CHAPTER 6 HYDROLOGY AND WATER QUALITY

6.1 ENVIRONMENTAL SETTING

Groundwater

The project site is located east of Geraldson Road between Ophir Road and Interstate 80 (I-80) in Placer County. The site is approximately one-half mile west of State Route (SR) 49 and approximately 1½ miles east of the community of Newcastle. Available geologic mapping indicates that the site area is underlain by igneous rock of the Rocklin Pluton, an intrusive mass of diorite. This is supported by onsite subsurface exploration consisting of backhoe-excavated test pits that typically encountered practical refusal at depths of three to five feet (KC Engineering, 2003). No public source of potable water is currently available in the project vicinity. Accordingly, domestic supplies are developed from individual wells deriving the water through flow transmitted by fractures in the bedrock, a phenomenon known as "fracture flow."

Well Completion Reports, which are filed by well drillers on behalf of the well owner, were obtained from the files of the California Department of Water Resources (DWR) in Sacramento. Based on available reports for the area surrounding the subject site, specifically Sections 17 and 20 of Township 12 North, Range 8 East, the following Well Completion Reports were obtained:

Section 17 (north of the property)

- 5 wells within ⅛ mile radius
- 103 wells within ¼ mile radius

Section 20 (south of the property)

- 11 wells within ⅛ mile radius
- 48 wells within ¼ mile radius

In addition to ownership information and geographic location, a typical Well Completion Report contains:

- Total depth;
- Hole sizes and well completion details;
- Depth to first water;
- Static water level;
- Estimated yield in gallons per minute (gpm) if testing was performed (and type of test); and
- Geologic log including soil and rock types, fractured intervals.

The domestic supply wells within a ⅛ mile and ¼ mile radius of the project site show a wide range of characteristics. *Table 6.1* summarizes total depth, static water level, and well yield for these wells. Although no specific deficiencies with any existing wells are indicated by the Well

Completion Reports, anecdotal evidence has been provided to Placer County indicating that some wells in the area experience lower than optimum production rates and depth to water levels.

Table 6.1
Summary of Well Characteristics

	⅛ Mile Radius	¼ Mile Radius
Total Depth (ft)	105 – 420	47 – 750
Static Water Level (ft)	20 – 400	3 – 400
Yield (gpm) (1)	1.5 – 60	1 – 200

(1) Note: Testing conducted using various techniques for varying periods of time, commonly air lifting for 4 hours.

Additionally, fractured intervals are identified locally within the bedrock mass, typically 1 to 2 feet in thickness at various depths. No evidence of lateral continuity was identified on the basis of available data.

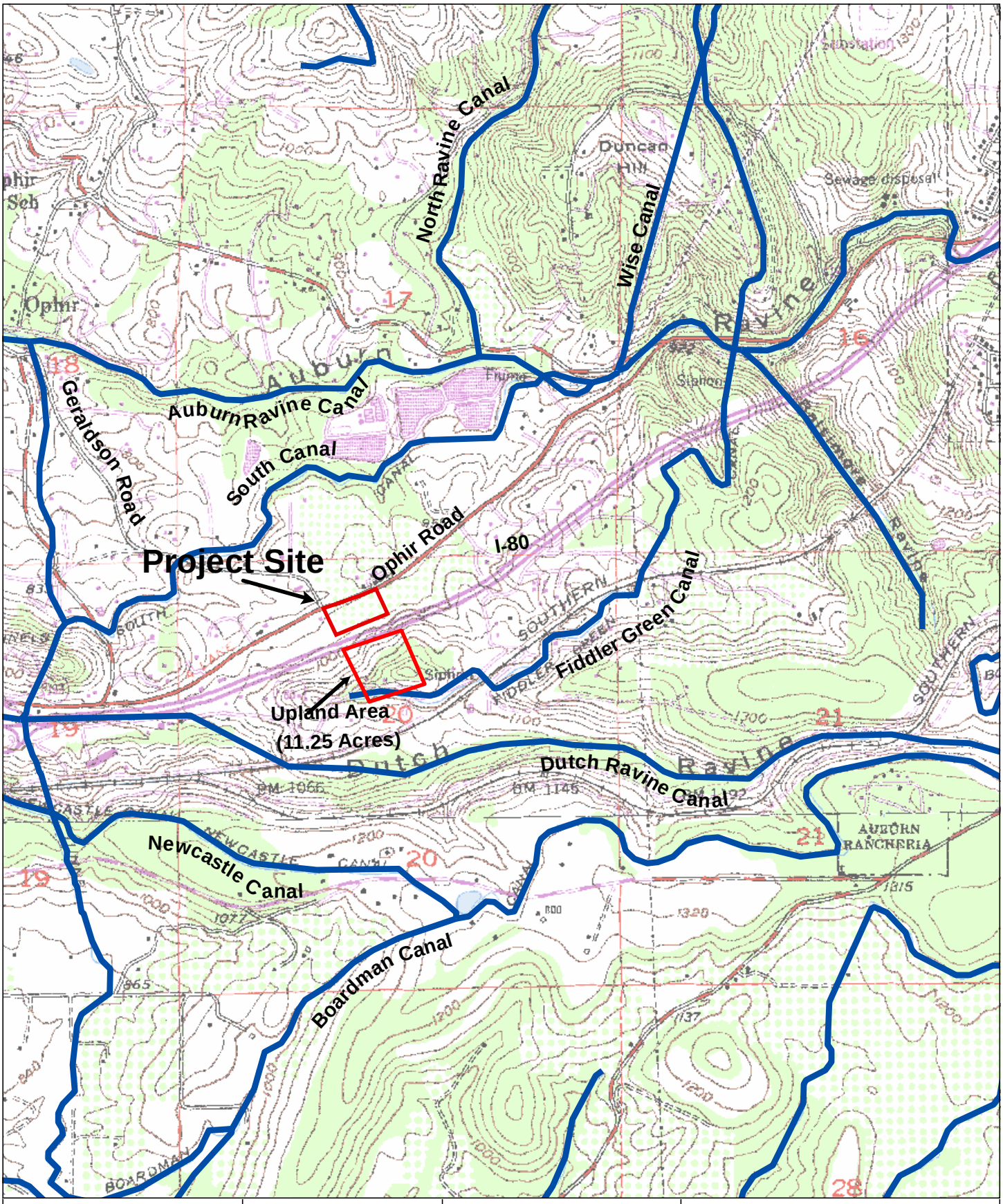
In addition a 72-hour constant head and recovery pump test (Diamond Well Drilling, 2007) was conducted for the existing onsite well. This test included monitoring of the nearby well at the American River Propane property, west of the project site. During the pump test, the depth to water level in the American River Propane well dropped less than one foot. This indicates that there is minimal communication or lateral continuity between these two wells. The 72-hour constant head and recovery pump test report is provided in Appendix D of this Draft EIR.

