agency approval. Preparation of the LHMP included a risk assessment to determine the County's vulnerability to hazards, which influenced the development of goals and mitigation actions.

In addition, the City of Auburn Emergency Operations Plan (EOP) addresses the planned response for the City of Auburn to emergencies. Potential hazards plans addressed in the EOP include: Terrorism Contingency Plan, Airport Response Plan, Hazardous Materials Response Plan, Wildfire Response Plan, 1-80 Transportation Infrastructure Plan, and Stormwater Pollution Prevent Plans (Placer County 2010).

3.8.2 DISCUSSION

- a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

Less-than-Significant Impact. Construction activities associated with the proposed project would involve the routine transport and handling of hazardous substances such as fuels and lubricants. In addition, the County is considering construction of a septage receiving station. This receiving station would increase the transportation, use, and disposal of hazardous materials within and from the site. Handling and transport of these materials could result in the exposure of workers to hazardous materials. The proposed project is required to comply with applicable federal, state, and local laws pertaining to the handling and transport of hazardous materials, including California Occupational Health and Safety Administration requirements. Thus, this impact would be **less than significant**.

- b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?**

Less-than-Significant Impact. Project construction would involve the use of heavy construction equipment that would use small amounts of hazardous materials such as oils, fuels, and other potentially flammable substances typically associated with construction activities. However, the County would work with the project contractor to establish a construction staging area where hazardous materials would be stored during construction. Furthermore, the County would require the contractor to prepare an accidental-spill prevention and response plan. During construction activities, the construction contractor would be required to employ BMPs for spill control and prevention as part of the stormwater pollution prevention plan (SWPPP) (see Section 3.9, “Hydrology and Water Quality”). Therefore, because the appropriate prevention and management practices would be in place as required by local and regional regulatory agencies, the potential for impacts from construction- and maintenance-related accidental spills of hazardous materials would be **less than significant**.

- c) **Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

No Impact. No schools are located within one-quarter mile of the project site. The nearest school, Chana High School, is a little more than three-quarter mile away. Thus, **no impact** would occur related to emission or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

- d) **Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

No Impact. The project site does not have any hazardous materials sites that are included on any list compiled pursuant to Section 65962.5 of the Government Code. Thus, **no impact** would occur.

- e) **For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

Less-than-Significant Impact. The project site is located within Compatibility Zone C2 of the *Placer County Airport Land Use Compatibility Plan*. However, project implementation would not include construction of tall buildings or habitat that could attract hazardous wildlife, and lighting of new structures would be similar to

existing lighting at the site. Therefore, impacts to people residing or working in the project area related to safety hazards associated with a public use airport would be **less than significant**.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. No private airstrips are within 2 miles of the proposed project; therefore, **no impact** would occur related to safety hazards for people residing or working within the project area because of a private airstrip.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less-than-Significant Impact. Project-related transport of materials to and from the site, including septage deliveries and other materials transport, and use of hazardous materials by workers during project construction have the potential to interfere with an adopted emergency response plan or emergency evacuation plan. However, as discussed above, under “Emergency Response Plans,” a variety of actions have been taken to increase preparedness for emergency situations. In addition, hazardous materials transportation emergencies are the primary responsibility of the California Highway Patrol and the California Department of Transportation, which are responsible for determining container types to be used and licensing of hazardous-waste haulers on public roadways. Thus, because transport of hazardous materials is regulated and emergency response plans have been prepared, this impact would be **less than significant**.

h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less-than-Significant Impact. The project site is located in an area that has zone designations as both Moderate and High for fire hazard severity. Although the proposed project would bring structures in the High fire hazard severity zone slightly closer to undeveloped land and nearby residences, the types of land uses would be similar to existing uses at the site. Implementation would not increase the amount of fuels in the area and would not substantially increase the potential for damage to structures compared to the existing conditions. Thus, project implementation would not substantially increase the risk of loss, injury, or death involving wildland fires. This impact would be **less than significant**.

3.9 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. Hydrology and Water Quality. Would the project:				
a) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in increased frequency and magnitude of flooding that would pose significant risks to human life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Cause exceedance of applicable State or Federal numeric or narrative water quality objectives/criteria, or other relevant water quality thresholds identified for this assessment, by frequency, magnitude, and geographic extent that would result in adverse effects to beneficial uses?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Increase levels of a bioaccumulative pollutant by frequency, magnitude, or geographic extent such that the water body (or portion of a water body) would be expected to have measurably higher body burdens of the bioaccumulative pollutant in aquatic organisms, thereby substantially increasing the health risks to wildlife (including fish) or humans consuming those organisms?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Cause long-term degradation of water quality, resulting in substantial risk of adverse effects to beneficial uses.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.9.1 ENVIRONMENTAL SETTING

CLIMATE AND HYDROLOGY

The SMD 1 WWTP is located within the Auburn Hydrologic Subarea of the American River hydrologic unit, which in turn is a subunit of the Sacramento River hydrologic region. The WWTP is located at about 1,200 feet above sea level in the foothills of the Sierra Nevada, which slope west to the floor of the Sacramento Valley. The region has a Mediterranean climate, with hot summers with average daytime high temperatures of 94 degrees Fahrenheit (°F) and cool, wet winters. Average annual precipitation is about 35 inches, with the majority occurring as rainfall between November and March.

The SMD 1 WWTP discharges treated effluent to Rock Creek. Approximately 200 feet downstream of the discharge location, Rock Creek joins Dry Creek, which merges with Orr Creek approximately 1.8 miles downstream, at which point the name changes to Coon Creek. Coon Creek splits into several channels (Main Canal, Markham, Bunkham, and East Side Canal), then enters the Natomas Cross Canal approximately 20 miles to the west and joins the Sacramento River just below the confluence with the Feather River.

The Dry Creek and Rock Creek watersheds cover a relatively small portion of the watersheds within the Auburn region, about 15 square miles (Placer County 2010); the streams would most likely be ephemeral under natural circumstances (i.e., little to no flow in the dry summer months). However, both the Rock Creek and Dry Creek channels are used to convey irrigation water during the summer. This irrigation water is released to downstream agricultural users from Nevada Irrigation District and Pacific Gas and Electric Company (PG&E) raw-water supply facilities (e.g., Halsey Forebay on Dry Creek and Rock Creek Lake on Rock Creek). Placer County also purchases water for release into Rock Creek (from Rock Creek Lake) to support the stream and pond resources located in Placer County Regional Park, located about 1 mile upstream of the WWTP.

Peak winter streamflow rates were modeled for the 1992 *Auburn/Bowman Community Plan* hydrology study area, which encompasses the Rock Creek and Dry Creek watersheds. The 10-year peak flows under 1992 conditions in Rock Creek at the Joeger Road crossing, adjacent to the SMD 1 WWTP, and in Dry Creek at SR 49 approximately 1,000 feet upstream of the WWTP boundary were estimated to be 997 and 1,562 cubic feet per second (cfs), respectively (Darrow, pers. comm., 2010). At the future planned level of urban development in the Auburn/Bowman area, the predicted 10-year peak flows at buildout would increase to approximately 1,217 cfs and 1,630 cfs in Rock Creek and Dry Creek, respectively. The existing 100-year peak flows in Rock Creek and Dry Creek are about 2,390 and 3,100 cfs, respectively. No 100-year floodplain boundary designation by the Federal Emergency Management Agency (FEMA) has been formally established for any reach of Rock Creek, or for Dry Creek either in the stream reach adjacent to the WWTP or farther downstream. However, a FEMA-designated 100-year floodplain is mapped for Dry Creek upstream of SR 49, which indicates that the floodplain is relatively narrow and adjacent to the banks of the stream channel.

Because of the generally shallow soils overlying the bedrock that forms the Sierra Nevada, groundwater is not abundant in the project area. Groundwater is generally sufficient to supply domestic requirements only in areas of open fractures within metamorphic and granitic rock units, and terrace alluvial deposits that can contain larger quantities of groundwater are generally infrequent (Placer County 1999). The project area does not lie within a specified groundwater basin within the groundwater mapping system maintained by the California Department of Water Resources.

WATER QUALITY

Available information characterizing existing water quality conditions in Rock Creek and Dry Creek is limited to the routine monitoring data collected at the SMD 1 WWTP for general parameters such as temperature, dissolved oxygen, electrical conductivity (EC), fecal coliform bacteria, pH, and turbidity at locations upstream (i.e., RSW-001 on Rock Creek and RSW-003 on Dry Creek) and downstream of the WWTP (i.e., RSW-002 on Rock Creek

and RSW-004 on Dry Creek) (Exhibit 2-5). In general, Rock Creek and Dry Creek flows are anticipated to be relatively low in chemical constituents and contaminants because they are used to convey water that originates from the sparsely populated and mountainous Bear River watershed. Neither creek is listed as impaired by water quality contaminants on the State Water Resources Control Board's (SWRCB's) 2010 Section 303(d) list of impaired water bodies. However, potential sources of contamination in the Rock Creek and Dry Creek watersheds include dispersed nonpoint sources and urban stormwater runoff from residential, commercial, and industrial land uses of Auburn's incorporated areas. Winter urban stormwater runoff can contain and convey suspended sediment, trash, oils and other petroleum-based wastes, organic matter and oxygen-demanding substances, nutrients (e.g., nitrogen and phosphorus), trace metals (e.g., copper and zinc) and organic compounds (e.g., pesticides), and pathogens (e.g., bacteria and viruses from fecal wastes of pets and livestock) to drainage systems (Placer County 2004).

Wastewater treatment plants, in general, can be sources of elevated levels of organic carbon, nutrients (i.e., nitrogen and phosphorus), salinity, and trace metals and organic compounds. The SMD 1 WWTP provides a continuous point-source discharge of flow to Rock Creek, Dry Creek, and downstream water bodies. Water quality conditions in Rock Creek, and Dry Creek channel reaches immediately downstream of the effluent outfall, can at times reflect the quality of effluent discharges during dry periods when channel flow is low. For this reason, effluent discharges to Rock Creek from the SMD 1 WWTP are regulated by the Central Valley RWQCB under an NPDES permit and Waste Discharge Requirements (WDRs). The NPDES/WDRs permit for the SMD 1 WWTP was renewed on September 22, 2010, as Order No. R5-2010-0092 (NPDES No. CA0079316). The NPDES/WDRs permit regulates allowable concentrations and loadings of constituents that have the potential to affect beneficial uses of the receiving water.

The fact sheet for the renewed NPDES/WDRs (Order No. R5-2010-0092) summarizes the SMD 1 WWTP's record of compliance with permit provisions. The existing SMD 1 WWTP treatment facilities provide tertiary treatment for wastewater flows (i.e., oxidation, coagulation and sedimentation, sand filtration, and chlorine disinfection). However, the capacity of the WWTP's tertiary filtration is limited to about 3.5 million gallons per day (mgd), and peak wet-weather flows have historically been a combination of secondary and tertiary treated disinfected effluent. Additionally, the WWTP typically provides full nitrification but does not provide an advanced level of nitrogen removal (i.e., denitrification). The chlorine disinfection process creates trihalomethane (THM) compounds, disinfection byproducts that are regulated to protect human health. The effluent can exceed the very low California Toxics Rule (CTR) criteria for some of the THMs, although the total THMs discharged do not exceed the applicable drinking-water maximum contaminant level (MCL) for total THMs.

REGULATORY FRAMEWORK

The following regulations, plans, or policies relevant to the management of hydrology and water quality in the project area were considered in this evaluation.

Federal

Clean Water Act and National Pollutant Discharge Elimination System Permit Program

The federal CWA establishes the basic structure for regulating discharges of pollutants to navigable waters within the United States. The law authorizes EPA to set point-source effluent limitations for industry and publicly owned treatment works and requires states (or EPA in the event of a state default) to set water quality standards for contaminants in surface waters. The CWA authorizes EPA to delegate many permitting, administrative, and enforcement aspects of the law to states. In such cases, EPA still retains oversight responsibilities. California administers the CWA through the SWRCB and its nine RWQCBs.

The CWA requires wastewater dischargers to obtain a permit that establishes effluent limitations and specifies monitoring and reporting requirements. The NPDES program regulates the discharge of waste to waters of the

United States and requires wastewater dischargers to regulate non-domestic waste discharged to sewers through activities such as pretreatment programs and/or sewer-use ordinances. NPDES permits include the following terms and conditions:

- ▶ effluent discharge limitations,
- ▶ prohibitions,
- ▶ receiving-water limitations,
- ▶ compliance monitoring and reporting requirements, and
- ▶ other special study or compliance provisions.

National Toxics Rule and California Toxics Rule

In 1992, pursuant to the CWA, EPA promulgated the National Toxics Rule (NTR) to establish numeric criteria for priority toxic pollutants for California. The NTR established water quality standards for 42 pollutants not covered at that time under California's statewide water quality regulations. As a result of a September 1994 court order that revoked California's statewide water quality control plan for priority pollutants, EPA initiated efforts to promulgate additional numeric water quality criteria for California. In May 2000, EPA issued the CTR, which promulgated numeric criteria for priority pollutants. The CTR documentation (Volume 65, pages 31682–31719 of the *Federal Register* [65 FR 31682–31719], May 18, 2000, along with amendments in February 2001) “carried forward” the previously promulgated standards of the NTR, thereby providing a single document listing California's fully adopted and applicable water quality criteria for 126 priority pollutants.

State

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act, California must adopt water quality policies, plans, and objectives to ensure that the state's beneficial uses for water are reasonably protected. The law requires the nine RWQCBs to adopt water quality control plans and establish water quality objectives, and authorizes the SWRCB and RWQCBs to issue and enforce permits containing requirements for the discharge of waste to surface waters and land. The water quality standards provisions of the state's water quality control plans (i.e., designation of beneficial uses, adoption of water quality objectives to protect beneficial uses, and adoption of an antidegradation policy) meet the requirements of Section 303 of the federal CWA, which requires the states to adopt water quality standards.

Water Quality Control Plan for the Central Valley Region

The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan), last amended in 2009, defines the beneficial uses, water quality objectives, implementation programs, and surveillance and monitoring programs for waters of the Sacramento River and San Joaquin River basins. The Basin Plan contains specific numeric water quality objectives that apply to certain water bodies or portions of water bodies. Numerical water quality objectives have been established for bacteria, dissolved oxygen (DO), pH, pesticides, EC, total dissolved solids, temperature, turbidity, and trace elements. Additionally, the Basin Plan contains numerous narrative water quality objectives generally intended to specify broad goals and minimum acceptable conditions.

The beneficial uses of Rock Creek and Dry Creek are designated via the “tributary statement” in the Basin Plan, which states that the “...beneficial uses of any specifically identified water body generally apply to its tributary streams” (Central Valley RWQCB 2009:II-2.00). Because Rock Creek and Dry Creek are tributary to the Sacramento River, the beneficial uses of the Sacramento River between the Colusa Drain and the I Street Bridge have been designated for Rock Creek and Dry Creek by applying the Basin Plan's tributary statement. In addition, the Basin Plan implements SWRCB Resolution No. 88-63, which established state policy that all waters (including groundwater), with certain exceptions, should be considered suitable or potentially suitable for

municipal or domestic supply. Table 3.9-1 identifies the designated beneficial uses for surface water. Groundwater near the SMD 1 WWTP is considered as suitable or potentially suitable for agricultural supply (AGR) and industrial process supply (PRO).

Table 3.9-1 Beneficial Uses for Rock Creek and Dry Creek	
Beneficial Use	Abbreviation
Municipal and domestic supply	MUN
Cold freshwater habitat	COLD
Agricultural supply (irrigation and stock watering)	AGR
Migration of aquatic organisms	MIGR
Contact water recreation	REC-1
Noncontact water recreation	REC-2
Spawning, reproduction, and/or early development	SPWN
Groundwater recharge	GWR
Wildlife habitat	WILD
Warm freshwater habitat	WARM
Source: Central Valley RWQCB 2009	

Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

The *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (commonly referred to as the Statewide Implementation Plan) applies to discharges of toxic pollutants into California’s inland surface waters, enclosed bays, and estuaries. Effective since April 28, 2000 (as amended in 2005), the policy describes methods for setting effluent limitations in NPDES permits for NTR and CTR standards and priority pollutant objectives established in basin plans. The policy also establishes certain monitoring requirements and provisions for controlling chronic toxicity, and includes special provisions for certain types of discharges.

California Antidegradation Policy (SWRCB Resolution No. 68-16)

The goal of SWRCB Resolution No. 68-16 (“Statement of Policy with Respect to Maintaining High Quality Waters in California”) is to maintain high-quality waters where they exist in the state. SWRCB Resolution No. 68-16 states, in part:

1. Whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water, and will not result in water quality less than that prescribed in the policies.
2. Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The SWRCB has interpreted Resolution No. 68-16 to incorporate the federal antidegradation policy, which is applicable if a discharge that began after November 28, 1975, will lower existing surface water quality.

3.9.1 DISCUSSION

- a) **Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in increased frequency and magnitude of flooding that would pose significant risks to human life or property?**

Less-than-Significant Impact. Expanding the discharge rate for SMD 1 WWTP effluent from the existing average daily discharge rate of approximately 1.7 mgd to the proposed average dry-weather flow (ADWF) design-capacity rate of 2.7 mgd would be anticipated to result in a corresponding increase in the peak hourly effluent discharge rate to Rock Creek from the current rate of about 10.4 mgd to approximately 11.9 mgd (see Table 2-1). The increased peak hourly effluent flow of 1.5 mgd (equivalent to 2 cfs) equates to an increase of approximately 0.1% over the current 10-year peak flows in Rock and Dry Creeks (about 2,500 cfs).