Regional Surface Water Features

The proposed project site is located in the Auburn Ravine watershed within the Sacramento River Basin, which is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Delta-Central Sierra area to the south. The Sacramento River is the principal stream in the basin. Its major tributaries are the Pit and McCloud rivers, which join the Sacramento River from the north, and the Feather and American rivers, which are tributaries from the east. Auburn Ravine originates in the western Sierra Nevada foothills north of Auburn, CA and discharges into the East Side Canal in southeastern Sutter County. The East Side Canal conveys flows to the Cross Canal, which discharges into the Sacramento River near Verona, CA.

Auburn Ravine generally flows from east to west. Above the Cross Canal, the Auburn Ravine watershed drains approximately 79 square miles (CH2MHill, 1993). Estimated peak winter flows for Auburn Ravine at the Cross Canal range from a few hundred cubic feet per second (cfs) to more than 17,000 cfs for a 100-year storm event (Placer County, 2002).

Limited historical streamflow data are available for Auburn Ravine. A hydrologic study was prepared for Placer County by James M. Montgomery (JMM) (1992) to support the *Auburn/Bowman Community Plan*. Peak flows at various locations within the Auburn Ravine watershed were estimated for both 1990 and future conditions. *Table 6.2* provides a summary of estimated peak flows for the 2-year, 10-year, 25-year, and 100-year events at two locations.



north fork associates

± 0 400 800 1,600 Scale in Feet

Figure 6-1

REGIONAL HYDROLOGY

Livingston's Concrete Batch Plant

Placer County, California

Table 6.2
Estimated Peak Flows within Auburn Ravine Watershed

Location	Area (sq. mi.)	2-Year Peak Flow (cfs)		10-Year Peak Flow (cfs)		25-Year Peak Flow (cfs)		100-Year Peak Flow (cfs)	
		1990	Future	1990	Future	1990	Future	1990	Future
Auburn Ravine at Wise Road	4.68	968	1,111	2,366	2,539	2,993	3,185	4,300	4,429
Auburn Ravine below confluence with North Ravine	10.42	856	1,017	3,042	3,281	4,060	4,384	5,835	6,050

Note: The study estimated the flows for base and future conditions. The base conditions were developed using land use survey information from 1990. The future conditions were developed by modifying the base model for the Placer County General Plan future condition.
Locations are shown on Figure 6-1.
Source: JMM, 1992

The amount of discharge from the various sources that contribute to the flow in Auburn Ravine varies throughout the year. Natural flow varies seasonally with precipitation; Auburn receives approximately 88 percent of its annual rainfall between the months of November and April (Western Regional Climate Center, 2005). Flows in Auburn Ravine are augmented by water imported from the Yuba, Bear, and American River watersheds, as well as discharges from wastewater treatment facilities and irrigation water. Winter streamflows are comprised primarily of storm runoff supplemented by discharge from wastewater treatment facilities. During the summer months, when natural flows are low due to little or no rainfall, streamflows consist primarily of irrigation water deliveries and discharges from powerhouses and wastewater treatment facilities.

Auburn Ravine receives water from the Yuba/Bear River watershed via Nevada Irrigation District's (NID's) Yuba-Bear River Power Project and PG&E's Drum-Spaulding Project. Water from both of these projects is conveyed via various canals, many of which were constructed by early settlers and miners to convey water for a variety of uses (Placer County, 2002). NID and PG&E operate and maintain canals in the vicinity of the project site primarily for the purpose of water supply and power generation. This includes PG&E's Wise Canal, which carries water from north to south. The Wise Canal is the largest canal in the vicinity (with a capacity of more than 500 cfs) and is not encased except in short segments where the water is diverted into penstocks (Placer County, 1994). The Wise Canal receives water from the Bear River Canal, which releases water to Halsey Forebay. This water is then released via a penstock to Halsey Powerhouse and Halsey Afterbay (located on upper Dry Creek). The water is then diverted from the Afterbay to the Wise Canal. This segment of the canal transports the water from the upper Dry Creek watershed to the Rock Creek watershed and is released into Rock Creek Lake. Water is then diverted from Rock Creek Lake into a lower section of Wise Canal passing into the Auburn Ravine watershed, and ending up in the Wise Forebay. At the Wise Forebay, the canal water enters into a penstock and is carried to Wise Powerhouse located along the Auburn Ravine, near the intersection of Wise Road and Ophir Road. From here, canal water is released both to Auburn Ravine and South Canal (Placer County, 1994). South Canal generally flows from east to west and is located approximately less than a quarter mile north of Ophir Road (see *Figure 6-1*).

The City of Auburn's Wastewater Treatment Plant (WWTP) is located approximately 1,000 feet downstream of the Wise Powerhouse. The plant discharges treated wastewater into Auburn

Ravine. Discharge from this plant contributes approximately 2 percent of the July flow in Auburn Ravine near the Lozanos Road Bridge to nearly 20 percent of the total flow in November near the WWTP (Placer County, 2002).

Discharge from Wise Powerhouse to Auburn Ravine fluctuates through the year and depends on water supply and power demands. During summer months, when water supply and power demands are high and natural flows in Auburn Ravine are low, the discharge from the powerhouse may make up most of the flow in the creek. *Figure 6-2* illustrates the flow contribution into Auburn Ravine from natural flow, powerhouse discharge, and WWTP discharge for water year 1997.

Site-Specific Surface Water Features

The proposed Livingston's Concrete Batch Plant site comprises approximately five acres, located between I-80 and Ophir Road. The southern boundary of the site abuts I-80 right-of-way at an approximate elevation of 985 feet above mean sea level, while the northern boundary of the site abuts Ophir Road right-of-way at an approximate elevation of 955 feet above mean sea level.

A Drainage Report was prepared for the proposed project by Oruada Engineering. That report is provided in Appendix D of this Draft EIR. The project site generally slopes from the south to the north. All stormwater runoff flows across the site towards the north as overland flow to an existing ditch along Ophir Road. Runoff from approximately 1.83 acres of the site flows to the northeast while runoff from approximately 3.07 acres flows to the northwest (Ourada, 2006) (see *Figure 6-3*). Flows conveyed in the roadside ditch ultimately cross Ophir Road via culverts and then flow via swales towards the South Canal and Auburn Ravine, located approximately ¼ mile and approximately ½ mile north of the project site, respectively, and ultimately into the Sacramento River.

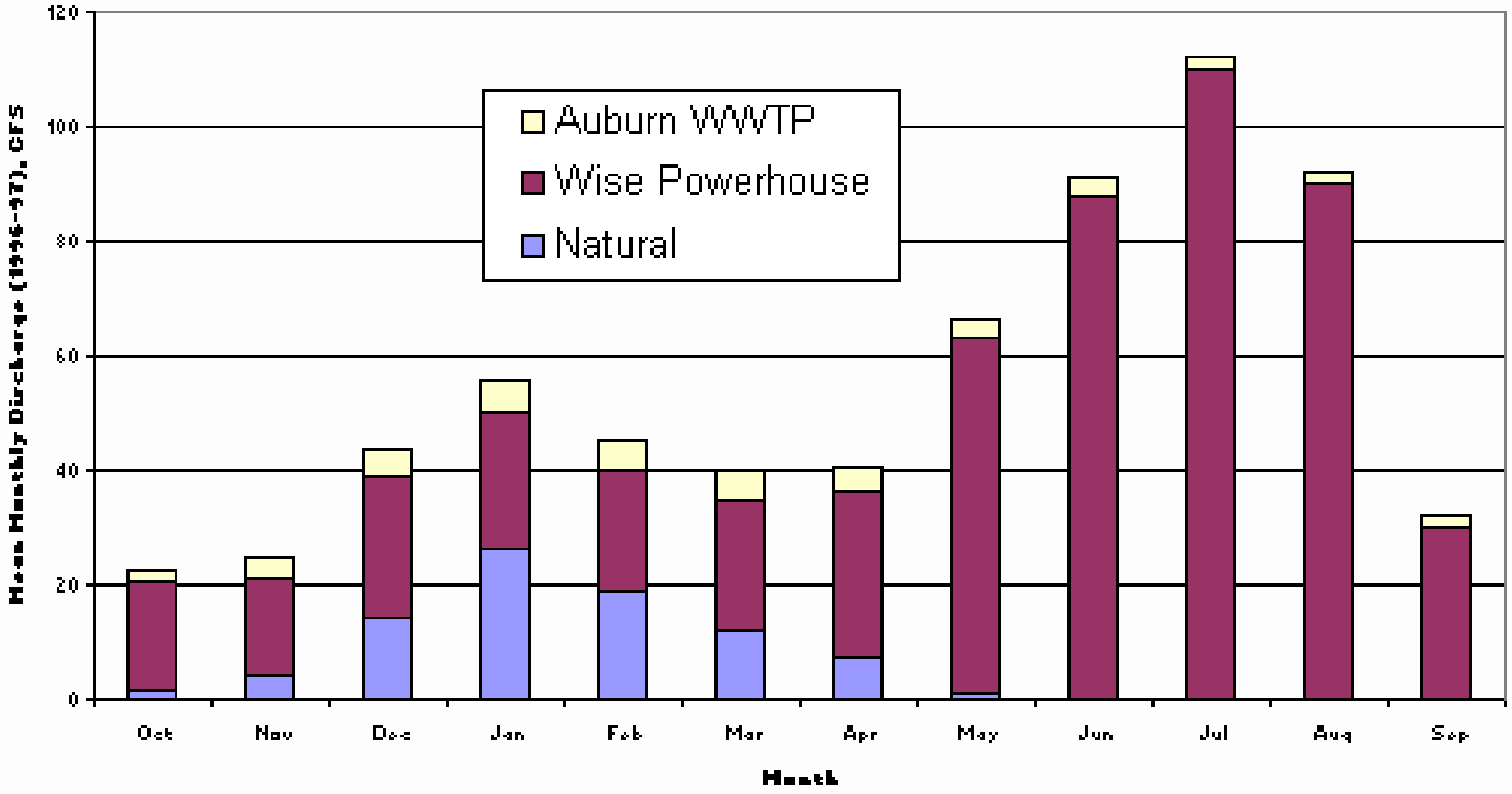
Drainage from the area upstream of the site and south of the I-80 pavement is assumed to be conveyed to an existing 24-inch diameter culvert located in the southwest corner of the site. The estimated drainage area of this upstream area is approximately 11.25 acres (Ourada, 2006). Preliminary calculations indicate that the estimated peak flows from this offsite area are approximately 13.5 cfs for the 10-year storm event and approximately 25 cfs for the 100-year storm event. These flows currently combine with the sheet flow from the site and discharge to the roadside ditch along Ophir Road.