Constructing new facilities would increase the developed area of the SMD 1 WWTP site, including new paved areas and other impervious surfaces. Additional impervious surfaces would reduce infiltration of rainfall into the soil during rain events and thus may produce additional stormwater runoff volume and higher flow rates. The potential additional stormwater runoff that would be generated under the proposed project has not been quantified. However, the additional drainage from the 10-acre site would not be expected to measurably contribute to channel peak flows that are generated in the upstream watershed, an area that exceeds 9,000 acres. Moreover, all stormwater generated onsite would be routed to the WWTP headworks for treatment. Because the WWTP unit processes provide a large volume of storage, it is anticipated that the WWTP would attenuate the peak rate of treated stormwater ultimately discharged with treated domestic wastewater.

The additional effluent discharge and stormwater drainage generated by the proposed project would be small relative to current peak-flow events that occur in the Rock Creek and Dry Creek channels. This additional discharge and drainage would not be expected to measurably change peak-channel-flow characteristics that dictate flooding conditions such as duration, frequency, water depth and inundation, or flow velocity. Channel flows related to storm events are a concern because they increase the exposure and risk of humans and livestock to flooding, can cause erosive damage to property and infrastructure (roads and bridges) adjacent to the channel, and can result in damage from debris and sedimentation. However, downstream of the SMD 1 WWTP, the Dry Creek channel is confined in a narrow and incised canyon, traversing rural areas of Placer County where there are few, if any, major encroachments on the natural channel (e.g., bridges, fences, dams and diversions, buildings) that would be exposed to or cause flooding hazards. Additionally, channel-flow velocity and water depth are not affected appreciably by small changes in flow in high-gradient streams like Dry Creek. Consequently, any potential small changes in channel flows associated with the proposed project would not be expected to cause or contribute measurably to any flooding hazards. Therefore, this impact would be **less than significant**.

- b) **Place within a 100-year flood hazard area structures that would impede or redirect flood flows?**

Less-than-Significant Impact. The existing SMD 1 WWTP and proposed facility improvement areas are not located within a FEMA-designated 100-year floodplain of Rock Creek or Dry Creek. However, the new WWTP facilities would be constructed on foundation pads that would be filled to raise the elevations above the anticipated depth of peak channel flows in Rock Creek and Dry Creek. The elevated foundation pads may encroach upon the floodplain, which in turn may cause flows to be impeded or redirected to the opposite sides of the channels. However, hydrologic and hydraulic analyses were conducted, as part of the planning and engineering design of the proposed project. These analyses evaluated the location of the estimated extent of floodplain inundation that would occur with peak flows having a predicted 1% chance of occurring in any given

year, or 0.01 annual exceedance probability [AEP] (i.e., 100-yr event) and having a 0.002 AEP (500-yr event). Based on the floodplain analysis conducted for the project, and the location of the fill placement for the proposed facilities adjacent to the Rock Creek and Dry Creek channels, any areas of fill encroachment on peak flood flows would affect only the outer areas of shallow inundation, and thus would not result in a substantial change in the channel area occupied by floodwater (Aimone pers. comm.). Consequently, any potential change in channel inundation characteristics (e.g., depth or location of inundation) as a result of the project would be expected to be negligible. Moreover, as noted above for checklist question a), the Rock Creek and Dry Creek channels traverse rural areas, and minor changes in peak flow inundation characteristics are not anticipated to adversely affect any resource conditions sensitive to inundation. Therefore, this impact would be **less than significant**.

c) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. The SMD 1 WWTP site is not located downstream of a defined hazard area subject to flooding as a result of dam failure (Placer County 2010), and the project would not involve the construction of levees or dams. Consequently, **no impact** would occur.

d) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less-than-Significant Impact. The incremental increase in drainage and related potential for the proposed project to exceed drainage system capacities or create additional sources of polluted runoff was evaluated qualitatively. Stormwater runoff from the SMD 1 WWTP site would be managed via several new facilities and operations: conveyance of facility drainage to the WWTP headworks for treatment with the wastewater treatment processes, conveyance of runoff to on-site drainage and/or treatment best management practices (BMPs), and conveyance of clear flows directly to stormwater outfalls. With implementation of the new UV light disinfection system for the proposed WWTP improvements, the storage, handling, and use of chlorine disinfection products would be eliminated, thus eliminating a potential source of contaminants to runoff or accidental spills. Based on the anticipated improvements in stormwater drainage management features and operations under the proposed project, any changes in drainage rates or water quality characteristics would be anticipated to be negligible. Therefore, this impact would be **less than significant**.

e) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or off-site erosion or siltation?

Less-than-Significant Impact. Construction of the new SMD 1 WWTP would involve substantial land grading and construction disturbance and would occur over several years, with resulting exposure to winter rainfall and stormwater runoff. Thus, project-related construction activities have the potential to cause temporary soil erosion, contamination of runoff, and associated sedimentation on off-site properties or in the Rock Creek and Dry Creek channels. The construction-related activities and exposure to the drainage-related erosive forces (i.e., rainfall and runoff) would be temporary and would not be anticipated to cause substantial temporary erosion. The potential for soil erosion from other construction activities and aspects of the new WWTP are addressed in Section 3.6, “Geology and Soils,” checklist question b). Moreover, as discussed in checklist question f) below, construction activities would require implementation of water quality BMPs to avoid and minimize discharge of turbidity, suspended solids, and construction wastes, which would also serve to limit soil erosion.

As discussed above in checklist question d), the new SMD 1 WWTP and related construction of additional impervious surfaces have the potential to generate additional drainage during storm events. Additional runoff, if unmanaged, can cause or contribute to soil erosion. Construction of the new WWTP would involve development of stormwater collection, conveyance, and drainage outfall features that would limit the potential for runoff and

exposure of bare soils to additional erosion. Consequently, the potential for long-term changes or increased soil erosion is anticipated to be minimal.

As assessed above for checklist question b), the potential exists for proposed fill placement for WWTP foundation pads to encroach into floodwater inundation areas along Rock Creek and Dry Creek. Based on the floodplain analysis conducted for the proposed project, and engineering planning and design in relation to the results of the analysis, encroachment of fill would occur only at the outer edges of the floodplain. Consequently, it is anticipated that the minor fill placement would result in negligible changes to floodwater depth, flow velocity, and channel currents, and consequently would not lead to changes in channel erosion or sedimentation (Aimone pers. comm.). Therefore, the potential for the proposed project to result in substantial erosion or sedimentation would be a **less-than-significant** impact.

- f) **Cause exceedance of applicable State or Federal numeric or narrative water quality objectives/criteria, or other relevant water quality thresholds identified for this assessment, by frequency, magnitude, and geographic extent that would result in adverse effects to beneficial uses?**

Temporary Construction-Related Impacts on Water Quality

Less-than-Significant Impact with Mitigation Incorporated. The proposed project would involve extensive site grading, excavation, and facility construction activities that would occur over the course of the winter rainfall months. Additionally, construction activities would require storage, handling, and use of construction materials (e.g., fuels, concrete, paints, cleaners and solvents) that may contain contaminants potentially harmful to water quality. Construction activities have the potential to result in discharges of construction-related contaminants, cause soil erosion, and be exposed to rainfall and stormwater runoff. If shallow groundwater is present in the project area, excavations also may require temporary site dewatering and disposal to accommodate construction activities. Consequently, construction activities could result in the discharge of constituents of concern to receiving waters (i.e., Rock Creek and Dry Creek) that might exceed applicable water quality standards. Aquatic organisms are likely to be most sensitive to contaminants discharged into construction site runoff, which may include suspended sediment and turbidity, toxic organic compounds in petroleum products, or trace metals (e.g., copper, zinc). Therefore, the potential temporary construction-related water quality impacts of the proposed project would be **potentially significant**.

Mitigation Measure HYD-1: Prepare and Implement a Storm Water Pollution Prevention Plan and Implement Best Management Practices.

The County will file a Permit Registration Document to obtain coverage from the SWRCB under the NPDES Stormwater General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ/NPDES Permit No. CAS000002). As required by this General Permit, the County will have a SWPPP prepared and implement the specified erosion control and pollution prevention BMPs that will be used to avoid and minimize potential adverse construction-related water quality impacts. The SWPPP will identify the BMPs that must be incorporated during construction and will describe BMP inspection and monitoring activities. All water quality, erosion, and sediment control measures included in the SWPPP will be implemented in accordance with the SWPPP. The SWPPP will identify the responsibilities of all parties, contingency measures, agency contacts, and training requirements and documentation for those personnel responsible for installation, inspection, maintenance, and repair of BMPs. Key categories of BMPs that will be described in the SWPPP, to the degree appropriate for this project, include Pollution Prevention, Erosion Control, Good Housekeeping Measures, and BMP Inspection and Monitoring. Compliance with the SWPPP will be required in the contract specifications.

Specifically, the standard construction-related BMPs and practices required to be considered for inclusion in the SWPPP and implemented during and after construction include the following:

- ▶ *Good Site Management BMPs:* Identify all construction sites and staging activities, work schedules, temporary storage and borrow areas, construction materials handling and disposal, dewatering and treatment and disposal of groundwater removed from excavations, discharge locations and methods, and final stabilization and clean-up measures.
- ▶ *Erosion and Sediment Control BMPs:* Identify BMPs designed to stabilize exposed soils, minimize off-site sediment runoff, remove sediment from on-site runoff before it leaves the site, slow down runoff rates across construction sites; and identify post construction soil stabilization BMPs. Identify and implement appropriate temporary and long-term seeding, mulching, and other erosion control measures as necessary to minimize erosion.
- ▶ *Good Housekeeping Measures:* Identify BMPs designed to reduce exposure of construction sites and materials storage to stormwater runoff, including tracking control facilities; equipment washing; litter and construction debris; designated refueling and equipment inspection/maintenance practices; and spill control and response measures for hazardous materials.
- ▶ *Non-Storm Water Management Measures:* Implement measures to control all non-storm water discharges during construction.
- ▶ *Run-on and Run-off Control Management:* Effectively manage all run-on and run-off from the site.
- ▶ *BMP Inspection Monitoring, Maintenance and Repair:* In the SWPPP, provide clear objectives in the SWPPP for evaluating environmental compliance. Identify inspection and monitoring protocols, Qualified SWPPP Practitioner (QSP) responsible for SWPPP implementation, requirements for environmental awareness training, requirements for preparation of Rain Event Action Plans, contractor and agency roles and responsibilities, reporting procedures, and communication protocols.

This impact would be reduced to a **less-than-significant** level with implementation of Mitigation Measure HYD-1.

Operations-Related Impacts on Water Quality

Less-than-Significant Impact. The proposed increase in the effluent discharge rate from the SMD 1 WWTP from the existing 1.7 mgd to 2.7 mgd ADWF and the long-term project-related operations of an upgraded treatment plant would affect water quality in Rock Creek. The assessment of proposed project operations considered the projected changes in effluent quality with the treatment process upgrades as documented in the report of waste discharge prepared by the County's engineering consultants (Placer County 2009a). It was assumed that concentrations of various constituents present in the effluent discharged from the new SMD 1 WWTP would be the same as or better than those present in the existing effluent. The magnitude and frequency of effluent constituent discharges, and resulting effects on the receiving water bodies, are derived from an antidegradation analysis prepared by Robertson-Bryan, Inc. (Placer County 2009b) for the NPDES/WDRs permit renewal process (see Appendix D). The water quality impacts were assessed considering potential dilution, where relevant to the analysis. The County prepared an effluent dilution study as part of the permit renewal process that evaluated conditions in the combined streamflow of Dry Creek and Rock Creek downstream of the WWTP (Robertson-Bryan, Inc. 2009) Based on the previous four years of daily effluent discharge measurements (i.e., 7/1/05 to 6/30/09) and previous ten years of Dry Creek and Rock Creek streamflow data (i.e., 1/1/99 – 6/30/09), the minimum monthly average dilution ratio of streamflow to effluent provided downstream is about 1:1. This general range of available dilution from streamflow is observed in most of the drier months of the year from March through October. In other words, the assessment indicates that under monthly average conditions, effluent

comprises less than 50% of the total streamflow downstream of the WWTP under worst-case dry conditions, and likely comprises much less of the total streamflow under normal, or average conditions.

Concentrations of constituents in WWTP proposed effluent were evaluated in relation to applicable water quality objectives. Appropriate water quality objectives included adopted CTR/NTR criteria, state MCLs for drinking water, and Basin Plan water quality objectives. In cases where adopted criteria do not exist (e.g., for aluminum), EPA-recommended criteria or other literature-based values were used. The evaluation consisted of determining whether the constituent had been detected and how substantial the detected maximum concentration was.

For some constituents that have not been detected (e.g., trace organic compounds), the best commercially available laboratory analytical detection limits exceed the applicable criteria. No relevant assessment of the presence or concentration of these constituents in the effluent can be conducted; thus, these constituents were not carried forward for further analysis because an informed impact determination cannot be made based on the available information. Constituents that have never been detected at or above the laboratory reporting limit (a limit that is less than the applicable regulatory objective), and constituents that have been detected only at levels below applicable water quality standards or other relevant guidance values, were not evaluated further because it is assumed that adverse effects to beneficial uses would not occur when present below water quality objectives or other relevant threshold values.

Because the discharge would meet applicable regulatory criteria, the discharge of undiluted effluent from the SMD 1 WWTP would not adversely affect any beneficial use of the receiving water. This conclusion includes constituents that may be detected but are not regulated, and do not have any other relevant guidance value that would facilitate an impact assessment. Among such constituents are several inorganic ions (calcium, potassium, magnesium). Constituents were evaluated if they were detected at least once above an applicable water quality standard, or detected above other relevant guidance values (e.g., EPA-recommended criteria) where no standard exists. If consistent compliance with the applicable water quality criteria/objectives was demonstrated for the receiving water downstream of the SMD 1 WWTP's effluent discharge, or if beneficial uses would not be adversely affected, then it was determined that the proposed project would not adversely affect water quality.

Under the proposed project, effluent would be discharged to Rock Creek from a reconstructed outfall located approximately 200 feet upstream from the confluence with Dry Creek. Because the Rock Creek reach affected by the effluent discharge is short, Table 3.9-2 summarizes the antidegradation mass-balance analysis of effluent constituent discharges in the combined receiving-water flow of Rock Creek and Dry Creek downstream of the SMD 1 WWTP, consisting of the detected constituents, applicable water quality objectives, and estimated project-related change in receiving water concentration and mass loading. The antidegradation analysis report (Appendix D) provides a similar tabular summary of projected changes to receiving water quality in Rock Creek only. The water quality effects to Rock Creek would be similar to those described below, and the impact assessments and significance determinations for effects in Dry Creek for CEQA compliance below are also applicable to Rock Creek. Detailed assessments of project-related effects on DO and temperature conditions are addressed in Section 3.4, "Biological Resources," because fisheries resources are the beneficial uses considered most sensitive to changes in these constituents.