The project site is currently undeveloped. The site was previously used as a fruit tree orchard and is still densely populated with fruit trees. There are also pine, locust and several varieties of oak trees, as well as coyote bush and other dense shrubs and grasses. The soil type present is classified as Soil Conservation Service Group D, which is soil that has very slow infiltration rates and therefore results in high runoff potential (JMM, 1992).

Surface Water Quality

The water quality in nearby streams is of concern for wildlife and fisheries as well as for other downstream uses. Stormwater runoff from rural and urban areas may contain excessive levels

Figure 6-2. Mean Monthly Flows at Auburn Wastewater Treatment Plant



Source: Placer County 2002

of pollutants (e.g., pesticides, herbicides, hydrocarbons) that are toxic to fisheries and other aquatic life in the streams and may negatively affect municipal, domestic, agricultural, and recreational uses of the water.

Water quality degradation from non-point–source pollutants is primarily the result of stormwater runoff carrying pollutants from the land surface to the receiving waters. The types of pollutants that may be transported to the receiving waters depend on the land use and associated activities. In the Auburn area, the urban/commercial uses that may contribute to non-point–source pollution include automobiles (tires, oil leaks, brake linings, catalytic converters), the improper use and disposal of chemicals (pesticides, fertilizers, herbicides, paints, paint thinners, solvents, petroleum chemicals), erosion of unprotected surfaces, structural surfaces (street pavement, galvanized pipes, roofing materials, wood preservatives), and solid waste (litter and debris, vegetative matter, pet droppings) (JMM, 1992).

Stormwater runoff originating at the site drains to Auburn Ravine. These surface waters are tributary to the Sacramento River, a primary source of water for the City of Sacramento as well as for the Sacramento-San Joaquin Delta. Key beneficial uses of the receiving waters are designated as municipal, domestic, and agricultural supply, recreation, and freshwater habitat (Central Valley RWQCB, 1998). In addition, stormwater runoff from the site may be intercepted by the South Canal for irrigation prior to reaching Auburn Ravine.

Water quality data for Auburn Ravine has been collected as part of the WWTP's NPDES permit requirements. In general, water quality criteria are met most of the time for most of the constituents. Water quality criteria for lead and copper are occasionally exceeded in Auburn Ravine, likely a result of urban runoff (Placer County, 2002). Water quality monitoring results are summarized in *Table 6.3*.

Table 6.3
Water Quality Monitoring Results for Auburn Ravine

Analyte	Units	Minimum Concentration	Maximum Concentration	Average
Inorganic[1]				
Conductance	µS/cm	81	149	113
Dissolved Calcium	mg/L	6	12	8.6
Dissolved Magnesium	mg/L	3	6	4.4
Dissolved Nitrite + Nitrate	mg/L as N	0.02	0.59	0.3
Dissolved Organic Carbon	mg/L as C	2.2	3.6	2.7
Hardness	mg/L as $CaCO_3$	27	55	40
Orthophosphate as P	mg/L	0.01	0.04	0.02
pH	pH units	6.7	7.5	–
Total Alkalinity	mg/L	26	84	48
Total Dissolved Solids	mg/L as $CaCO_3$	42	93	69
Total Suspended Solids	mg/L	10	39	21
Turbidity	NTU	7	24	16
Biological[2]				
Total Coliform	MPN/100 mL	220	300	260

Analyte	Units	Minimum Concentration	Maximum Concentration	Average
Fecal Coliform	MPN/100 mL	130	240	185
Eschedrichia coli	MPN/100 mL	50	130	90
Trace Metals[1]				
Aluminum	µg/L	466	955	746
Arsenic	µg/L	0.871	1.32	1.10
Cadmium	µg/L	0.018	0.02	0.019
Chromium	µg/L	1.52	2.82	2.08
Copper	µg/L	2.97	3.93	3.57
Iron	µg/L	805	1,680	1,202
Mercury	µg/L	9.4	31.1	18.6
Methylmercury	µg/L	0.331	0.439	0.387
Manganese	µg/L	48.8	70.4	57.5
Nickel	µg/L	1.55	3.25	2.33
Selenium[3]	µg/L	ND	0.5	0.40
Zinc	µg/L	3.88	6.25	4.83

Notes:

1. Results are for samples collected on three dates: January 24, 2001, July 17, 2001 and January 17, 2002.

2. Results are for samples collected on two dates: July 17, 2001 and January 17, 2002.

3. Average based on results for samples collected on July 17, 2001 and January 17, 2002, since detection limit for selenium was not provided.

Source: Placer County, 2002

mg/L = milligrams per liter

µg/L = micrograms per liter

ND = not detected

Groundwater Quality and Quantity

The quality of groundwater in the project vicinity was evaluated through well output and water quality tests conducted for the existing onsite groundwater well. The 72-hour constant head and recovery pump test conducted in 2007 indicated a yield of 25 gallons per minute. This pump test included a bacteriological test that was positive for coliform bacteria.

6.2 REGULATORY SETTING

Federal and State Regulations

Clean Water Act

The Clean Water Act (CWA) is a 1977 amendment to the Federal Water Pollution Control Act of 1972, which establishes the basic structure for regulating discharges of pollutants to waters of the United States. Section (§) 303 of the Clean Water Act requires states to adopt water quality standards, discussed below as part of the National Pollutant Discharge Elimination System.

The U.S. Army Corps of Engineers (Corps) regulates the placement of fill or dredged materials that affect waters of the United States, which include stream courses and jurisdictional wetlands. The Corps regulates these activities under the authority of §404 of the Clean Water

Act. The Corps would regulate any development within the project site that affects jurisdictional wetlands.

In the State of California, the State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCB) also regulate activities in waters of the United States through §401 of the Clean Water Act. A 401 Certification is necessary to obtain a 404 permit for construction of wetlands/habitat where waters of the United States are impacted.

NPDES Stormwater Discharge Permits

Surface water quality is regulated by the National Pollutant Discharge Elimination System (NPDES), developed by the U.S. EPA in accordance with §303 of the Clean Water Act. In the State of California, the SWRCB administers the NPDES program, with implementation and enforcement by the RWQCB. The NPDES program, designed to protect surface water quality, is applicable to all discharges to waters of the United States, including stormwater discharges associated with municipal drainage systems, construction activities, industrial operations, and "point sources" (such as wastewater treatment plant discharges and other direct discharges to water bodies). In April 2003, the SWRCB adopted an NPDES Phase II General Permit for the Discharge of Storm Water from small municipal separate storm sewer systems (MS4s) to provide NPDES permit coverage to municipalities that were not covered under the NPDES Phase I Rule for municipalities serving more than 100,000 people. Placer County is designated within the NPDES Phase II General Permit. Under this permit, stormwater discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR) or the applicable RWQCB Basin Plan. For Placer County, the applicable Basin Plan is the Water Quality Control Plan for the Sacramento River and the San Joaquin River Basins (Central Valley RWQCB, 1998). The Basin Plan establishes water quality objectives and implementation programs to meet stated objectives and to protect the beneficial uses of water in the basin, in compliance with the federal Clean Water Act and the state Porter Cologne Water Quality Control Act.

The California SWRCB Water Quality Order No. 97-03-DWQ "General Permit to Discharge Storm Water Associated With Industrial Activity" authorizes a general permit to regulate industrial storm water discharges for various industries, including cement and concrete product manufacturing. The General Industrial Permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT). The General Industrial Permit also requires the development of a Storm Water Pollution Prevention Plan (SWPPP), a monitoring plan, and annual reporting.

The Central Valley RWQCB also issues NPDES permits for construction activities involving disturbance of one acre or more. The conditions of the state's General Permit for Storm Water Discharges associated with Construction Activities, Order Number 99-28-DWQ require development and implementation of a SWPPP that must address the following:

- Plans for implementation of structural and operational BMPs to prevent and control impacts to surface water during construction;
- Inspection and maintenance of BMPs throughout all phases of construction;

- Monitoring of runoff quality during all phases of construction; and
- A plan for preventing and controlling post-construction impacts to runoff quality.

The California RWQCB Central Valley Region Order 5-00-175 "Waste Discharge Requirements General Order for Dewatering and Other Low Threat Discharges to Surface Waters" addresses potential discharges of low water quality-threat wastewater. Such discharges include short duration (4 months or less) or low flow conditions (average dry weather discharge does not exceed 0.25 mgd). Types of discharges covered by this permit include: (1) well development water, (2) construction dewatering, (3) pump/well testing, (4) pipeline/tank pressure testing, (5) pipeline/tank flushing or dewatering, (6) condensate, (7) water supply system, and (8) miscellaneous dewatering and low-threat discharges.

The Porter-Cologne Water Quality Control Act of 1969

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the principal law governing water quality regulation in California. This statute established the SWRCB and the nine RWQCBs, which are charged with implementing its provisions. Porter-Cologne establishes a comprehensive program for the protection of water quality and the beneficial uses of water. It applies to surface waters, wetlands, and groundwater and to both point and nonpoint sources. Porter-Cologne is found in the California Water Code beginning with §13000. In addition, Title 23 of the California Code of Regulations contains administrative and regulatory elements of water quality and quantity management in California.

The SWRCB was formed in 1967 when the State Water Rights Board and the State Water Quality Control Board were merged by the State Legislature, based on the understanding that decisions affecting water quality and water rights are inseparable. Under its dual legal authority, the SWRCB allocates rights to the use of surface water and, together with the nine RWQCBs, protects water quality in all waters of the state. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. The RWQCBs have responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The project site is located within Region 5 – the Central Valley River Basin RWQCB.

Porter-Cologne also incorporates many provisions of the federal Clean Water Act such as delegation to the SWRCB and RWQCBs of the NPDES permitting program.

Groundwater

The SWRCB regulates activities that could result in adverse impacts to groundwater quality. Policies and regulations promulgated by the SWRCB (either under its Clean Water Act authority or state-derived authority) are implemented and enforced by the Central Valley RWQCB. Groundwater-related activities governed by NPDES permits or waste discharge requirements issued by the Central Valley RWQCB include aquifer reinjection, reclaimed water irrigation, and siting and design of waste management facilities (including wastewater treatment plants). The Central Valley RWQCB also oversees local implementation of underground storage tank management programs and other programs related to prevention and control of groundwater impacts.