The concentrations of several constituents in effluent from the SMD 1 WWTP would decrease after implementation of the proposed upgrades to the treatment process because the upgrades would improve treatment performance. In particular, the WWTP would be upgraded specifically to reduce nitrogen levels (i.e., ammonia and nitrates) through nitrification and denitrification processes. The proposed conversion to UV disinfection is anticipated to eliminate production of THMs, and discontinuing the use of chlorine-based disinfection and dechlorination chemicals is expected to reduce concentrations of total dissolved solids and EC. The improved solids-removal performance of the new SMD 1 WWTP would reduce turbidity and concentrations of total suspended solids. Improved solids removal may also reduce concentrations of constituents that can be associated with solids through physical or chemical binding, such as some inorganic elements (e.g., iron, manganese, phosphorus) and total trace metals and organic compounds (e.g., aluminum, zinc). The resulting concentrations of

**Table 3.9-2
Incremental Mass-Balance Change in Dry Creek Water Quality Attributable to Future 2.7-mgd Average Dry-Weather Flow Discharge of
Constituents and Comparison to Applicable Water Quality Standards**

Constituent	Units	Effluent Percent Detect	Peak Concentration in Dry Creek downstream of WWTP and Rock Creek (RSW-004)			Lowest Applicable Water Quality Criteria		Assimilative Capacity	
			At Current Permitted Discharge Rate (2.18 mgd)	At Future Discharge Rate (2.7 mgd)	Incremental Increase	Value	Basis	Available	Used by Expansion
Aluminum	µg/l	92	163	163	-0.49	200	EPA	NA ¹	NA
Ammonia	mg/l	69	14.6	1.95	-12.6	2.7	EPA	NA	NA ²
Antimony	µg/l	60	0.176	0.196	0.0199	6	DPH MCL	5.82	0.3%
Arsenic (without outlier)	µg/l	100	2.43	2.76	0.334	10	DPH MCL	7.57	4.4%
Atrazine	µg/l	19	1.98	1.98	0.0062	NA	NA	NA	NA
Barium	µg/l	100	9.32	8.87	-0.448	1000	EPA-Advisory	991	0.0%
Cadmium	µg/l	60	0.035	0.0353	0.0003	3.22	CTR-AQ	3.19	0.0%
Chloride	mg/l	100	23.5	26.5	3.057	106	Basin Plan	82.5	3.7%
Chloroform	µg/l	96	9.14	ND	NA ³	5.7	NTR	NA	NA ²
Chromium (III)	µg/l	60	0.426	0.396	-0.03	50	DPH MCL	49.6	-0.1%
Chromium (IV)	µg/l	15	0.967	0.965	-0.002	11	CTR-AQ	10.0	0.0%
Copper (without outlier)	µg/l	95	9.85	9.92	0.0709	12.51	CTR-AQ	2.66	2.7%
Cyanide	µg/l	33	0.127	0.0938	-0.034	5.2	CTR-AQ	5.07	-0.7%
DBCM	µg/l	29	0.211	ND	NA ³	0.4	CTR-HH	0.189	NA ²
DCBM	µg/l	75	1.343	ND	NA ³	0.56	CTR-HH	NA	NA ²
Di-n-butyl phthalate	µg/l	20	0.506	0.512	0.0066	2700	CTR-HH	2,700	0.0%
EC	µmhos/cm	100	313	347	33.5	700	Basin Plan	387	8.7%
EC with UV system	µmhos/cm	100	316	260	-52.9	700	Basin Plan	387	-14%
Fluoride	µg/l	58	0.1428	0.143	0.0006	2000	DPH MCL	2,000	0.0%
Iron	µg/l	100	224	207	-16.6	300	DPH MCL	NA ¹	NA
Lead (without outlier)	µg/l	95	1.21	1.22	0.0094	4.48	CTR-AQ	3.27	0.3%
Manganese	µg/l	100	27.7	27.0	-0.632	50	DPH MCL	22.3	-2.8%
Mercury	µg/l	79	0.0034	0.00323	-2E-04	0.05	CTR-HH	0.0466	-0.4%
MBAS	mg/l	92	0.057	0.0636	0.0066	0.5	DPH MCL	0.443	1.5%
Molinate	µg/l	20	2.22	2.25	0.0216	13	DFG	10.8	0.2%
Nickel	µg/l	75	2.73	2.72	-0.008	69.8	CTR-AQ	67.1	0.0%
Nitrate	mg/l	100	47.3	9.77	-37.5	10	DPH MCL	NA	NA
OCDD	pg/l	30	11.9	11.3	-0.563	NA	NA	NA	NA

**Table 3.9-2
Incremental Mass-Balance Change in Dry Creek Water Quality Attributable to Future 2.7-mgd Average Dry-Weather Flow Discharge of
Constituents and Comparison to Applicable Water Quality Standards**

Constituent	Units	Effluent Percent Detect	Peak Concentration in Dry Creek downstream of WWTP and Rock Creek (RSW-004)			Lowest Applicable Water Quality Criteria		Assimilative Capacity	
			At Current Permitted Discharge Rate (2.18 mgd)	At Future Discharge Rate (2.7 mgd)	Incremental Increase	Value	Basis	Available	Used by Expansion
Phosphorus	mg/l	100	1.73	2.01	0.278 ⁴	NA ⁵	Narrative ⁶	NA	NA
Selenium	µg/l	50	1.162	1.17	0.011	5	CTR-AQ	3.84	0.3%
Silver	µg/l	5	0.0198	0.0198	7E-05	3.36	CTR-AQ	3.34	0.0%
Sulfate	mg/l	100	18.4	20.5	2.15	250	DPH 2nd MCL	232	0.9%
TDS	mg/l	100	182	201	19.1	450	Basin Plan	268	7.1%
TDS with UV system	mg/l	100	184	152	-30.6	450	Basin Plan	268	-11%
Tributyltin	µg/l	9	0.0025	0.00247	-3E-05	0.072	EPA-AQ	0.0695	0.0%
Zinc	µg/l	100	46.5	46.9	0.426	160	CTR-AQ	114	0.4%

Notes: µg/l = micrograms per liter; µmhos/cm = micromhos per centimeter; Basin Plan= *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*; CTR-AQ= California Toxics Rule criterion for the acute/chronic protection of aquatic life, based on a minimum effluent hardness of 141 milligrams per liter as calcium carbonate; CTR-HH = California Toxics Rule criterion for the protection of human health (consumption of water and organisms); DBCM = dibromochloromethane; DCBM = dichlorobromomethane; DFG = California Department of Fish and Game; DPH MCL = California Department of Public Health (formerly California Department of Health Services) maximum contaminant level; DPH 2nd MCL= California Department of Public Health Services (formerly California Department of Health Services) secondary maximum contaminant level; EPA National Recommended Water Quality Criteria for freshwater; EC = electrical conductivity; EPA = U.S. Environmental Protection Agency; MBAS = methylene blue active substance (surfactant); mgd = million gallons per day; mg/l = milligrams per liter; NA = not applicable and/or no assimilative capacity is available; ND = nondetect; NTR = National Toxics Rule; OCDD = octachlorodibenzo-p-dioxin; TDS = total dissolved solids; Total Rec. = total recoverable; UV = ultraviolet; WWTP = wastewater treatment plant.

All effluent values expected to be non-detectable with UV disinfection.

¹ Currently there is no assimilative capacity because the upstream receiving water exceeds the applicable water quality criteria.

² Currently there is no assimilative capacity; however, effluent from the upgraded/expanded plant and downstream receiving waters will meet applicable water quality criteria.

³ The anticipated decrease cannot be calculated because effluent levels are expected to be nondetect for the upgraded/expanded plant.

⁴ Phosphorus levels are anticipated to decrease in effluent from the upgraded/expanded plant. However, an accurate quantification of the anticipated decrease cannot be calculated at this time.

⁵ Applicable numerical regulatory objectives for phosphorus do not currently exist and there are no other relevant threshold values established for California waters. Therefore, there is no readily available numerical guidance value or other threshold with which to interpret the narrative objective. The U.S. EPA has developed guidance for states to develop numeric nutrient criteria for the purpose of preventing nuisance aquatic algae biostimulation (EPA 2000; -Nutrient Criteria Technical Guidance Manual, Rivers and Streams). The potential exists for California to establish freshwater nutrient numeric criteria for inland water bodies in the future through a formal rule setting process. For further discussion of phosphorus, refer to the discussion below under "Nutrients (Nitrogen and Phosphorus)". The assessment therein indicates that phosphorus is not likely to contribute to nutrient biostimulation in the receiving water downstream of the SMD 1 WWTP discharge.

⁶ The Central Valley Basin Plan contains a narrative water quality objective for biostimulation, as follows: *Water shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.*

Source: Placer County 2009b

these constituents in Rock Creek and Dry Creek would decrease, and concentrations would be lower than the applicable water quality objectives necessary to fully protect beneficial uses.

The proposed project is not anticipated to increase the concentration of any constituent in the effluent from the SMD 1 WWTP. However, for those constituents where effluent concentrations would not be anticipated to change appreciably, the potential exists for concentrations in Rock Creek and Dry Creek to increase slightly in response to the increased effluent discharge rate as wastewater flows increase in the service area. As summarized in Table 3.9-2, for constituents where concentrations in receiving water may increase, there would be no increase in the potential for exceedances of applicable regulatory criteria or other relevant thresholds used for the assessment. Additionally, for several constituents (aluminum, barium, chromium, cyanide, iron, manganese, mercury, nickel, the dioxin congener OCDD [octachlorodibenzo-p-dioxin], and tributyltin), background receiving-water concentrations have been higher than effluent concentrations. Consequently, the mass-balance analysis demonstrates that because of the increased capacity of the SMD 1 WWTP, effluent discharge would contribute to reduced concentrations in the receiving streams. The mass-balance analysis also indicates that the proposed project would meet the highest statutory and regulatory NPDES requirements. Thus, when the plant is operating as designed, the effluent discharge from the upgraded SMD 1 WWTP would not cause exceedance of applicable state or federal numeric or narrative water quality objectives/criteria, or other relevant water quality thresholds identified for this assessment, by frequency, magnitude, and geographic extent that would result in adverse effects on beneficial uses of Rock Creek, Dry Creek, or any other downstream water bodies.

Specific information is provided below for several constituents for which the County is continuing to resolve regulatory compliance issues identified in the renewed NPDES/WDRs permit, or that were not addressed in detail in the antidegradation analysis.

Arsenic, Copper, and Lead

The renewed NPDES/WDRs permit contains effluent limitations for arsenic, copper, and lead, based on single elevated sample values in the data record. Further evaluation of these values indicated that they are statistical outliers within the data record, and thus are not considered representative of the projected maximum concentration in effluent from the SMD 1 WWTP. Because the values are outliers, they are not considered reasonable or representative of the anticipated effects on receiving-water quality. Moreover, the concentrations of these constituents measured in all other effluent samples have been lower than applicable regulatory criteria. Additionally, as a result of the new WWTP containing new treatment processes and improved filtration which will improve suspended solids removal performance, the concentrations of trace metals would be expected to not increase at a minimum, and may decrease. Therefore, there is substantial evidence that the potential arsenic, copper, and lead discharges would not result in exceedances of applicable criteria in the receiving water, or otherwise adversely affect beneficial uses, downstream of the discharge. Therefore, the potential long-term operations-related water quality impacts of the proposed project due to arsenic, copper, and lead discharges would be **less than significant**.

Aluminum

Understanding the effect of aluminum on water quality requires an understanding of the current permitting process for aluminum. USEPA developed ambient aluminum standards to protect freshwater aquatic life. Their standard is a 4-day average (chronic) and 1-hour average (acute) aluminum concentration of 87 µg/L and 750 µg/L, respectively. The California Department of Public Health established a 200 µg/L standard to protect drinking water sources. The Central Valley RWQCB has considered these standards in light of site specific studies and determined that some local wastewater treatment plants will be held to the less stringent standard. For example, the City of Roseville Pleasant Grove and Dry Creek, and City of Lincoln wastewater treatment plants are subject to a maximum daily aluminum discharge standard of 750 µg/L, while the City of Auburn treatment plant discharge standard was 146 µg/L. The City of Auburn later provided the results of a site specific study and the Central Valley RWQCB relaxed their discharge standard for aluminum to the 200 µg/L level (Order R5-2011-

0003 dated February 3, 2011). Because the County has not yet provided the results of their site specific study to the Central Valley RWQCB, SMD 1 is currently held to a 151 µg/L maximum day aluminum discharge standard.

The County anticipates the SMD 1 aluminum standard will change similarly to the way the standard was changed for the City of Auburn. The County has already conducted water quality sampling to support a less stringent aluminum discharge standard and is in the process of completing the required study for submission to the Central Valley RWQCB. Based on the results of sampling completed to date, the water-effect ratio (WER, the ratio of a metal's toxicity in a site water to the toxicity of that same metal in laboratory water) for the SMD 1 effluent was 13.7. This means it would take 13.7 times more aluminum in Rock/Dry Creek water to see the same toxic effect in the EPA test waters used to establish the 87 µg/L standard.

In addition, the USEPA reviewed SMD 1 effluent and receiving water hardness and pH data and indicated the 750 µg/L would be appropriate. Mr. Charles Delos of U.S. EPA Headquarters in Washington indicated in a letter dated June 10, 2010 that "The hardness of the [SMD 1] effluent is high, and the upstream hardness of Rock Creek and Dry Creek is generally moderate. With respect to the aluminum discharged in the effluent, the critical condition for protection of aquatic life is the low dilution condition. For [SMD 1] a criterion of 750 µg/L is appropriate. Because the effluent aluminum would be diluted simultaneously with any dilution of effluent hardness, there is no basis for anticipating that the effluent aluminum would pose a toxicity problem during periods of higher dilution flow, when it allows attainment of the 750 µg/L criterion in low-dilution situations."

Based on the WER sampling, and the letter from the USEPA referenced above, the County has conservatively assumed the Central Valley RWQCB would use the next most stringent standard of 200 µg/L for SMD 1, just like it did for the City of Auburn. Historic effluent and creek water quality data from July 2006 through June 2009 for the SMD 1 WWTP show the maximum effluent concentration for aluminum to be 162 µg/l, which is lower than the most stringent applicable criterion (i.e., 200 µg/l MCL). Therefore, the project would not result in exceedances of applicable aluminum criteria in the receiving water, or otherwise adversely affect beneficial uses, downstream of the discharge. Therefore, the potential long-term operations-related water quality impacts of the proposed project due to aluminum discharges would be **less than significant**.

Nutrients (Nitrogen and Phosphorus)

Nitrogen and phosphorus are water quality constituents of concern in streams based in part on their important role as nutrients for plants such as planktonic and benthic algae, and vascular aquatic macrophytes. In particular, elevated concentrations of nutrients can contribute to biostimulation of algae and vascular plants, which in turn can contribute to several nuisance conditions:

- ▶ aesthetically undesirable conditions for recreational users;
- ▶ tastes and odors in supplies of drinking water;
- ▶ daily changes in DO and pH levels in response to algal photosynthesis (day) and respiration (night) cycles; and
- ▶ potential algal toxin production and release, primarily by blue-green algae species, which can be harmful to animals and humans.

Nitrogen is often considered the limiting nutrient in flowing streams, as opposed to other potential limiting factors such as light or phosphorus (EPA 2000). Numerical criteria have not been developed for the purpose of limiting biostimulatory responses in aquatic ecosystems, however, the Basin Plan contains a narrative water quality objective to require that discharges do not cause biostimulation that would adversely affect beneficial uses. A major difficulty in the science of biostimulation is that the variety and magnitude of specific factors affecting algae and plant growth can vary greatly among varying habitat types. EPA, in promoting the development of ecoregional nutrient criteria for streams, considers it more appropriate to classify the trophic states of stream

systems based on benthic algal biomass (e.g., chlorophyll per unit area) than on in-water nutrient concentrations (EPA 2000).

The new WWTP will provide nitrification and denitrification processes to dramatically reduce the effluent nitrogen concentrations compared to the existing conditions. Additionally, while not quantifiable, the new SMD 1 WWTP would be expected to provide improved performance in the removal of phosphorus. Because primary production is often limited primarily by available nitrogen, and because the proposed project would result in reduced nitrogen discharges, it is anticipated that potential biostimulation may decrease and would not be greater than under existing conditions. Additionally, instream algae and aquatic plant conditions in Rock Creek and Dry Creek were visually inspected by staff from Robertson-Bryan, Inc., on two separate dates during the summer and fall of 2009 during warm, low-flow conditions. The visual inspections and comparison of benthic algae growth conditions, at locations upstream and downstream of the SMD 1 WWTP effluent outfall, revealed no substantial or widespread presence of benthic algae biomass rising to the level of nuisance conditions within the streams. Moreover, the County has not received complaints from residents downstream of the SMD 1 WWTP regarding nuisance algae or aquatic plant biostimulation conditions in the streams. Based on available data, it is anticipated that the effluent nutrient discharges under the proposed project would not cause or contribute to nuisance-level biostimulation effects and thus would not adversely affect beneficial uses. Therefore, the potential long-term operations-related water quality impacts of the proposed project due to nutrient discharges would be **less than significant**.

Constituents of Emerging Concern

Several classes of compounds are considered constituents of emerging concern (CECs) when discharged in domestic wastewater: pharmaceutical and personal care products (PPCPs), natural and synthetic hormones, alkylphenols and alkylphenol ethoxylates, polybrominated diphenyl ether flame-retardant chemicals, bisphenol A, and new unregulated pesticides. Some classes of contaminants (e.g., PPCPs and hormones) are recognized as endocrine-disrupting compounds (EDCs) that have the potential to cause or contribute to adverse water quality effects on aquatic organisms. No applicable federal water quality criteria or state objectives have been adopted or recommended for the suite of CECs, and it may be many years before regulatory objectives are developed or the Central Valley RWQCB establishes effluent limitations for CECs in wastewater discharges. Consequently, this assessment is provided for informational purposes and at this time, there is not sufficiently developed scientific evidence available to assess the specific environmental effects of the SMD 1 effluent discharges on beneficial uses in downstream receiving water bodies.

The existing SMD 1 WWTP effluent has not been monitored for CECs, nor has monitoring been required. However, the proposed WWTP treatment processes would provide improved performance that would increase the efficiency of CEC removal. Consequently, the concentrations of CECs that may be present in the SMD 1 WWTP effluent would be anticipated to be lower under the proposed project than under existing conditions. The following discussion provides additional details about the state of the science regarding CECs and the potential effects of the proposed project.

EDCs are substances or mixtures that alter the function of the endocrine system and consequently cause adverse health effects in an intact organism or its progeny (WHO 2002). Endocrine disruption may be described as a functional change that may lead to adverse effects, not necessarily a toxicological end point. Most EDCs are human-made synthetic chemicals, such as hormones or other drugs, that are released into the environment unintentionally (e.g., as trace elements in human urine that are not removed by conventional wastewater treatment). EDCs may block, mimic, stimulate, or inhibit the production of natural hormones, disrupting the endocrine system's natural functions. The endocrine system is a complex of glands that secrete hormones and regulate reproduction, growth, and development in vertebrates. Certain drugs, such as birth control pills, intentionally alter the endocrine system. Although some EDCs are known, many chemicals are termed "suspect" because they have not been sufficiently evaluated to allow a conclusive determination of their endocrine-disrupting characteristics.

The potential ecological effects of EDCs in the aquatic environment were first reported in the 1990s. Studies suggested that the presence of natural and synthetic estrogen hormones in wastewater induced the production in male fish of vitellogenin, which is a protein involved in reproduction that is normally found only in females (Desbrow et al. 1998). Similar results were observed with alkylphenolic compounds, which are breakdown products of industrial surfactants used in products such as paints, herbicides, and cosmetics (Jobling et al. 1998). The U.S. Geological Survey (Barnes et al. 2002) found the occurrence of EDCs or potential EDCs to be high in surface waters across the country, with 80% of the streams sampled containing at least one of the 95 endocrine-disrupting compounds that were tested. Although the frequency of occurrence was relatively high, measured concentrations of EDCs were low, usually below drinking-water standards for compounds that have such standards.