In general, SWRCB policy prohibits degradation of groundwater quality, and in cases where impacts occur, the Central Valley RWQCB typically requires restoration of impacted aquifers such that residual concentrations do not exceed the U.S. EPA's Maximum Concentration Limits (MCL) for drinking water. In cases where the aquifer is hydraulically connected to a surface water body, fresh water aquatic habitat water quality criteria may be imposed as cleanup levels.

Local Regulations

The Placer County Engineering and Surveying Department (ESD) is the local regulatory and permitting authority regarding the proposed project's drainage considerations, while the Placer County Department of Health and Human Services, Environmental Health Division (EHD) is responsible for regulating underground storage tanks and water wells. Placer County ESD and the Placer County Flood Control and Water Conservation District (FCWCD) formulate regional strategies for flood control management and regulate site-specific drainage impacts. The Placer County FCWCD's *Stormwater Management Manual* presents policy, guidelines, and specific development criteria for stormwater management. The main objective of the *Stormwater Management Manual* is to reduce the effects of flooding through best management practices (BMPs). This includes requiring that storm drainage be planned and designed so that no damage occurs to structures or improvements during the 100-year event and no inundation of private property occurs during the 10-year event. It also includes requirements that detention facilities be designed to maintain downstream channel flow rates at 90 percent of the channel capacity.

Local regulations relevant to water quality with respect to erosion and sediment discharge control include the Placer County Grading and Erosion Prevention Ordinance (Article 15.48) and the Placer County General Plan (see below). The Placer County Grading Ordinance specifies permitting requirements and establishes design standards for drainage and erosion/sediment control. The Placer County *Land Development Manual* (LDM) provides additional details on developing and designing erosion/sediment control features and contains a storm drainage section that supplements the *Stormwater Management Manual*. Stormwater management infrastructure constructed or affected by the project must also meet the relevant elements of the LDM's storm drainage section. Grading plans must be designed to address construction-related and long-term erosion and sediment control. An erosion and sediment control plan showing all facilities and measures to be implemented to control erosion and prevent offsite discharge of sediment must be submitted for review and approval by the Placer County ESD.

For compliance and control of sanitary wastewater, including construction and operation of septic systems, a permit must be obtained from the Placer County EHD. The Placer County Wastewater Regulations Ordinance (Article 8.24) and the Placer County On-Site Sewage Manual outline requirements for permitting, design, installation, operation, and maintenance of onsite sewage systems. In addition, Article 13.08 of the Placer County Code regulates use of water wells, and Article 8.20 regulates underground storage tanks. The Placer County EHD also has authority for hazardous materials business plans, hazardous waste, underground storage tanks, and hazardous waste treatment, through delegation from the California Department of Toxic Substances Control as a Certified Unified Program Agency.

Placer County General Plan

The Placer County General Plan contains goals and policies governing development within Placer County. The goals listed below summarize the priorities of the General Plan related to hydrology and water quality, and Appendix B of this EIR provides an evaluation of the project's consistency with applicable General Plan policies.

Goal 4.C To ensure the availability of an adequate and safe water supply and the maintenance of high quality water in water bodies and aquifers used as sources of domestic supply.

Goal 4.D To ensure adequate wastewater collection and treatment and the safe disposal of liquid and solid waste.

Goal 4.E To collect and dispose of stormwater in a manner that least inconveniences the public, reduces potential water-related damage, and enhances the environment.

Goal 4.F To protect the lives and property of the citizens of Placer County from hazards associated with development in floodplains and manage floodplains for their natural resource values.

Goal 6.A To protect and enhance the natural qualities of Placer County's streams, creeks and groundwater.

6.3 IMPACTS

This section identifies and discusses the environmental impacts resulting from the proposed project, and suggests mitigation measures to reduce the level of impact. Each mitigation measure is identified in Section 6.4.

Significance Criteria

Based on Appendix G of the CEQA guidelines, implementation of the project would result in potentially significant impacts associated with hydrology and water quality if it would result in the following conditions:

- Substantial degradation of groundwater quality (i.e., during construction or operation);
- Substantial decrease of groundwater recharge resulting in depressed groundwater levels in the local and/or regional area;
- Substantial decrease in the volume of groundwater pumped from nearby wells due to onsite pumping during operation of the plant;
- Substantial degradation of surface water quality (i.e., during construction or operation);
- Substantial increase in rate of runoff downstream of the site;
- Substantial increase in volume of runoff leaving the site;
- Inadequate water supply facilities; or
- Inadequate wastewater disposal faciliteis.

Project Impacts

IMPACT 6.1:	Construction Impacts To Groundwater
SIGNIFICANCE:	Less than Significant
MITIGATION:	
Proposed:	None
Significance After Proposed Mitigation:	Less than Significant
Recommended:	None
RESIDUAL SIGNIFICANCE:	Less than Significant

Construction of the facility could potentially impact groundwater quality through inadvertent spills or discharge onto the ground surface that could then infiltrate and percolate down to groundwater. Degradation of groundwater resources during construction could theoretically occur by downward migration of a contaminant, e.g., a surface release of equipment fuel, to the groundwater. As noted in the Well Completion Report for the existing 300-foot-deep domestic supply well in the southwestern portion of the property, the static water level at the time of drilling, November 1999, was at a depth of 40 feet. The well features a sanitary grout seal extending to a depth of 24 feet. The driller's log indicates fractured intervals at depths of 35 to 37 feet and 235 to 237 feet. The potential to degrade groundwater during construction is considered highly unlikely, given the mass of bedrock above the static water level and depth of fractured zones. In addition, Best Management Practices (BMPs) would be implemented to reduce or avoid discharge of pollutants during construction in accordance with the County's grading permit and NPDES permit requirements (see discussion and mitigation measures for Impact 6.5).