Human exposure and dose response to EDCs in concentrations at the low levels found in the environment is still largely unknown. The absence of adequate exposure data, especially data regarding exposure during critical development periods, is the weakest link in determining whether any observed adverse effects on humans and/or fish and wildlife are linked to EDCs. The World Health Organization's state-of-the-science assessment concludes that "...our current understanding of the effects posed by EDCs to wildlife [including fish] and humans is incomplete" (WHO 2002). The National Toxicology Program's draft report on the Endocrine Disruptors Low-Dose Peer Review was released for public comment in May 2001 (66 FR 27152, May 16, 2001). As stated in this report, "the focus of this review was on 'biological change' rather than on 'adverse effect' because, in many cases, the long-term health consequences of altered endocrine function during development have not been fully characterized."

Some known EDCs (e.g., polychlorinated biphenyls [PCBs], dichlorodiphenyltrichloroethane [DDT], and chlordane) are regulated via ambient water quality criteria or drinking-water standards based on their toxicological and carcinogenic effects. However, there are no applicable water quality criteria for natural and synthetic estrogens or related pharmaceutical chemicals. Based on the current state of knowledge regarding dose-response relationships of CECs for various organisms at the low levels in which they can occur in surface waters, it is likely to be many years before any such standards are promulgated. The approach in the United States has been to require more definitive information to be gathered and conclusive research conducted before regulatory measures can be taken.

Municipal WWTPs are not specifically designed to treat and remove CECs, but activated sludge treatment processes are known to be effective in CEC treatment and removal. The Water Environment Research Foundation has sponsored research that investigated factors of WWTP processes that remove PPCPs (Oppenheimer and Stephenson 2006). The study evaluated monitoring data for 20 PPCP compounds in a variety of secondary biological and filtration treatment processes, including processes with nitrification and denitrification. The study determined that in general, an increase in solids residence time (SRT) was an important factor that enhanced removal efficiency for the majority of the monitored chemicals. The SRT required to achieve consistent removal above 80% is compound-specific, with many of the target compounds well removed by activated sludge processes with SRTs of 5–15 days. Half of the 20 PPCP target compounds frequently occurred in secondary influent, but were also efficiently removed (> 80%) at SRT of less than 5 days: caffeine, ibuprofen, oxybenzone, chloroxylenol, methylparaben, benzyl salicylate, 3-phenylpropionate, butylbenzyl phthalate, and octylmethoxycinnamate. An SRT of more than 30 days was necessary to achieve 80% removal for certain compounds.

Miège et al. (2009) evaluated PPCP removal performance based on monitoring data from 117 WWTPs and determined that removal efficiency was highest in facilities using activated sludge with nitrogen removal processes. They determined that the main mechanisms involved in PPCP removal efficiency were biodegradation (e.g., oxidation, hydrolysis, demethylation, cleavage of glucuronide conjugates), sorption on sludge or particulate matter (by hydrophobic or electrostatic interactions), and filtration.

The unit processes proposed for the upgraded SMD 1 WWTP are not specifically designed to treat and remove CECs. However, the upgraded WWTP would include improvements and new treatment technologies and unit processes (e.g., improved filtration and solids removal, improved oxidation and anaerobic digestion, improved nitrogen removal, UV disinfection) that would be anticipated to enhance treatment and removal performance for CEC compounds. In particular, the upgraded SMD 1 WWTP would provide extended-aeration activated sludge processes with substantially longer hydraulic detention time and SRT than is provided at the current WWTP. In addition to the elimination of the THMs associated with the current chlorine disinfection process (discussed above), potential formation of chlorate (which is a suspected EDC) would be reduced by eliminating chlorine use. Additionally, UV disinfection has been shown effective in reducing concentrations of another disinfection byproduct and suspected human carcinogen, n-Nitrosodimethylamine (Hunter et al., 2008), which also would be formed to a lesser degree through elimination of chlorine disinfection. Consequently, implementing the proposed project would be anticipated to result in lower effluent concentrations for any CECs that may be present in the effluent with operation of the current WWTP. Increased removal of a broad variety of CECs would improve water quality in downstream receiving water bodies.

Section 15145 of the State CEQA Guidelines provides that if, after a thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impacts. Taking this into consideration when considering the discussion above, it has been determined that further discussion of the impacts is too speculative for the following reasons: first, there are no current regulatory criteria against which to evaluate CECs in the effluent; second, considering the CEC issue is not well understood, and is the subject of ongoing research, the current presence and concentration of CECs in the SMD 1 WWTP effluent and the resulting impact or nonimpact is unclear; finally, while these unregulated CECs, as a group, are generally anticipated to be reduced via the improved and new WWTP processes, some CECs may not be reduced. Because the current state of knowledge about this topic is too speculative to evaluate, no impact conclusion can be made about CEC levels in the SMD 1 WWTP effluent, or any potential water quality effects of the discharge, on beneficial uses in the receiving water bodies.

g) Increase levels of a bioaccumulative pollutant by frequency, magnitude, or geographic extent such that the water body (or portion of a water body) would be expected to have measurably higher body burdens of the bioaccumulative pollutant in aquatic organisms, thereby substantially increasing the health risks to wildlife (including fish) or humans consuming those organisms?

Less-than-Significant Impact. Bioaccumulation is defined as an increase in the concentration of a chemical in a biological organism over time. Compounds accumulate in organisms whenever they are taken up and stored faster than they are metabolized (broken down within the body) or excreted from the body. Bioaccumulation occurs in aquatic organisms via direct uptake through the gills or skin, and by ingestion of other organisms that contain the chemicals (e.g., algae, insects, crustaceans, and other fish). Bioconcentration refers to the accumulation of a chemical in an organism at higher levels than are found in the environment or its food. Biomagnification refers to the process by which concentrations of a chemical in tissues increase in higher trophic-level organisms of the food chain. Overall bioaccumulation processes and rates depend on numerous factors: the environmental concentrations of the chemical, exposure pathways of organisms to the chemical (i.e., chemical properties, absorption and ingestion factors, and bioconcentration and biomagnifications processes), and metabolic/excretion factors.

Constituents detected in SMD 1 WWTP effluent that are recognized as having a strong potential to bioaccumulate in the aquatic environment include mercury, octachlorinated dibenzo-p-dioxin (OCDD) congener, selenium, and tributyltin. The effects of project-related discharges of bioaccumulative constituents were assessed based on the estimated increase in concentrations and mass loading to Rock Creek and Dry Creek; bioaccumulation rate and capacity factors partially depend on concentration gradients, and mass affects the total quantity of the constituent available for uptake in the environment relative to existing conditions. Project-related changes in mercury and selenium mass loading were assessed in the antidegradation analysis (refer to Appendix D) based on the potential

for their receiving-water concentrations to increase in Rock Creek and Dry Creek (see Table 3.9-3). The assessment for OCDD and tributyltin is qualitative and is not included in the table below because background receiving-water concentrations of these constituents have been higher than effluent concentrations, and concentrations in downstream receiving waters would continue to be lower than the background with implementation of the proposed project.

**Table 3.9-3
Incremental Change in Dry Creek Water Quality, on a Mass Loading Basis,
for Bioaccumulative Constituents**

Constituent	Units	Effluent Percent Detect	Mass Loading to Dry Creek (pounds per day)			Lowest Applicable Water Quality Criteria		Assimilative Capacity	
			At Current Permitted Discharge Rate (2.18 mgd)	At Future Discharge Rate (2.7 mgd)	Net Loading Increase	Value (pounds per day)	Basis	Available (pounds per day)	Used by Expansion
Mercury	µg/l	79	2.19×10^{-5}	3.48×10^{-5}	1.29×10^{-5}	2.6×10^{-3}	CTR-HH	0.00222	0.30%
Selenium	µg/l	50	0.0170	0.0270	0.0100	0.116	CTR-AQ	0.0723	7.2%

Notes: µg/l = micrograms per liter; Basin Plan= *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*; CTR-AQ= California Toxics Rule criterion for the acute/chronic protection of aquatic life, based on a minimum effluent hardness of 141 milligrams per liter as calcium carbonate; CTR-HH = California Toxics Rule criterion for the protection of human health (consumption of water and organisms); mgd = milligrams per day; mg/l = milligrams per liter Source: Placer County 2009b)

The upgraded WWTP would not include specific processes designed to remove the four bioaccumulative constituents, but the potential for an increase in effluent mass discharge to increase exposure of organisms to OCDD and tributyltin would be limited. In particular, the downstream receiving water concentrations for OCDD and tributyltin would be lower because effluent concentrations have been lower than background receiving water, and thus additional effluent discharge would further dilute the receiving water load. Additionally, while the total mass discharge downstream would increase slightly, both OCDD and tributyltin have been detected infrequently and reduced environmental exposure would be expected to result in no appreciable net change in the body burdens of aquatic organisms under project conditions. Moreover, both OCDD and tributyltin exhibit chemical properties that result in their strong association to sediment in the aquatic environment. Consequently, the improved solids treatment and removal performance that would be provided with the upgraded WWTP may reduce concentrations of these constituents in effluent relative to existing conditions. Both OCDD and tributyltin have been measured at low levels, with tributyltin more than an order of magnitude below the applicable regulatory CTR criteria. There are no regulatory criteria for OCDD; however, its Toxic Equivalency Factor is 0.0001, which reflects that the capacity to contribute to toxic effects is considered to be 1/10,000 of the capacity of the 2,3,7,8-TCDD dioxin congener, which is regulated with a CTR criterion. Given the low potential for increased aquatic exposure to OCDD and tributyltin, the proposed project would not be anticipated to cause or contribute to substantially increased exposure of organisms to uptake or measurably increased tissue levels. Therefore, the risks of adverse health effects from consumption of aquatic organisms in the receiving water would not be expected to change measurably, and thus is considered a **less-than-significant** impact.

With an increase of total flow into the SMD 1 WWTP, the mass discharge of mercury and selenium to Rock Creek and Dry Creek would be predicted to increase by approximately 1.29×10^{-5} and 0.0100 pounds per day, respectively (see Table 3.9-3). Although this is an increase, the mercury and selenium load in the creek is still well below the lowest applicable water quality criteria of 2.6×10^{-3} and 0.116, respectively. The federal human health tissue criterion for total mercury in edible fish fillets is 0.3 milligrams per kilogram (mg/kg) (EPA 2001). There is currently no adopted tissue criterion for selenium; however, EPA proposed a whole-body fish tissue criterion of 7.9 mg/kg in 2004. Based on newer information regarding bioaccumulation of selenium, EPA released

additional information indicating that the ultimate fish tissue criterion adopted is anticipated to be in the range of 15–20 mg/kg when finalized (73 FR 63706–63707, October 27, 2008).

Based on the concentration and mass-loading assessment, it is anticipated that organism exposure and bioaccumulation potential for mercury and selenium would not increase measurably. The incremental increase in mass loading would represent a negligible quantity distributed to the downstream receiving water system, and natural attenuation (e.g., physical and chemical reactions) would also likely minimize exposure routes. In particular, Dry Creek and its subsequent downstream receiving water bodies are generally all free-flowing riverine systems to the Sacramento River; the creek and downstream water bodies contain no reservoirs that could impede or prevent downstream transport of the constituents, or otherwise trap and increase organism exposure to the additional mass loading. Because concentrations in receiving waters would increase minimally, and are well below applicable regulatory water quality criteria, the potential for additional exposure and uptake related to concentration gradients would not change appreciably. Additionally, the Dry Creek system flows to larger streams that provide additional dilution, reducing the potential for concentration gradient-dependent uptake in organisms. Downstream water bodies also are all low-gradient, slow-moving systems relative to the higher gradient Rock Creek and Dry Creek systems, resulting in settling of additional solids and attenuation of constituents associated with settleable solids. Given the multiple pathways for constituent distribution and attenuation in the aquatic environment, the potential for increased organism exposure, uptake, and bioaccumulation is limited. Consequently, the proposed project would not be anticipated to cause or contribute to measurably increased tissue levels of mercury and selenium in aquatic organisms, or to substantially increase ecological or human health risks. This impact would be **less than significant**.

h) Cause long-term degradation of water quality, resulting in substantial risk of adverse effects to beneficial uses.

Less-than-Significant Impact. The purpose of an antidegradation assessment is to ensure that before an increased rate of wastewater discharge to a receiving water is authorized, sufficient evidence exists to show that existing beneficial uses of the water will be protected, and that any degradation of water quality will be limited and compliant with water quality standards and state and federal antidegradation policies (refer to Appendix D for a detailed discussion). The antidegradation analysis conducted for the proposed project evaluated the potential for the increased effluent discharge rate to increase concentrations of regulated and unregulated constituents in downstream receiving waters, and thereby to reduce the stream’s remaining available assimilative capacity for contaminant input. Assimilative capacity is the difference between the concentration of a constituent in a receiving water and an applicable water quality objective/criterion for the constituent, and is a measure of the ability of a water body to accept additional constituent input before concentrations exceed a threshold level. It represents the ability of the receiving water body to “assimilate” additional constituent loads without causing the water quality standard to be exceeded. Table 3.9-2 summarizes the results of the mass-balance analysis and evaluation of changes in constituent concentrations in the receiving water (Dry Creek); Table 3.9-3 summarizes predicted changes in mass loading with implementation of the proposed project and the expanded effluent discharge rate of 2.7 mgd.

As noted above in checklist question f), the potential for long-term operations under the proposed project to degrade water quality is associated primarily with the increase in the effluent discharge rate from the current flow rate to a rate of 2.7 mgd ADWF and for constituents that the new WWTP is not designed to treat. A primary objective of the proposed project is to improve the SMD 1 WWTP’s treatment processes and contaminant removal performance. As demonstrated in Table 3.9-2, projected concentrations of turbidity and total suspended solids, EC/TDS, nitrogen compounds (i.e., ammonia and nitrates), and THMs would be reduced with operation of the updated SMD 1 WWTP. Additionally, constituents typically associated chemically or physically with particulate matter such as trace metals and organic compounds may be reduced. Based on the predicted increase in receiving-water concentrations under the proposed project, the available background assimilative capacity of constituents regulated with numerical water quality objectives (i.e., arsenic) would be reduced by a maximum of 4.4%. The project-related incremental downstream degradation associated with atrazine, an unregulated

constituent, and phosphorus where background assimilative capacity is currently exceeded, would be small and would not be anticipated to result in measurable effects on existing beneficial uses. Finally, the incremental increase in discharge would not lead to a substantial increase in mass loading of bioaccumulative constituents or other conserved constituents such as total dissolved solids. In fact, the use of UV disinfection in the new WWTP would facilitate the elimination of some chemical additions for treatment processes, thus resulting in a reduced net mass loading of TDS to downstream receiving water bodies (refer to Appendix D).

Based on the results of the antidegradation analysis, the incremental lowering of receiving-water quality would be negligible. Considerably less than 10% of the available assimilative capacity of the immediate receiving water bodies would be used; 10% of available assimilative capacity is a threshold of change recognized by EPA as potentially being substantial and requiring further analysis. Thus, the proposed project would not substantially lower water quality for any constituent in Rock Creek and Dry Creek, relative to that which would occur under the current effluent flow rate. The limited degradation in receiving-water quality that may occur as a result of the proposed project would be small, and would accommodate important socioeconomic development in the service area while maintaining full protection of the beneficial uses of Rock Creek and Dry Creek. Finally, the minor degradation of certain water quality parameters that would occur as a result of the project is consistent with the state and federal antidegradation policies and would not cause long-term degradation of water quality that would result in substantial risk of adverse effects on beneficial uses. This impact would be **less than significant**.

3.10 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. Land Use and Planning. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.10.1 ENVIRONMENTAL SETTING

The project site is located in unincorporated Placer County. The unincorporated community of North Auburn is located immediately to the south of the project site. Land uses in the project vicinity consist of primarily single-family residential neighborhoods, both suburban and rural, with some commercial uses on the SR 49 corridor. The *Placer County General Plan* designates the project site as part of the *Auburn/Bowman Community Plan*, which defines the project site as a Rural Low-Density Residential area (Placer County 1994a, 1994b). According to the Placer County Zoning Map, the project site is designated as RS-AG-B-43-SP. The RS designation indicates a district intended for residential development characterized by detached single-family homes in standard subdivision form. The -AG designation indicates an agricultural combining district, meaning that while residential single-family is the primary intended land use for this district, agricultural uses also are allowed. The -B designation indicates a Building Site combining district, which is meant to provide for different parcel sizes in new subdivisions than would otherwise be required by an applicable zoning district, based upon special characteristics of the site or area to which the combining district is applied, including but not limited to sensitive environmental characteristics, limited resource capacities, and community character. The -43 designation indicates a district with a one-acre parcel minimum. The -SP designation indicates a Special Purpose combining district, which was created because Placer County found that mineral extraction operations, airports, community sewage treatment plants, and waste disposal facilities are of such importance to the health, safety, economy, and general welfare of the public that special consideration of the issue of land use had to be afforded such uses. The Special Purpose combining zone is created to identify specific areas in the vicinity of such uses where land use compatibility issues are of particular importance (Placer County 1994).

3.10.2 DISCUSSION

a) Physically divide an established community?

No Impact. The proposed project would extend an existing use onto two adjacent and currently vacant parcels. Nearby residences located to the west, south, and east of the existing SMD 1 WWTP would not be physically divided from an established community with project implementation and **no impact** would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The project site is designated in the *Auburn/Bowman Community Plan* as Rural Low-Density Residential, representing a transition zone between clearly rural areas and large-lot suburban projects. This zone typically provides for equestrian and small hobby farms. Although the project site is not used as a low-density residence, utilities are allowed in areas with a Rural Low-Density Residential designation. Accordingly, the proposed project would be consistent with the existing site's *Auburn/Bowman Community Plan* designation, which also serves as the project area's general plan land use designation (Placer County 1994b).

The project site is zoned RS-AG-B-43-SP, a residential single-family district designation that is intended to provide areas for residential development, characterized by detached single-family homes in standard subdivision form. For the public utility facilities, a minor use permit is required in this district. The purpose of a minor use permit is to allow County Planning Department staff and the zoning administrator to evaluate a proposed use and determine whether problems may occur; to provide the public with an opportunity to review a proposed project and express their concerns in a public hearing; to work with a project applicant to adjust the applicant's project through conditions of approval to solve any potential problems that are identified; or to disapprove a project if identified problems cannot be acceptably corrected (Placer County 1994c). Because the County would be required to obtain the minor use permit prior to project implementation, the proposed project would be consistent with the applicable zoning designation for the site. **No impact** would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. No existing habitat conservation plan or natural community conversation plan is applicable to the project site. The *Placer County Conservation Plan* was released in draft form on February 1, 2011. However, the plan has not yet been approved by the resource agencies. Accordingly, **no impact** would occur.

3.11 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Mineral Resources. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.11.1 ENVIRONMENTAL SETTING

Placer County includes an extensive range of extractive mineral resources, many of which have been mined since the Gold Rush era. Known mineral resources in the County include aggregate (sand, gravel, and decomposed granite), clay, quartz, stone (granite, limestone, and crushed quarry rock), and other minerals and ores including gold and other heavy minerals (Placer County 1994a). Minerals currently being extracted in Placer County include sand and gravel, clay, stone, and gold. Sand and gravel extraction is the most common mining activity in the County.

3.11.2 DISCUSSION

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. According to the *Placer County General Plan Background Report*, the project site is not located on an existing mineral extraction site or on a potential mineral resource site (Placer County 1994b). Therefore, the project would not result in the loss of availability of known mineral resources of value to the region and residents of the state. **No impact** would occur.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. The project site is not located on an existing mineral extraction site or on a potential mineral resource site. Therefore, the proposed project would not result in the loss of availability of a locally important mineral resources recovery site. **No impact** would occur.

3.12 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. Noise. Would the project:				
a) Result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards?				
Short-term Noise Sources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Long-term Noise Sources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.12.1 ENVIRONMENTAL SETTING

Existing Noise Sources and Sensitive Receptors

The nearest sensitive receptors to the project site are a group of six single-family residences that are located to the east of the project boundary along Joeger Road (the closest being approximately 20 feet away). The next closest sensitive receptors are the single-family residences located approximately 300 feet west on Joeger Road.

The noise environment in the project vicinity is dominated by surface transportation noise, emanating from vehicular traffic on Joeger Road and SR 49, and from existing WWTP operations. Intermittent noise from outdoor activities at the surrounding residences (e.g., people talking, operation of landscaping equipment, car doors slamming, and dogs barking), although minor, also influences the noise environment.

Traffic on SR 49 would contribute to the background noise levels at the project site and vicinity. Existing roadway traffic volumes are published by the California Department of Transportation (Caltrans) for SR 49 (Caltrans 2010). According to the *Placer County General Plan* (1994), Joeger Road is defined as a “Rural Collector” with a 2010 maximum daily traffic volume of 8,000 trips. Modeling was conducted using the Federal Highway Administration

(FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108). The FHWA model is based on California Vehicle Noise Reference Energy Mean Emission Levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receptor, and ground attenuation factors (Appendix E). Table 3.12-1 presents the modeled community noise equivalent levels (CNELs), based on existing average daily traffic volumes at 50 feet from the centerline of the near travel lane on SR 49, and the distances from the roadway centerline of SR 49 for the 60- and 65-dBA (A-weighted decibels) CNEL contours. The residence closest to the project site is approximately 1,100 feet from SR 49. Based on the modeling results, noise levels resulting from existing traffic on SR 49 are approximately 55 dBA CNEL at this residence.

Roadway	Average Daily Traffic	Noise Level at 50 Feet (dBA CNEL)	60-dBA CNEL Contour (feet)	65-dBA CNEL Contour (feet)
State Route 49 from Dry Creek Road to Lorenson Road	28,000	74	403	187
Joegar Rd from SR-49 to Project Site	8,000	65	106	49
Notes: CNEL = Community Noise Equivalent Level; dBA = A-weighted decibels Source: Modeling conducted by AECOM in 2010				

Existing Noise Standards

The applicable existing noise standards presented in the *Placer County General Plan* and the *Auburn/Bowman Community Plan* are presented in Table 3.12-2.

Type of Noise	Ordinance or Plan	Noise Standards	
		Daytime Hours (7 a.m. to 10 p.m.)	Nighttime Hours (10 p.m. to 7 a.m.)
Nontransportation-related noise	Placer County Noise Ordinance ¹	$L_{eq}(h)$: 55 dBA L_{max} : 70 dBA	$L_{eq}(h)$: 45 dBA L_{max} : 65 dBA
	<i>Auburn/Bowman Community Plan</i>	$L_{eq}(h)$: 50 dBA L_{max} : 70 dBA	
Transportation-related noise (as measured at residential land uses)	Placer County Noise Ordinance ¹ <i>Auburn/Bowman Community Plan</i>	60 dBA CNEL for outdoor activity areas, 45 dBA CNEL for interior spaces	
Notes: CNEL = community noise equivalent level; dBA = A-weighted decibels; $L_{eq}(h)$ = hourly equivalent noise level; L_{max} = maximum noise level			
¹ Placer County exempts construction noise that occurs Monday through Friday, 6 a.m. to 8 p.m.; and Saturdays, 8 a.m. to 8 p.m.			
Construction noise is not exempt from applicable standards on Sundays or federal holidays			
Sources: Placer County 1994, 2004; Chapter 9.36, Noise Ordinance of the Placer County Code			

3.12.2 DISCUSSION

- a) **Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, State, or federal standards?**

SHORT-TERM CONSTRUCTION SOURCE NOISE

Less-than-Significant Impact with Mitigation Incorporated. The proposed project would require the demolition of old facilities and the construction and renovation of new facilities, which would result in the

temporary generation of noise from demolition, material transport, building construction, utility routing, and other miscellaneous activities. At the peak of construction, two bulldozers, two cranes, four forklifts, two excavators, and two backhoes would be operating on the project site. In addition, at the peak of material delivery, the use of 20 concrete delivery trucks, 20 material delivery trucks, six subcontractor work pickup trucks, and four general contractor work pickup trucks would result in approximately 90 average daily trips. Noise levels for individual equipment could range from 80 to 85 dBA at 50 feet, as indicated in Table 3.12-3.

Table 3.12-3 Modeled Construction-Equipment Noise Levels	
Type of Equipment ¹	Noise Level in dBA at 50 feet
Dozer	85
Backhoe	80
Crane	85
Excavator	85
Total Combined Noise Level	
85	
Note: dBA = A-weighted decibels ¹ Modeling was not conducted for forklifts, only for the four loudest pieces of equipment that would operate simultaneously, because forklifts do not generally have internal combustion engines, and do not generate significant noise levels when compared to the other equipment listed. Source: Modeling conducted by AECOM in 2010 based on Federal Highway Administration (2006) model	

The simultaneous operation of on-site construction equipment could result in intermittent noise levels up to 85 dBA at 50 feet from the project site. Based on these noise levels and a typical noise-attenuation rate of 6 dBA per doubling of distance, exterior noise levels at noise-sensitive receptors located within 750 feet from the project site (e.g., residences) could exceed 55 dBA hourly equivalent noise level ($L_{eq}[h]$) (Placer County’s hourly daytime standard) without feasible noise controls. Intervening buildings, topographic features, and other masking noise sources such as SR 49 likely would reduce the distance from which construction noise would be noticeable. However, 750 feet would be the maximum distance at which noise would exceed County standards. More specifically, construction-generated noise levels could reach 96 dBA at the closest residence, located approximately 20 feet from the project site. Maximum noise levels would only be reached when equipment is operated directly adjacent to residences. Typical daily noise levels would range from 85 to 73 dBA at 50 to 200 feet, respectively.

Project construction also would result in a short-term increase in traffic on the local area roadway network, but this increase would not be sufficient to raise traffic noise levels. Up to 90 daily trips (consisting of 40 haul and 50 employee/contractor trips) would be expected to occur during peak construction activity periods. Construction-related traffic would be distributed over the roadway network, as identified in Section 3.16, “Transportation/Traffic.” Noticeable increases of 3 dBA (CNEL) typically do not occur without a substantial (i.e., doubling) increase in roadway traffic volumes (Caltrans 2009:7-5). Because the added traffic would be minimal and limited to specific routes, the overall traffic volumes (8,000 on Joeger Rd, 28,000 on SR 49) on affected roadways would not double; therefore, the overall traffic noise levels would not change substantially.

Noise levels from on-site, heavy-duty construction equipment would exceed standards set by the County at adjacent sensitive receptors (see discussion above and Table 3.12-3). However, construction activities occurring Monday through Friday, 6 a.m. to 8 p.m., and Saturdays, 8 a.m. to 8 p.m. would be exempt from noise standards established by the County noise ordinance. Construction activities would not be restricted to the hours for which construction-related noise would be considered exempt. Thus, if construction activities were to occur during nonexempt noise-sensitive hours or if construction equipment were not properly equipped with noise control

devices, construction-generated source noise could result in annoyance and/or sleep disruption to nearby noise-sensitive receptors (e.g., residences) and exceed applicable standards, creating a substantial temporary increase in ambient noise levels in the project vicinity. As a result, this impact would be **potentially significant**.

Mitigation Measure NOI-1: Maintain and Equip Project Construction Equipment with Noise Control Devices.

The County will ensure that project construction equipment is properly maintained and equipped with all feasible noise control devices, such as mufflers, in accordance with manufacturers' specifications.

Mitigation Measure NOI-2: Limit Project Construction to County-Exempted Hours; Notify Neighbors Otherwise.

Construction activities shall be limited to the hours of 6 a.m. to 8 p.m., Monday through Friday, and 8 a.m. to 8 p.m., Saturdays and Sundays, the times such noise levels are exempted by Placer County standards. When construction activities require hours extending beyond those limited by Placer County the contractor shall give area residents within 750 feet of activities 48-hours notice of activities.

Mitigation Measure NOI-3: Manage Construction Equipment Movement on the Project Site to Minimize Disturbance to Occupied Residences and Limit Idling Times.

Moving construction equipment around the project site shall be managed to minimize noise disturbance to occupied residences. Equipment not in use shall not be left idling for more than 5 minutes. The construction staging area(s) shall be located as far from nearby residences as feasible.

Mitigation Measure NOI-4: Designate a Disturbance Coordinator to Receive All Public Complaints.

The County will designate a disturbance coordinator, such as an employee of the general contractor or the project manager for the County, post the coordinator's contact telephone number conspicuously around the project site, and provide the number to nearby sensitive receptors. The disturbance coordinator shall receive all public complaints, be responsible for determining the cause of the complaint, and implement any feasible measures to alleviate the problem.

Implementing the above mitigation measures would reduce construction-generated noise levels by 5–15 dB at noise-sensitive receptors in the project vicinity by requiring use of mufflers, restricting hours, and minimizing the proximity of equipment to nearby residences. Furthermore, restricting operation of project construction-related equipment to less-sensitive daytime hours would reduce sleep disturbance and human annoyance to nearby noise receptors. As a result, short-term, construction-generated noise levels would be reduced. Implementation of Mitigation Measures NOI-1 through NOI-4 would reduce short-term construction source noise to a **less-than-significant** level.

LONG-TERM OPERATIONAL SOURCE NOISE

Less-than-Significant Impact with Mitigation Incorporated. As discussed in Section 3.16, "Transportation/Traffic," with long-term project operation, SMD 1 WWTP employee levels would increase from 7.5 to 11, resulting in an increase of 4 trips per day. The proposed project would also include the construction of a septage receiving station that would result in a maximum of two deliveries per week. These additional 4.5 vehicle trips per day would be negligible when compared to the existing available capacity on the local roadway network. With access for commercial haulers to the proposed septage receiving facility, septage deliveries are expected to increase three- to four-fold by 2034 (Lillis, pers. comm., 2010).

Typically, traffic volumes have to double before the associated increase in noise levels is noticeable (3 dBA CNEL) along roadways (Caltrans 2009:7-5). The addition of four to five daily project trips to local roadways

would not double the existing daily volumes on those roadways. Thus, operation of the proposed project would not increase long-term traffic noise levels associated with project implementation.

Mechanical Equipment

Specific noise levels from mechanical equipment at the proposed facilities are not known at this time. However, the noise that would be generated by the upgraded and expanded facility likely would be greater than that under existing conditions. In addition, expanding the SMD 1 WWTP would move mechanical facilities within approximately 100 feet of sensitive receptors located to the east on Joeger Road.

Operation of mechanical equipment could be a primary noise source associated with the SMD 1 WWTP expansion. Mechanical equipment is often mounted on rooftops, located on the ground, or located within mechanical rooms. The noise sources could take the form of fans, pumps, air compressors, chillers, or cooling/exhaust towers. The exact noise levels to be generated from operating such mechanical equipment are not available. However, these noise levels would be similar to those produced by commercial heating, ventilation, and air conditioning equipment. Noise levels from this type of equipment vary substantially, depending on unit efficiency, size, and location, but generally range from 45 to 70 dBA $L_{eq}(h)$ at a distance of 50 feet (EPA 1971). Accounting for typical attenuation rates of 6 dBA per doubling of distance, noise levels attributed to mechanical equipment would range from 39 to 64 dBA $L_{eq}(h)$ at the nearest sensitive receptors (94 feet from the nearest possible mechanical noise source), and thus could exceed the County's stationary-source noise level criteria (55 dBA $L_{eq}[h]$ daytime, 45 dBA $L_{eq}[h]$ nighttime) and *Auburn/Bowman Community Plan* stationary-source noise level criteria (50 dBA $L_{eq}[h]$ daytime, 45 dBA $L_{eq}[h]$ nighttime). As a result, the impact of noise from mechanical equipment would be **potentially significant**.

Generators and Transformers

The proposed project would place emergency electrical generators approximately 400 feet from residences adjacent to the northeastern corner of the project site. Emergency generators would supply necessary power requirements to vital systems within the facilities to ensure that operations would not be interrupted during outages. Emergency generators typically would be operated under two conditions: loss of main electrical supply or preventive maintenance/testing. The operation of mechanical equipment associated with emergency operations would be exempt from the noise standards outlined in the Placer County Code; thus, this analysis focuses on routine preventive maintenance and testing operations, which would be conducted periodically.

Reference noise-level measurements that were conducted for emergency generators with rated power outputs of 225 kilowatts resulted in noise levels of 90 dBA $L_{eq}(h)$ at 23 feet (Cummins 2010). Based on reference noise levels, emergency electrical generators located within 2,100 feet of noise-sensitive receptors could potentially exceed the level specified in the Placer County Code for daytime stationary-source noise for simple tone noises and the *Auburn/Bowman Community Plan* stationary-source noise criterion (50 dBA $L_{eq}[h]$). In addition, generators located within 3,500 feet of noise-sensitive receptors could potentially exceed the level specified in the Placer County Code and the *Auburn/Bowman Community Plan* noise criterion for nighttime stationary-source noise (45 dBA $L_{eq}[h]$). The nearest sensitive receptors would be located within 400 feet of the proposed generator location. Because preventive maintenance and outages would likely require testing or operation of emergency generators for periods longer than an hour at a time, testing and operation of emergency generators would exceed the noise standard, despite infrequent use. Therefore, the impact of noise levels from preventive maintenance testing/operation of emergency electrical generators would be **potentially significant**.

The proposed project also would include a Pacific Gas and Electric Company transformer within approximately 400 feet of residences adjacent to the project site. Substations typically generate steady noise from operation of transformers, as well as from cooling fans and oil pumps that are needed to cool the transformer during periods of high electrical demand. With all auxiliary cooling fans operating, the worst-case noise level from the transformers at full load is predicted to be no more than 66 dBA $L_{eq}(h)$ at 3 feet away from the equipment (California Public

Utilities Commission 2009). Accounting for typical attenuation rates of 6 dBA per doubling of distance, noise levels attributed to transformers would be approximately 22 dBA $L_{eq}(h)$ at the nearest sensitive receptors (400 feet from the nearest possible transformer), and thus, they would not exceed Placer County stationary-source noise level criteria (55 dBA $L_{eq}[h]$ daytime, 45 dBA $L_{eq}[h]$ nighttime) or *Auburn/Bowman Community Plan* stationary-source noise level criteria (50 dBA $L_{eq}[h]$ daytime, 45 dBA $L_{eq}[h]$ nighttime). As a result, the impact of noise from transformers would be **less than significant**.