Construction activities will include foundation excavations. The maximum depth of excavation is estimated to be approximately 15 feet deep. Data from recent investigations conducted at the site suggest that groundwater below the footprint may be present at approximately 40 feet below ground surface. Therefore, it is unlikely that dewatering will be required as part of construction.

Due to the depth of groundwater below the site and given that BMPs would be implemented during construction to address Impact 6.5, potential impacts to groundwater during construction of the project are considered to be less than significant.

IMPACT 6.2:	Operational Impacts To Groundwater From Septic System
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	Mitigation Measures 6.2a and 6.2b
Significance After Proposed Mitigation:	Potentially Significant
Recommended:	Mitigation Measures 6.2c through 6.2e
RESIDUAL SIGNIFICANCE:	Less than Significant

The project proposes to use a septic system to treat non-process wastewater from onsite facility toilets and all wastewater from the caretaker's quarters, should any be constructed onsite. This system would be used until the public sewer service is extended to the project area. The estimated maximum quantity of sewage to be discharged to the septic system is approximately 450 gallons per day, based on eight employees and a one-bedroom caretaker's apartment to be located in the onsite warehouse building (Aqua-Terra Environmental Consultants, 2006). As noted in **CHAPTER 3 PROJECT DESCRIPTION**, there is no requirement that the project include a caretaker apartment, and this apartment may be eliminated from the final construction plans, at the discretion of the project applicant. This EIR considers impacts from including the caretaker's apartment to ensure that the analysis does not minimize any of the potential environmental impacts of the project.

A septic field area is proposed for the southeastern corner of the site, away from all traffic. The proposed septic system must meet the requirements of Placer County Code Article 8.24. Specific requirements for the design and function of the onsite septic system are expressed in Section 8.24.080 and the Placer County *On-Site Sewage Manual*. As required by Section 8.24.080.B.2 and page 41, Chapter 24 of the Manual, the proposed sand filter sewage disposal system would be subject to a renewable operating permit from the Placer County EHD.

Septic systems can have numerous impacts on the quality of ground and surface water supplies. Improperly located or failing systems can discharge inadequately treated sewage which may pond on the ground and runoff into surface waters. Inappropriate vertical distances from groundwater can result in contamination of water supply wells. The wastewater and sewage that may be discharged from failing onsite systems may contain bacteria and viruses that present problems for the health of both humans and aquatic organisms. In addition, excess nitrogen and phosphorus can cause algal blooms that reduce the level of available oxygen in the water and prevent sunlight from reaching desirable submerged aquatic vegetation.

Soil mantle testing was conducted onsite in 1999 (Lindbloom, 2002) to evaluate general soil capability for a septic system. Percolation testing was not conducted at that time. Lindbloom's sketch map of the property includes a note stating "No cut banks downslope of leach field without my review of grading plans."

Soil percolation testing in addition to soil mantle testing was conducted at the site by Aqua-Terra Environmental Consultants on February 23, 2006. Soils within the testing area were found to be shallow and somewhat poorly drained with effective soil depths ranging from approximately 27 to 48 inches. Soil percolation rates were estimated to range from

approximately 11.4 to 57.0 minutes per inch (mpi) for four test holes, with a mean percolation rate of approximately 26.1 mpi. The depth of the test holes ranged from 20 to 24 inches.

Subsurface flow regimes from septic systems generally follow the path of least resistance. Thus, the basic approach to septic system design is to provide an effective infiltration rate into the receiving soils that is greater than the wastewater flows plus any other infiltration flows (e.g., from rain or storm water run-on from up-gradient areas). Typically, this requires provision of sufficient unsaturated void space within the receiving soils directly below and adjacent to the exfiltration trenches that maintains a minimum distance above localized groundwater. If the effective infiltration rate into the receiving soils is not sufficient, wastewater will tend to migrate laterally, acting to flatten the hydraulic gradient, until the hydraulic gradient flattens to the point where wastewater comes up through the soil horizon and becomes surface flow. In general, Placer County EHD requires sufficient robustness of system design to ensure that under most operating conditions surface flow and/or surface ponding of wastewater does not occur. Specifically, the system must be designed to ensure that effluent remains below ground surface. Conditions that can lead to surface flow and/or surface ponding include: a) higher than estimated wastewater generation rates, b) higher than average rainfall, c) improper operation and maintenance of the septic system, which can lead to passage of solids into the exfiltration trenches and clogging of the gravel and/or subsurface soils limiting infiltration effectiveness, and d) any combination of these conditions coupled with limited subsurface void space that limits a system's robustness to handle upsets to systems operation, plus the presence of a preferential flow path that allows wastewater flow to "daylight" through surface features/grading. Sewage treatment provided by the proposed septic system must comply with requirements identified in Section 8.24.080 of the Placer County Code and in the Placer County *On-Site Sewage Manual*.