Parking Lot Activities

The proposed project would include relocation of a parking area for staff and visitors to the southeast corner of the project site on Joeger Road. Parking demand was calculated to include the estimated number of employees per shift, maximum number of visitors, and deliveries. Previously conducted reference noise-level measurements of parking lot activities indicate that the average sound exposure level associated with a single parking event would be approximately 71 dBA at a distance of 50 feet. Activities included in a single parking event would be vehicle arrival, limited idling, occupants exiting a vehicle, door closures, conversations among passengers, occupants entering a vehicle, startup, and vehicle departure. Based on a parking demand of 12 trips per day and assuming a standard attenuation rate of 6 dBA per doubling of distance, the combined noise level from parking lot activities would be 44 dBA $L_{eq}(h)$ at the nearest noise-sensitive receptor, located approximately 75 feet east of the center of the parking area. This would be less than the County's stationary-source noise performance standards of 50 dBA $L_{eq}(h)$ and 45 dBA $L_{eq}(h)$ for daytime and nighttime periods, respectively, and the *Auburn/Bowman Community Plan*'s stationary-source performance standards of 50 dBA $L_{eq}(h)$ and 45 dBA $L_{eq}(h)$ for daytime and nighttime periods, respectively. As a result, the impact of noise generated from parking activities would be **less than significant**.

Mitigation Measure NOI-5: Orient Structures and Provide Enclosures or Barriers to Reduce Noise from Mechanical Equipment and Electrical Generators.

The County will require the facility to be designed in accordance with the Placer County Noise Ordinance:

- ▶ Mechanical equipment and generators that could produce noise levels exceeding 45 dBA $L_{eq}[h]$ at adjacent residential property lines will be located within an enclosure or behind a barrier, or an intervening structure will be placed between the source and receiver to ensure a minimum attenuation of 20 dBA to meet the requirements of the Placer County Noise Ordinance.

With implementation of Mitigation Measure NOI-5, noise levels from mechanical equipment and generators would be reduced to levels acceptable under County standards. As a result, long-term stationary-source noise would be reduced to a **less-than-significant** level after mitigation.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact with Mitigation Incorporated. Proposed project construction activities would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. Vibration generated by construction equipment would spread through the ground and diminish in magnitude with increases in distance. Table 3.12-4 presents vibration levels for typical construction equipment.

As discussed above, on-site construction equipment would include dozers, excavators, cranes, and backhoes. According to the Federal Transit Administration (FTA), vibration levels associated with the use of bulldozers range from approximately 0.003 to 0.089 inch per second (in/sec) peak particle velocity and 58–87 vibration decibels (referenced to 1 microinch per second and based on the root mean square velocity amplitude) at 25 feet, as shown in Table 3.12-4. Using FTA's recommended procedure for applying a propagation adjustment to these

reference levels, predicted worst-case vibration levels of approximately 0.12 in/sec peak particle velocity and 90 vibration decibels at the nearest sensitive residence (20 feet) could occur from use of large bulldozers (non rubber-tired dozers) and trucks. These vibration levels would not exceed Caltrans’s recommended standard of 0.2 in/sec peak particle velocity (Caltrans 2002:11), with respect to the prevention of structural damage for normal buildings, but would exceed FTA’s maximum acceptable vibration standard of 80 vibration decibels (FTA 2006:Chapters 10 and 12), with respect to human annoyance for residential uses. Thus, vibration and groundborne noise resulting

Table 3.12-4 Typical Construction-Equipment Vibration Levels		
Equipment ¹	PPV at 25 feet (in/sec) ²	Approximate L _v at 25 feet ³
Large Bulldozer	0.089	87
Trucks	0.076	86
Small Bulldozer	0.003	58

¹ Vibration levels for excavators, cranes, and backhoes were not modeled because these pieces of equipment generate less vibration than the larger pieces of equipment that would be used.
² Where PPV is the peak particle velocity.
³ Where L_v is the velocity level in vibration decibels (VdB) referenced to 1 microinch/second and based on the root mean square velocity amplitude.
Source: FTA 2006:Chapters 10 and 12

from the proposed project could expose individuals to levels exceeding the recommendations of Caltrans and FTA during construction. This impact would be **potentially significant**.

The long-term operations and maintenance of the project would not include any vibration sources. Additional truck trips associated with septage and other material deliveries would be less than eight per week at full project operation and, thus, would not be a substantial vibration source. The impact related to vibration would be **less than significant**.

Mitigation Measure NOI-6: Prohibit Operation of Large Bulldozers (Non Rubber-Tired Dozers) and Trucks within 43 feet of Habitable Structures.

The County will prohibit operation of large bulldozers (non rubber-tired dozers) and trucks within 43 feet (the nearest distance that vibration could disturb area residents) of the nearest habitable structure to the project site at all times.

With implementation of Mitigation Measure NOI-6, vibration levels resulting from construction activities would be reduced to below FTA’s maximum-acceptable vibration standard of 80 vibration decibels with respect to human annoyance for residential uses. As a result, short-term, construction-generated vibration levels would be reduced to a **less-than-significant** level after mitigation.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant Impact with Mitigation Incorporated. The long-term operation of the project would not create substantial increases in vehicle traffic on the local roadway system (see Section 3.16, “Transportation/Traffic”). Noticeable increases of 3 dBA (CNEL) typically do not occur without a substantial increase (i.e., doubling) in roadway traffic volumes (Caltrans 2009:N-96). Consequently, the operation of the project would not noticeably change traffic noise contours of area roadways. Long-term operation of the project

would include operation of additional mechanical equipment, generators/transformers, and parking lots. Although operation of transformers and parking lots would not exceed Placer County and *Auburn/Bowman Community Plan* standards, operation of mechanical equipment and generators could exceed County and community plan noise standards. This impact would be **significant**.

With implementation of Mitigation Measure NOI-5, noise levels from mechanical equipment and generators would be within acceptable levels under Placer County and *Auburn/Bowman Community Plan* standards. As a result, the impact of long-term stationary-source noise would be reduced to a **less-than-significant** level after mitigation.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant Impact with Mitigation Incorporated. The County has adopted a noise ordinance for which construction-generated noise levels are limited to between 6 a.m. to 8 p.m. Monday through Friday, and 8 a.m. to 8 p.m. Saturdays. Nevertheless, if construction activities were to occur during more noise-sensitive hours or if construction equipment was not properly equipped with noise control devices, construction-generated source noise could result in annoyance and/or sleep disruption to occupants of nearby noise-sensitive receptors (e.g., residences) and create a substantial temporary increase in ambient noise levels in the project vicinity. As a result, this impact would be **potentially significant**.

Implementation of Mitigation Measures NOI-1 through NOI-4 would reduce short-term construction source noise to a **less-than-significant** level.

e, f) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and for a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is approximately 1.25 miles from Auburn Municipal Airport. According to the most recent noise contours from the *Auburn Municipal Airport Land Use Compatibility Plan*, the project site is not located within the 55-, 60-, or 65- dBA CNEL airport noise contours (Placer County 2000). Because the project would not be located within the 55-, 60-, or 65- dBA CNEL airport noise contours and the project would not include the development of any noise-sensitive receptors, the project would not expose people residing or working on the project site to excessive noise levels. **No impact** would occur.

3.13 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. Population and Housing. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.13.1 ENVIRONMENTAL SETTING

The project site is located in a primarily rural area, with open space and single-family residences on large lots located nearby to the north, east, and west, and several suburban neighborhoods located to the south. No residences are located on the project site. Several single-family residences to the west of the existing SMD 1 WWTP would be located immediately adjacent to the newly expanded WWTP upon completion of the proposed project.

3.13.2 DISCUSSION

- a) **Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

Less-than-Significant Impact. The proposed project would require only a minor increase in the number of employees necessary to operate the upgraded and expanded SMD 1 WWTP, from 7.5 full-time-equivalent employees to 11 full-time-equivalent employees. The proposed project would require a maximum of 60 employees during project construction over a limited time frame (approximately 3 years). As of June 2010, Placer County had an unemployment rate of 11.6% (EDD 2010). Accordingly, construction workers to be hired likely would be local residents, and thus, hiring would not cause growth in the project area, either directly or indirectly.

The proposed project would increase the capacity of the existing SMD 1 WWTP, which could indirectly contribute to increased growth in the WWTP service area by providing increased capacity for wastewater treatment. Adequate wastewater treatment capacity is one potentially significant barrier to the growth and expansion of a community. New collection systems would likely be required for the upgraded and expanded WWTP to serve new growth, and construction of such collection system improvements would be subject to additional CEQA review. However, any new growth that could be served by the proposed project was projected and planned in the *Auburn/Bowman Community Plan*, which anticipates substantial growth in the project vicinity, projecting a population of as many as 37,186 residents in the Plan area, and allowing for 40,672 residents at full build-out. Goals and policies are outlined in the Plan to accommodate this new growth, and its impacts were addressed in the EIR that was done for the Plan (Placer County 1994). Therefore, this impact would be **less than significant**.

b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would not result in the removal of any dwellings. Accordingly, no existing housing units or people would be displaced. **No impact** would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed project would not result in the removal of any dwellings, and no permanent housing in the area would be affected by the project. Therefore, the proposed project would not necessitate the construction of replacement housing elsewhere. **No impact** would occur.

3.14 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.14.1 ENVIRONMENTAL SETTING

The Placer County Office of Emergency Services coordinates countywide fire and law enforcement services in cooperation with the Placer County Sheriff’s Office and CAL FIRE.

The proposed project would not involve the construction of new schools or park facilities. The nearest park, the Auburn District Regional Park, is located approximately 0.5 mile from the project site; the nearest school is Chana High School, located at 3775 Richardson Drive in Auburn.

3.14.2 DISCUSSION

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:**

Less-than-Significant Impact. As stated in Section 3.13, “Population and Housing,” the proposed project would result in only a minor increase in the number of employees necessary to operate the SMD 1 WWTP, from 7.5 full-time equivalent (FTE) employees to 11 FTE employees. Construction workers likely would be local residents who would not cause growth in the project area or a corresponding increase in the use of existing public services.

The proposed project would increase the capacity of the SMD 1 WWTP, which could indirectly contribute to increased growth in the SMD 1 service area, and a consequent increase in the need for expanded fire or police protection services, or construction of new schools, parks, or other public facilities. However, the upgraded and expanded WWTP would serve growth that was projected and planned for in the Auburn/Bowman Community Plan. This Plan includes goals and policies to ensure adequate public services for new residents are developed as growth occurs. Therefore, this impact would be **less than significant**.

3.15 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. Recreation. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.15.1 ENVIRONMENTAL SETTING

No recreational activities are available at the project site. The nearest recreational area to the project site is located 0.5 mile to the south, at Auburn District Regional Park. This park has a large pond, encircled by a sidewalk, a playground, picnic areas, and an 18-hole disk golf course.

3.15.2 DISCUSSION

- a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

Less-than-Significant Impact. As stated in Section 3.13, “Population and Housing,” the proposed project would require only a minor increase in the number of employees necessary to operate the upgraded and expanded the SMD 1 WWTP. Construction workers likely would be local residents who would not increase the demands on existing parks or other recreational facilities.

The proposed project would increase the capacity of the existing SMD 1 WWTP, which could indirectly contribute to increased growth in the SMD 1 WWTP service area and a consequent increase in the use of parks in the project vicinity. However, the upgraded and expanded WWTP would serve growth that was projected and planned in the *Auburn/Bowman Community Plan* (Placer County 1994). This plan includes goals and policies to ensure that adequate recreational facilities for new residents are developed as growth occurs. Therefore, this impact would be **less than significant**.

- b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

No Impact. The proposed project would not include recreational facilities, nor would the proposed project require the construction or expansion of recreational facilities for the reasons discussed above. Thus, **no impact** would occur.

3.16 TRANSPORTATION/TRAFFIC

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. Transportation/Traffic. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.16.1 ENVIRONMENTAL SETTING

Regional access to the project site is provided from Interstate 80 (I-80) and SR 49. Local access is provided from Joeger Road on the south side of the property, approximately 0.2 mile west of the intersection of SR 49 and Joeger Road.

According to the *Placer County General Plan (1994)*, Joeger Road is defined as a “Rural Collector” with a 2010 maximum daily traffic volume of 8,000 trips. “Collectors” are intended to collect traffic from local streets and carry it to roadways higher in the street classification hierarchy (e.g., arterials). The public uses these roadways as secondary circulation routes, and they generally carry light to moderate traffic volumes. Rural collectors seek to achieve a balance between providing property access and high mobility for through-traffic. Low levels of traffic were observed on Joeger Road during site visits.

The Placer County Transportation Planning Agency (PCTPA) is the state-designated regional transportation planning agency for the county. It makes decisions about the regional transportation system in the county. PCTPA

plans and programs the area's federal and state transportation funds. In developing and adopting plans and strategies, PCTPA makes use of these funds and fulfills the requirements of the organization's state designation as the county's regional transportation planning agency. The current transportation planning and programming decisions are stated in the *Regional Transportation Plan 2027* (PCTPA 2005). The closest regionally significant roadway recognized by PCTPA is SR 49; Joeger Road is not considered regionally significant (PCTPA 2005:3.1-4).

Although PCTPA has not adopted a congestion management plan for Placer County, Caltrans has adopted a corridor system management plan (CSMP) for SR 49 (Caltrans 2009). The SR 49 CSMP addresses the portion of SR 49 that begins at the I-80/SR 49 interchange in Placer County and ends at the SR 49/SR 20 junction in Nevada County. The CSMP provides for the integrated management of travel modes and roadways to facilitate the efficient and effective mobility of people and goods within one of California's most congested transportation corridors. It presents an analysis of existing and future traffic conditions and proposes traffic management strategies and capital improvements to maintain and enhance mobility within the SR 49 corridor (Caltrans 2009:2). To reduce congestion on SR 49 in the project vicinity, the CSMP calls for the widening of SR 49 from Nevada Street north to Dry Creek Road (Caltrans 2009:31). This project is programmed and portions have been completed (Caltrans 2009:31). Dry Creek Road is approximately 0.5 mile south of Joeger Road.

The Auburn Municipal Airport is the closest airport to the project site. The closest runway is approximately 1.25 miles southeast of the project site.

3.16.2 DISCUSSION

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

Taking into account all modes of transportation, including mass transit, nonmotorized travel, and relevant components of the circulation system, no PCTPA plans or programs are scheduled for Joeger Road or SR 49 within 0.5 mile of its intersection with Joeger Road.

Placer County General Plan Policy 3.A7 (Placer County 1994:71) is applicable to the proposed project and forms the basis of the impact evaluation. General Plan Policy 3.A7 states:

The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS).

- ▶ LOS "C" on rural roadways, except within one-half mile of state highways where the standard shall be LOS "D."
- ▶ LOS "C" on urban/suburban roadways except within one-half mile of state highways where the standard shall be LOS "D."

Because Joeger Road is less than 0.5 mile from SR 49, construction of the proposed project would cause significant traffic impacts if the level of service for Joeger Road would be reduced to LOS E or worse.

Short-Term Construction Impacts

Less-than-Significant Impact. Project construction would result in a maximum of 90 temporary one-way daily trips that would include employee vehicles and heavy trucks. This increase in trips would be minor (1.13%), relative to traffic volumes that could be accommodated on Joeger Road based on its general plan designation as a

rural collector. Conservatively assuming an 8-hour workday, the average number of haul trips during the a.m. and p.m. peak hour periods would be approximately 11.25 haul trips. Pursuant to Mitigation Measure NOI-2, construction activities would be limited to the hours of 6 a.m. to 8 p.m. (14 hours), Monday through Friday, and 8 a.m. to 8 p.m. (12 hours) Saturdays. Increasing the length of the workday would further reduce the number haul trips during the a.m. and p.m. peak hours. Low traffic volumes were observed on Joeger Road during peak hours, and the increase in traffic volumes caused by construction would be minimal relative to roadway capacity. As a result, the additional construction-related vehicle trips that would be generated from employee vehicles and construction equipment associated with project construction would not result in considerable changes in the performance of the circulation system. Therefore, these additional trips would not result in a conflict with an applicable plan, ordinance, or policy related to traffic circulation. This impact would be **less than significant**.

LONG-TERM OPERATIONAL IMPACTS

Less-than-Significant Impact. The upgraded and expanded SMD 1 WWTP would be designed to have the same normal operating hours and work shifts as the existing WWTP. The number and classifications of staff are anticipated to increase from 7.5 to 11 full-time-equivalent employees as a result of the proposed project. The number of employee vehicle round trips per day would correspondingly increase by three. In addition, the proposed project would include the construction of a septage receiving station. County septage deliveries to the existing WWTP average approximately one haul truck every 2 weeks. With access for commercial haulers to the septage receiving facility, septage deliveries potentially could increase three- to four-fold by 2034 (Lillis, pers. comm., 2010).

Low traffic volumes were observed on Joeger Road during peak hours, and the increase in traffic volumes because of project operations is anticipated to be minimal relative to the available roadway capacity. Therefore, the additional operational vehicle trips that would be generated from employee vehicles and septage deliveries would not result in considerable changes in the performance of the circulation system. This impact would be **less than significant**.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

PCTPA has not adopted a congestion management program for Placer County. Caltrans implements the SR 49 CSMP in the vicinity of the project site. No CSMP projects are programmed within 0.5 mile of the project site. The closest CSMP project in the project vicinity is the widening of SR 49 up to Dry Creek Road.

SHORT-TERM CONSTRUCTION IMPACTS

Less-than-Significant Impact. As stated above, construction-related traffic increases would be minimal relative to roadway capacity and would occur in an area with low levels of traffic. Although the widening of SR 49 could occur simultaneously with construction of the proposed WWTP improvements, the 90 additional daily construction-related trips associated with the proposed project would not conflict with implementation of the SR 49 road widening project because the additional trips are so few. There would only be approximately 11.25 hourly truck trips using the conservative 8-hour workday. There would be even fewer hourly trips if a 14-hour weekly workday or 12-hour weekend workday were implemented by the construction contractors. The SR 49 widening project would be more likely to interfere with the circulation for WWTP construction-related trips, which would be a nuisance for construction workers but would not be considered a significant impact of the proposed project. Because construction-related traffic would not conflict with implementation of the CSMP, the impact of 90 additional daily construction vehicle trips would be **less than significant**.

LONG-TERM OPERATIONAL IMPACTS

Less-than-Significant Impact. The upgraded and expanded SMD 1 WWTP would be designed to have the same normal operating hours and work shifts as the existing WWTP. The number and classifications of staff are anticipated to increase from 7.5 to 11 full-time-equivalent employees as a result of the proposed project. The number of employee vehicle round trips per day would correspondingly increase by approximately four. In addition, the proposed project would include the construction of a septage receiving station. County septage deliveries to the existing WWTP average approximately one haul truck every 2 weeks. With access for commercial haulers to the septage receiving facility, septage deliveries potentially could increase three- to four-fold by 2034 (Lillis, pers. comm., 2010).

SMD 1 anticipates that the proposed project would be completed and operational in 2014. Therefore, the only time that new traffic generated by the additional employees and increased septage deliveries could affect implementation of the CSMP would occur between 2014 and 2020, when SR 49 widening is programmed for completion. For the reasons stated above for construction-related traffic, SR 49 widening would more likely affect WWTP employees and septage delivery drivers, and not the other way around. Given that low traffic volumes were observed on Joeger Road, and the increase in traffic volumes caused by project operation would be minimal, the additional operational vehicle trips that would be generated from employee vehicles would not substantially conflict with implementation of the CSMP. This impact would be **less than significant**.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project site is located approximately 1.25 miles northwest of the nearest runway at the Auburn Municipal Airport. The proposed project would not involve a change in the location of the SMD 1 WWTP, although the site would be expanded. Implementation of the proposed project would not include construction of tall buildings and would not affect avian activity in the area. Therefore, no change would occur in existing risks to aviation. The proposed project would not affect existing air traffic patterns. **No impact** would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project would not alter any roadway, and accordingly would not include any design feature that could increase traffic hazards. In addition, the proposed project would be an expansion of an already existing use, which is compatible with the surrounding roadway network. **No impact** would occur.

e) Result in inadequate emergency access?

SHORT-TERM CONSTRUCTION IMPACTS

Less-than-Significant Impact with Mitigation Incorporated. Construction of the proposed driveway improvements to the WWTP site would require encroachment in the Joeger Road public road right-of-way. Utility pipelines in the Joeger Road public road right-of-way may be excavated and replaced with wider diameter pipes. Paved areas that are trenched would be repaved when the utility pipelines have been replaced. Construction activities in the public road right-of-way could impede the flow of traffic and possibly require the closure of Joeger Road. The closure of Joeger Road could result in inadequate emergency access. This would be a **potentially significant** impact.

Mitigation Measure Trans-1: Prepare and implement a traffic control plan.

The project proponent shall prepare or shall require the construction contractor to prepare a traffic control plan for review and approval by the Placer County Department of Public Works prior to any construction in County public road right-of-way. The traffic control plan shall be submitted to the Placer County

Department of Public Works no less than 45 days prior to construction in the County public road right-of-way. The traffic control plan shall be prepared in accordance with professional traffic engineering standards and in compliance with the requirements of Placer County's encroachment permit requirements. The traffic control plan shall require that at least one lane will remain open during construction and that there will be no road closure. The traffic control plan may include, but not be limited to, the following measures:

- ▶ Identify specific construction methods to maintain traffic flows on affected streets.
- ▶ Maintain the maximum amount of travel lane capacity during nonconstruction periods and provide flagger control at sensitive sites to manage traffic control and flows.
- ▶ Limit the construction work zones to widths that, at a minimum, shall maintain alternate one-way traffic flow past the construction zones.
- ▶ Post advanced warning of construction activities to allow motorists to select alternative routes in advance.
- ▶ Prepare appropriate warning signage and lighting for construction zones.
- ▶ Maintain steel trench plates at construction sites to restore access across open trenches to minimize disruption of access to driveway and adjacent land uses. Construction trenches in the street shall not be left open after work hours.

Implementation of Mitigation Measure Trans-1 would reduce potential impacts on emergency access to a **less-than-significant** level because it would maintain at least one lane for through traffic and Joeger Road would not be closed.

LONG-TERM OPERATIONAL IMPACTS

No Impact. Low traffic volumes were observed on Joeger Road during peak hours and the increase in traffic volumes because of project operations would be minimal relative to roadway capacity. Therefore, the additional operational vehicle trips that would be generated from employee vehicles would not result in considerable changes in performance of the circulation system. **No impact** would occur.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The project site is located in a rural area, and no public transportation providers serve the project area. In addition, no bicycle or pedestrian facilities are located in the project area. Implementation of the proposed project would not affect any street facility, and project operations would not conflict with PCTPA carrying out its regional transportation planning efforts or Caltrans implementing its CSMP, both of which include policies, plans, and programs for public transit, bicycle, and pedestrian facilities. **No impact** would occur.

3.17 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. Utilities and Service Systems. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.17.1 ENVIRONMENTAL SETTING

The proposed project would upgrade and expand the existing SMD 1 WWTP to meet NPDES permit requirements and reasonably predicted future requirements, as well as to meet wastewater treatment needs for growth consistent with the *Auburn/Bowman Community Plan* (Placer County 1994).

Electrical service to the SMD 1 WWTP is provided by Pacific Gas and Electric Company.

Sludge from the anaerobic digesters at the existing SMD 1 WWTP is dewatered, then transferred to sludge hauling containers. The County transports the dewatered sludge by truck to the Western Regional Sanitary Landfill, located in Lincoln. Methane gas that is generated from the anaerobic digestion process is sent to a conventional gas flare to be wasted by burning. Natural gas is used to heat the digester.

The effluent for process water, wash water, and belt water is used for facility operations that do not require potable water; potable water is provided by Placer County Water Agency for fire protection, drinking, emergency, eyewash and showers, seal water for pumps, and general laboratory usage.

3.17.2 DISCUSSION

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less-than-Significant Impact. The proposed upgraded and expanded SMD 1 WWTP would be designed to achieve compliance with requirements for effluent quality, specified in the NPDES permit's interim (i.e., current) limits and the reasonably predicted final limits anticipated after future studies are completed and submitted to the Central Valley RWQCB. Treatment process upgrades would result in effluent water quality that would meet new effluent limits for California Toxics Rule constituents, as well as ammonia, chlorine residual, nitrite, nitrate, oil and grease, and turbidity. Because proposed upgrades would improve effluent water quality relative to existing effluent water quality and would be designed to meet permit requirements, this impact would be **less than significant**.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The proposed project would consist of upgrades to the existing SMD 1 WWTP and expansion of treatment capacity, but would not itself create new demand for additional water or wastewater treatment facilities. Therefore, there would be **no impact**.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-than-Significant Impact. The proposed project would require modification of the existing stormwater drainage system at the project site. The on-site plant drainage would be handled in one of a combination of three systems. First, stormwater that was not exposed to potential on-site pollutants would be diverted around the treatment facilities. Second, the proposed plant drain pump station would collect all process drainage, floor drains, sanitary sewage, backwash waste, and filtrate. This return flow would be piped to the primary clarifiers, equalization tank, or septage equalization tanks. The third system only would collect on-site storm drainage. The runoff would be diverted to a flow control box that would allow operators to either treat it or divert it to the creek. The storm water drainage facilities would be designed based on runoff calculations for the new upgraded plant and would comply with Placer County's storm water management manual. The proposed drainage facilities would be designed to comply with the *Placer County Stormwater Management Manual*. In addition, as stated above in "Hydrology and Water Quality," the incremental increase in drainage and related potential for the proposed project to exceed drainage system capacities or create additional sources of polluted runoff was evaluated qualitatively. Based on the anticipated improvements in stormwater drainage management features and operations under the proposed project, any changes in drainage rates or water quality characteristics would be anticipated to be negligible. As a result, impacts associated with construction of new stormwater drainage facilities would be **less than significant**. See Section 3.9, "Hydrology and Water Quality," for further discussion of related impacts.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less-than-Significant Impact Potable water would be provided by Nevada Irrigation District. Project improvements may include upsized pipelines and fire hydrants for emergency situations. The water pipeline improvements would be located in Joeger Road adjacent to the WWTP. Similarly, the project may require improvements to the County sanitary sewer in Joeger Road adjacent to the WWTP. The demand for potable water at the WWTP would not increase due to the proposed project (Schmidt, pers. comm., 2011).. Therefore, this impact would be **less than significant**.

- e) **Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand, in addition to the provider's existing commitments?**

No Impact. The proposed SMD 1 WWTP upgrade and expansion would increase wastewater treatment capacity to 2.7 mgd, to accommodate existing and projected flows in the *Auburn/Bowman Community Plan* (Placer County 1994). Because the proposed expansion would be designed to accommodate existing and planned growth, projected demand for wastewater treatment services would be adequately served. **No impact** would occur.

- f) **Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

Less-than-Significant Impact. Upgrades to the WWTP would result in a short-term increase in solid waste disposal needs associated with construction activities. With increased treatment capacity and the potential for future acceptance of septage from commercial haulers, implementation of the proposed project likely would also result in long-term increased generation of solid waste in the form of dewatered sludge. The Western Regional Sanitary Landfill, which currently receives the sludge generated by the SMD 1 WWTP, has a permitted capacity of more than 36 million cubic yards with 80% capacity remaining, and it is not scheduled to close until 2042 (CalRecycle 2011). Sludge generated by the expanded plant, even at full buildout (2.7 mgd) with extension of septage handling to commercial haulers (3- to 4-fold increase in deliveries) would account for only a small fraction of the remaining capacity of this landfill. Because the increase in solid waste generation by the SMD 1 WWTP would be easily accommodated by a nearby landfill that has sufficient permitted capacity to accommodate the project's solid waste disposal needs, this impact would be **less than significant**.

- g) **Comply with federal, state, and local statutes and regulations related to solid waste?**

No Impact. As under current conditions, the proposed project would comply with all federal, state, and local statutes and regulations related to solid waste, including recycling. **No impact** would occur.

3.18 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Authority: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.

Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

3.18.1 DISCUSSION

- a) **Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?**

Less-than-Significant Impact with Mitigation Incorporated. As evaluated in Sections 3.4 and 3.5 of this IS/MND, the proposed project would not substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife species population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; reduce the number or restrict the range of an endangered, rare, or threatened species; or eliminate important examples of the major periods of California history or prehistory. Mitigation measures to avoid, reduce, and minimize adverse environmental effects that could occur related to biological resources and cultural resources are included in Sections 3.4 and 3.5, respectively. The County has agreed to implement all the required mitigation measures, and thus a **less-than-significant** impact would result from project implementation.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)**

Less-Than-Significant Impact with Mitigation Incorporated. The initial study identifies impacts related to air quality, biological resources, water quality, and noise that would potentially result in cumulatively considerable impacts. Related to air quality, project construction-related activities could contribute to exceeding emissions thresholds. Related to water quality, the proposed project could cause exceedance of applicable water quality standards. Related to biological resources, the proposed project could have an impact on oak woodlands, riparian habitat, and wetlands, as well as several threatened or endangered species located in riparian and wetland habitat areas. Related to greenhouse gases, the proposed project would cause short-term construction and long-term operational GHG emissions. Related to noise, the project could contribute to exceeding noise thresholds during construction and operation.

However, mitigation measures in Section 3.3, “Air Quality,” would require a reduction in temporary construction emissions, compliance with Placer County Air Pollution Control District rules, and implementation of an approved emissions/dust control plan that would reduce NO_x emissions from construction vehicles by an average of 20%, and particulate emissions by 45% so that project-related construction emissions stay within the allowable emissions thresholds; measures in Section 3.4, “Biological Resources,” would require pre-construction surveys for threatened or endangered species to limit impacts to such species, avoid riparian habitat where feasible, develop a habitat mitigation plan where not to limit impacts to riparian habitat, ensure project construction results in no net loss of wetlands, and comply with permit regulations related to disturbance of protected trees to limit impacts to oak woodlands; measures in Section 3.9, “Hydrology and Water Quality,” would implement a Storm Water Pollution Prevention Plan and Best Management Practices to avoid exceedance of water quality standards; impacts related to greenhouse gas emissions from the Project would be less than cumulatively considerable because they are much lower than any reporting limits or adopted GHG thresholds of significance for stationary sources, the Project would not conflict with AB 32 or any other climate-change related plans, policies, or regulations, and there are currently no applicable local climate-change related plans, policies, or regulations; and Section 3.12, “Noise,” would require maintaining and equipping construction equipment with noise control devices, limiting hours of project construction, managing construction equipment movement, orienting structures and providing enclosures or barriers to reduce noise, and designating a disturbance coordinator to receive all noise-related complaints. Therefore, mitigation measures identified in this initial study would reduce both project-specific impacts, as well as cumulatively considerable impacts attributable to the project’s incremental effects, and, the proposed project’s contribution to cumulative impacts would be **less than significant**.

- c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?**

Less-than-Significant Impact with Mitigation Incorporated. The proposed project would upgrade the existing SMD 1 WWTP and expand wastewater treatment capacity. This would result in environmental effects that, without mitigation, could affect human beings. In particular, impacts detailed in Section 3.1, “Aesthetics” (potential impacts related to degradation of views), Section 3.3, “Air Quality” (potential impacts related to short-term construction emissions and odors), Section 3.5, “Cultural Resources” resources (potential to disturb or damage undiscovered subsurface cultural resources or human remains during construction), Section 3.9, “Hydrology and Water Quality” (potential to exceed applicable water quality standards), Section 3.12, “Noise” (short-term noise impacts during construction and long-term operations-related noise impacts), and Section 3.17, “Utilities and Utility Systems” systems (environmental impacts associated with WWTP construction) could cause adverse effects on human beings, either directly or indirectly. Implementing the mitigation measures proposed herein, however, would reduce these impacts to a **less-than-significant** level.

4 REFERENCES

Chapter 1, “Introduction”

No references cited.

Chapter 2, “Project Description”

Central Valley Regional Water Quality Control Board. 2007. *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*. Sacramento, CA.

Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.

Lillis, Rebecca. Environmental Resource Specialist. Placer County Department of Facility Services, Auburn, CA. September 10, 2010—conference call with Doug Brown, Andrea Shephard, and Casey Mills of AECOM regarding elements of the SMD 1 WWTP Upgrade and Expansion Project.

Placer County. 1994. *Auburn/Bowman Community Plan*. Auburn, CA.

———. 2008. *Sewer System Management Plan, Volume 3*. Auburn, CA.

———. 2010. *SMD 1 WWTP Upgrade and Expansion Preliminary Design Report, Volume 1*. Department of Facilities Services, Auburn, CA. Prepared by Psomas, Cameron Park, CA.

Schmidt, Keith J. P.E., Assistant engineer, Placer County, Environmental. March 30, 2011—personal communication via e-mail with Andrea Shephard, Project Manager, AECOM regarding potential increase in potable water due to proposed WWTP.

Section 3.1, “Aesthetics”

Lillis, Rebecca, Placer County Department of Facility Services. February 25, 2011—personal communication with Andrea Shephard and Casey Mills of AECOM over e-mail regarding proposed building heights for SMD 1 WWTP.

Placer County. 1994. *Auburn/Bowman Community Plan*. Auburn, CA.

Section 3.2, “Agricultural and Forest Resources”

California Department of Conservation. 2008. *Placer County Important Farmland Map*. Sacramento, CA.

Section 3.3, “Air Quality”

ARB. *See* California Air Resources Board.

California Air Resources Board. 2007 (December). Nonattainment Area Designations for the Revised Federal PM_{2.5} 24-hour Standard – Enclosure 3. Sacramento, CA.

———. 2010. Federal Attainment Designation Maps. Available: <http://www.arb.ca.gov/desig/adm/adm.htm> Last Updated: September 2010. Accessed: February 28, 2011.

———. 2010a. Air Quality Data Statistics. Available: <http://www.arb.ca.gov/adam/welcome.html>. Accessed August 5, 2010.

- . 2010b. Community Health Air Pollution Information System. Available: http://www.arb.ca.gov/gismo/chapis_v01_6_1_04/chapis_v02.asp. Accessed August 5, 2010.
- . 2010c. Area Designation Maps/State and National. Available: <http://www.arb.ca.gov/desig/adm/adm.htm#state>. Accessed August 5, 2010.
- California Geological Survey. 2008 (November 4). *Naturally Occurring Asbestos Hazard—North Auburn and Vicinity*. Sacramento, CA.
- Chang, Yushou, Placer County Air Pollution Control District. October 5, 2010—personal communication with Michael Wolf of AECOM regarding Placer County Thresholds of Significance.
- Code of Federal Regulations. 2010 (July). 40 CFR Chapter 1 Section 51.853 “Applicability”. Washington D.C.
- Higgins, C. T., and J. P. Clinkenbeard. 2006. *Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California. Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California*. Special Report, 190. California Department of Conservation, California Geological Survey. Sacramento, CA.
- Placer County. 2010. Air Pollution Control District Web page. Available: <http://www.placer.ca.gov/airpollution/airpolut.htm>. Accessed October 2010.
- Rimpo and Associates. 2008. URBEMIS 2007 v.9.2.4. Urban Emissions Model. Available: <http://www.urbemis.com>.
- Sacramento Air Quality Management District. 2008 (December). Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan. Sacramento, CA.
- Salinas, Julio. Staff Toxicologist. Office of Health Hazard Assessment, Sacramento, CA. August 3, 2004—telephone conversation with Kurt Legleiter of EDAW (now AECOM) regarding exposure period for determining health risk.
- Zhu, Y., W. C. Hinds, S. Kim, and S. Shen. 2002. Study of Ultrafine Particles near a Major Highway with Heavy-duty Diesel Traffic. *Atmospheric Environment* 36:4323–4335.

Section 3.4, “Biological Resources”

- Bailey, R. 2003 (December). Streams of Western Placer County: Aquatic Habitat and Biological Resources Literature Review. Prepared for the Sierra Business Council.
- Bell, M. C. 1986. *Fisheries Handbook of Engineering Requirements and Biological Criteria*. Fish Passage Development and Evaluation Program. Portland, OR: U.S. Army Corps of Engineers, North Pacific Division.
- Boles, G. L., S. M. Turek, C. D. Maxwell, and D. M. McGill. 1988. *Water Temperature Effects on Chinook Salmon (Oncorhynchus tshawytscha) with Emphasis on the Sacramento River: a Literature Review*. Red Bluff: California Department of Water Resources, Northern District.
- California Native Plant Society. 2010 (April 21). Inventory of Rare and Endangered Plants. Available: <http://cnps.site.aplus.net/cgi-bin/inv/inventory.cgi/Home>. Accessed July 1, 2010.
- California Natural Diversity Database. 2010 (July). Results of electronic records search. Sacramento: California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch.

CNDDDB. *See* California Natural Diversity Database.

CNPS. *See* California Native Plant Society.

Hallock, R. J., R. F. Elwell, and D. H. Fry, Jr. 1970. *Migrations of Adult King Salmon* *Oncorhynchus tshawytscha* *in the San Joaquin Delta as Demonstrated by the Use of Sonic Tags*. California Department of Fish and Game, Fish Bulletin 151.

Natural Resources Conservation Service. 2008. Web Soil Survey. Available: <http://websoilsurvey.nrcs.usda.gov/>. Last updated November 11, 2009. Accessed July 26, 2010.

NRCS. *See* Natural Resources Conservation Service.

Placer County. 1994 (August 14). *Placer County General Plan Update. Countywide General Plan Policy Document*. Auburn, CA. Prepared by Placer County with assistance from Crawford Multari & Starr, DKS Associates, Psomas and Associates, Jones & Stokes Associates, Recht Hausrath & Associates, and J. Laurence Mintier & Associates. Available: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/CommPlans/PCGP.aspx>. Accessed August 6, 2010.

———. 1999. *Auburn/Bowman Community Plan*. Adopted 1994. Auburn, CA. Available: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/CommPlans/ABCP.aspx>. Accessed August 6, 2010.

———. 2002. *Auburn Ravine/Coon Creek Ecosystem Restoration Plan*. Available: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/PlacerLegacy/WatershedPlanning/ARCCRestorPlan.aspx>. Accessed April 18, 2011.

———. 2009. (August 25). Covered Species Table. Available: http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/PCCP/~media/cdr/Planning/PCCP/Covered%20Species_Table.ashx. Accessed January 25, 2011.

———. 2010. Conservation Plan Web page. Available: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/PCCP/PCCPPlan.aspx>. Accessed January 25, 2011.

———. 2011. *Draft Placer County Conservation Plan*. Available: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/PCCP/PCCPDocuments/2011DraftPCCP.aspx>. Accessed February 28, 2011.

U.S. Fish and Wildlife Service. 2010. Endangered Species Lists. Sacramento Fish and Wildlife Office. Available: http://www.fws.gov/sacramento/es/spp_lists/auto_list_form.cfm. Last updated February 2, 2010. Accessed August 26, 2010.

USFWS. *See* U.S. Fish and Wildlife Service.

Witham, C. W. 2006. *Field Guide to the Vernal Pools of Mather Field, Sacramento County*. Sacramento: California Native Plant Society, Sacramento Valley Chapter.

Section 3.5, “Cultural Resources”

American Water Works Association, Inc. 1969. *Water Treatment Plant Design*. New York, NY.

- Auburn, California: Crossroad of Historic Gold Country. ca. 1950. Pamphlet. On file at the California Room, California State Library. Sacramento, CA.
- Beiersdorfer, R. E., and H. W. Day. 1992. Metamorphic Features of the Smartville Complex, Northern Sierra Nevada, California. In *Field Guide to the Geology and Metamorphism of the Franciscan Complex and Western Metamorphic Belt of North California*, eds. P. Schiffman and D. L. Wagner, 29–47. Sacramento: California Division of Mines and Geology.
- Kyle, D. E. (ed.). 1990. *Historic Spots in California*. Fourth edition. Stanford, CA: Stanford University Press.
- Lardner, W. B., and M. J. Brock. 1924. *History of Placer and Nevada Counties California*. Los Angeles, CA: Historic Record Company.
- Myer, C. 2002. *Placer County, an Illustrated History*. Carlsbad, CA: Heritage Media Corporation.
- Peak, M. A., and R. A. Gerry. 1998. *Cultural Resources Inventory and Determination of Eligibility for the Proposed Auburn Ranch, Placer County, CA*. Prepared for Area West Engineers, Inc., Citrus Heights, CA. Report No. 2407 on file at the North Central Information Center, California State University, Sacramento.
- Sanks, R. L. (ed.). 1979. *Water Treatment Plant Design for the Practicing Engineer*. Ann Arbor, MI: Ann Arbor Science.
- UCMP. See University of California Museum of Paleontology.
- University of California Museum of Paleontology. 2010. Museum of Paleontology Database. Berkeley, CA. Accessed October 2010.
- Wagner, D. L., C. W. Jennings, T. L. Bedrossian, and E. J. Bortugno. 1981. Geologic Map of the Sacramento Quadrangle, California. Regional Geologic Map Series, Map No. 1A. Sacramento: California Division of Mines and Geology.

Section 3.6, “Geology and Soils”

- California Department of Conservation. 2008. *Probabilistic Seismic Hazard Assessment for the State of California*. Sacramento, CA.
- California Geological Survey. 2010. *Fault Activity Map of California*. Available: <http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html>. Accessed September 2, 2010.
- Placer County. 1994. *Placer County General Plan Background Report*. Auburn, CA.
- U.S. Natural Resources Conservation Service. 2009 (November 11). Web Soil Survey. Available: <http://websoilsurvey.nrcs.usda.gov/>. Accessed December 2, 2009.
- Youngdahl Consulting Group, Inc. 2000. *Foundation Engineering Study for Placer County SMD-1 Waste Water Treatment Facility Improvements*. Placerville, CA.

Section 3.7, “Greenhouse Gas Emissions”

- California Energy Commission. 2006a. *Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004*. (Staff Final Report). Publication CEC-600-2006-013-SF. Available:

<http://www.climatechange.ca.gov/inventory/index.html>. Last updated July 31, 2008. Accessed September 22, 2010.

———. 2006b (July). *Our Changing Climate: Assessing the Risks to California*. Publication CEC-500-2006-077. Available: <http://www.energy.ca.gov/2006publications/CEC-500-2006-077/CEC-500-2006-077.PDF>. Last updated September 2009. Accessed September 22, 2010.

CEC. *See* California Energy Commission.

Intergovernmental Panel on Climate Change. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. Prepared by the National Greenhouse Gas Inventories Programme, ed. H. S. Eggleston, L. Buendia, K. Miwa, T. Ngara, and K. Tanabe. Hayama, Kanagawa, Japan: Institute for Global Environmental Strategies.

IPCC. *See* Intergovernmental Panel on Climate Change.

ScienceDaily. 2010. Science Reference: Carbon Dioxide Sink. Available: http://www.sciencedaily.com/articles/c/carbon_dioxide_sink.htm. Updated in 2010. Accessed October 30, 2010.

Section 3.8, “Hazards and Hazardous Materials”

CAL FIRE. *See* California Department of Forestry and Fire Protection.

California Department of Forestry and Fire Protection. 2007. Placer County Fire Hazard Severity Zone Map. Available: http://www.fire.ca.gov/fire_prevention/fhsz_maps/fhsz_maps_placer.php. Accessed September 2010.

Placer County. 2010 (April). *Placer County Local Hazard Mitigation Plan*. Available: <http://www.placer.ca.gov/Departments/CEO/Emergency/Final%20Hazard%20Mitigation%20Plan.aspx>. Accessed: January 2011.

Shutt Moen Associates. 2000 (October 25). Auburn Municipal Airport Compatibility Map. Santa Rosa, CA.

Section 3.9, “Hydrology and Water Quality”

Aimone, Jack. Engineer, Psomas. February 24, 2010 – phone conversation with Jeff Lafer of Robertson-Bryan, Inc., regarding results of floodplain analysis conducted for the proposed project.

Barnes, K. K., D. W. Koplun, M. T. Meyer, E. M. Thurman, E. T. Furlong, S. D. Zuagg, and L. B. Barber. 2002. *Water-Quality Data for Pharmaceuticals, Hormones, and Other Organic Wastewater Contaminants in U.S. Streams, 1999–2000*. U.S. Geological Survey Open File Report 02-94.

Central Valley Regional Water Quality Control Board. 2009 (September). *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins*. Originally published September 1998. Updated September 2009. Rancho Cordova, CA.

Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.

Darrow, Andrew, P.E. Development Coordinator, Placer County Flood Control and Water Conservation District. Auburn, CA. October 19, 2010—e-mail to Jeff Lafer of Robertson-Bryan, Inc., regarding modeled hydrologic conditions for the Auburn-Bowman Specific Plan area.

Delos, Charles. Environmental Scientist. U.S. Environmental Protection Agency, Health and Ecological Criteria Division, Office of Water, Washington, DC. June 10, 2010—letter to Dr. Michael Bryan of Robertson-Bryan, Inc., regarding applicable aquatic life criteria for aluminum.

Desbrow, C., E. J. Routledge, G. C. Brighty, J. P. Sumpter, and M. Waldock. 1998. Identification of Estrogenic Chemicals in STW Effluent. 1. Chemical Fractionation and in Vitro Biological Screening. *Journal of Environmental Science and Technology* 32(11):1549–1558.

EPA. See U.S. Environmental Protection Agency.

Hunter, G., D. Buhmaster, T. Walz, J. Coughenour, P. Ruiz-Haas, and K. Linden. 2008 (June). Advanced Treatment to Remove Microconstituents: Studies Indicate Several Technologies Show Potential to Remove Endocrine Disrupting Compounds and Pharmaceutical and Personal Care Products. *Water Environment & Technology*. Jobling, S., M. Nolan, C. R. Tyler, G. Brighty, and J. P. Sumpter. 1998. Widespread Sexual Disruption in Wild Fish. *Environmental Science and Toxicology* 32:2498–2506.

Miège, C., J. M. Choubert, L. Ribeiro, M. Eusèbe, and M. Coquery. 2009. Fate of Pharmaceuticals and Personal Care Products in Wastewater Treatment Plants—Conception of a Database and First Results. *Environmental Pollution* 157(2009):1721–1726.

Oppenheimer, J., and R. Stephenson. 2006. Characterizing the Passage of Personal Care Products through Wastewater Treatment Processes. *Water Environment & Technology* 18(12):1521–1542.

Placer County. 1999. *Auburn/Bowman Community Plan*. Environmental Resources Management Element. Auburn, CA.

———. 2004 (March). *County of Placer Stormwater Management Plan, 2003–2008*. Small Municipal Stormwater Program. Auburn, CA.

———. 2009a (September). *Placer County SMD 1 WWTP Upgrade & Expansion Report of Waste Discharge, NPDES Permit No. CA0079316*. Department of Facility Services, Auburn, CA. Prepared by Owen Psomas, Cameron Park, CA.

———. 2009b (October). *Antidegradation Analysis for the Placer County SMD 1 Wastewater Treatment Plant*. Department of Facility Services, Auburn, CA. Prepared by Robertson-Bryan, Inc., Elk Grove, CA.

———. 2010 (April). *Placer County Local Hazard Mitigation Plan*. Auburn, CA. Prepared by Amec Earth & Environmental and Robert Olson Consulting. Sacramento, CA.

U.S. Environmental Protection Agency. 2001 (January). *Water Quality Criterion for the Protection of Human Health: Methylmercury*. EPA-823-R-01-001. Washington, DC.

WHO. See World Health Organization.

World Health Organization. 2002. *Global Assessment of the State-of-the-Science of Endocrine Disruptors*. Rome, Italy: International Programme on Chemical Safety.

Section 3.10, “Land Use and Planning”

Placer County. 1994a. *Placer County General Plan*. Auburn, CA.

———. 1994b. *Auburn/Bowman Community Plan*. Auburn, CA.

Section 3.11, “Mineral Resources”

Placer County. 1994a. *Placer County General Plan*. Auburn, CA.

———. 1994b. *Placer County General Plan Background Report*. Auburn, CA.

Section 3.12, “Noise”

California Department of Transportation. 2002 (February 20). Transportation Related Earthborne Vibrations. Sacramento, CA. Available: http://www.dot.ca.gov/hq/env/noise/pub/transportation_related_earthborne_vibrations.pdf. Accessed August 2010.

———. 2009 (November). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed August 2010.

———. 2010. 2008 All Traffic Volumes on California State Highway System. Traffic and Vehicle Data Systems Unit. Available: <http://www.dot.ca.gov/hq/traffops/saferestr/trafdata/2008all.htm>. Accessed August 2010.

California Public Utilities Commission. 2009 (November 25). Proponent’s Environmental Assessment, Mascot Substation Project. Application A.09.11.020. San Francisco, CA.

Caltrans. *See* California Department of Transportation.

Cummins. 2010. Cummins Power Generation Sound Data for Model 200DGFC 60 Hz. Minneapolis, MN.

EPA. *See* U.S. Environmental Protection Agency.

Federal Highway Administration. 2006 (January). Roadway Construction Noise Model Version 1.0 (FHWA RCNM V. 1.0). Washington, DC.

Federal Transit Administration. 2006 (May). Transit Noise and Vibration Impact Assessment. Washington, DC.

FHWA. *See* Federal Highway Administration.

FTA. *See* Federal Transit Administration.

Lillis, Rebecca. Environmental Resource Specialist. Placer County Department of Facility Services, Auburn, CA. September 10, 2010—conference call with Doug Brown, Andrea Shephard, and Casey Mills of AECOM regarding elements of the SMD 1 WWTP Upgrade and Expansion Project.

Placer County. 1994a. Noise Element of the *Placer County General Plan*. Originally adopted November 25, 1994. Auburn, CA.

———. 1994b. *Auburn/Bowman Community Plan*. Auburn, CA.

———. 2000. *Auburn Municipal Airport Land Use Compatibility Plan*. Auburn, CA.

———. 2004. Chapter 9.36 Noise Ordinance of the County of Placer Code.

U.S. Environmental Protection Agency. 1971. *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Washington, DC.

Section 3.13, “Population and Housing”

California Employment Development Department. 2010 (June). *Labor Market Info: Placer County Profile*. Sacramento, CA.

EDD. *See* California Employment Development Department.

Placer County. 1994. *Auburn/Bowman Community Plan*. Auburn, CA.

Section 3.14, “Public Services”

No references cited.

Section 3.15, “Recreation”

Placer County. 1994. *Auburn/Bowman Community Plan*. Auburn, CA.

Section 3.16, “Transportation/Traffic”

California Department of Transportation. 2009 (May). *State Route 49 Corridor System Management Plan*. Marysville, CA.

Caltrans. *See* California Department of Transportation.

Institute of Transportation Engineers. 1989. *Traffic Access and Impact Studies for Site Development*. Washington, DC: Transportation Planners Council.

ITE. *See* Institute of Transportation Engineers.

Lillis, Rebecca. Environmental Resource Specialist. Placer County Department of Facility Services. Auburn, CA. September 10, 2010—conference call with Doug Brown, Andrea Shephard, and Casey Mills of AECOM regarding elements of the SMD 1 WWTP Upgrade and Expansion Project.

PCTPA. *See* Placer County Transportation Planning Agency.

Placer County. 1994. *Placer County General Plan Update*. Placer County, CA. Available: <http://www.placer.ca.gov/Departments/CommunityDevelopment/Planning/CommPlans/PCGP.aspx>. Accessed August 6, 2010.

Placer County Transportation Planning Agency. 2005 (September). *Regional Transportation Plan 2027*. Auburn, CA.

Section 3.17, “Utilities and Service Systems”

Placer County. 1994. *Auburn/Bowman Community Plan*. Auburn, CA.

Schmidt, Keith J. P.E., Assistant engineer, Placer County, Environmental. March 30, 2011—personal communication via e-mail with Andrea Shephard, Project Manager, AECOM regarding potential increase in potable water due to proposed WWTP.

Section 3.18, “Mandatory Findings of Significance”

No references cited.

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