Considering the limited depth to rock, the clayey nature of the subsurface soils, surface topography sloping to the north and non-uniform results of the onsite percolation testing, it appears that this site could be prone to operational upsets and provide a preferential pathway for wastewater to flow either to the offsite area to the east and/or out into the planned cut to the north. In addition, localized seeps were observed just west of the planned leach field during geotechnical investigations (KC Engineering, 2003). These conditions may contribute to seepage of leach field effluent from the cut slope and/or the nearby retaining wall and should be taken into consideration during the final design stage. The proposed layout of the disposal area, as shown in *Figure 3-4 Site Plan* in **CHAPTER 3 PROJECT DESCRIPTION**, indicates a setback from the adjacent property to the east of 50 feet and a planned six-foot cut bank approximately 24 feet west and north of the disposal area. The proposed layout also includes a graded swale at the northern edge of the disposal area to intercept any up-gradient drainage and prevent it from entering the septic field.

Conceptually, the septic system would consist of a 1,200-gallon septic tank, a 1,200-gallon pump tank, a 16-foot by 24-foot sand filter and 180 lineal feet of disposal trench (Aqua-Terra Environmental Consultants, 2006). The disposal trenches would be approximately 36 inches wide by approximately 18 inches deep, with the maximum flow line at approximately 12 inches below the ground surface. The disposal field would be capped with approximately 12 inches of native topsoil. Approximately 6,800 square feet of area in the southeast corner of the site would be available for the septic field. The applicant would prepare final design drawings,

construction details and material specifications to submit to Placer County EHD for review and approval as part of the septic system permit application package, as required by *Mitigation Measure 6.2a*. Maintenance of the septic system will be in accordance with standard septic/leach field maintenance requirements. A mitigation measure was also included in the Initial Study regarding operation of the septic system. Initial Study Mitigation Measure 1.4 reiterates the need for a renewable operating permit for the septic system. To reflect that a caretaker apartment is not required for this project, minor revisions have been made to Mitigation Measure 1.4 as shown in *Table 2.3* of **CHAPTER 2 EXECUTIVE SUMMARY**.

Specific methods to mitigate potential offsite and/or surface flows of wastewater that will be considered during the final design approval can include increasing the size of the disposal system as compared with the minimum sizing guidance provided by the Design Consultant or Placer County EHD (e.g., providing larger septic tanks and/or more disposal trench). If a system cannot be over-sized due to site limitations, the ability for the system to provide robust operational capabilities is limited. In this case, operation of the system must be closely monitored to evaluate system condition to avoid surface discharge down gradient. In general, septic systems can be difficult to monitor in that the area saturated by the disposal trenches is underground. Monitoring wells can be installed that indicate localized/perched groundwater conditions in the vicinity of the disposal system, however, monitoring of these wells can be very time consuming and difficult to enforce. As a means to ensure success, funding/protocols for approved access to monitoring wells by third parties to evaluate compliance with specific disposal system permit conditions is also generally required. Ongoing monitoring and annual renewal of the septic system permit is required, as expressed in Mitigation Measure 6.2b.

Currently the public sewer system does not extend to the project area; however, with increasing development in the area, it is expected that the public system would be extended to the project site vicinity in the future. The project would use its onsite septic system until such time when the public system has been extended to the area. At that time, the project would abandon the septic system in accordance with Placer County Environmental Health requirements and connect to the public system, as required by Mitigation Measure 6.2d. In addition, Mitigation Measure 6.2c requires that the onsite collection system be designed and constructed with sewer stub-outs toward the future point of connection to facilitate this future connection.

With implementation of the proposed and recommended mitigation measures, the potential impacts from the proposed project's onsite septic system to groundwater resources will be less than significant.

IMPACT 6.3:	Operational Impacts To Groundwater
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	Mitigation Measures 6.3a and 6.3b
Significance After Proposed Mitigation:	Potentially Significant
Recommended:	Mitigation Measure 6.3c
RESIDUAL SIGNIFICANCE:	Less than Significant

Operation and maintenance of the facility could potentially impact groundwater quality through inadvertent spills or discharge that could then infiltrate and percolate down to groundwater. Most of the operational portion of the site would be paved, thereby preventing infiltration into the subsurface. Potential contaminants that could collect on the paved surfaces would be picked up by stormwater and/or washwater and conveyed to the onsite detention basin (see discussion of Impact 6.5). As indicated in a letter from Livingston's Concrete dated September 13, 2005, hexavalent chromium (Cr^{+6}) will not be used directly in their process but it may be present in trace amounts in other products used. In obtaining a Report of Waste Discharge from the Central Valley RWQCB, the project applicant would be required to provide management of process water to ensure that impacts associated with this and other constituents will not occur. Specifically, the proposed process water collection and treatment system would be designed such that no connection to surface drainage would occur. Thus any constituents present in the process water would not be discharged to the surface water system in the project area.

The project would use a concrete lined pond to manage storm water runoff from the operational areas of the site and recycled washwater. Because the pond would be concrete lined, percolation of storm water and recycled washwater from the basin into the subsurface would not be expected to occur, and no degradation of groundwater below the site is expected.

Groundwater recharge into the regional system occurs throughout the area. Soils within the project site are not conducive to onsite recharge of the aquifer. Substantial recharge typically occurs in this area at major drainageways, none of which occur onsite or would be affected by the proposed project. Thus, the paving associated with the project is not anticipated to decrease regional groundwater recharge.

The project proposes to use groundwater from an onsite well until such time as treated water is available in the project area. The well is located in the southwest corner of the site, and water would be pumped to the water tank through a two-inch water line. As described in Chapter 3 Project Description, the proposed project would use approximately 7,000 to 10,000 gallons per day during the summer months, until a supply is provided by PCWA. It is unknown when PCWA will extend public water supply to the project site. The maximum water demand includes 7,500 gallons per day for concrete production, (based on a maximum of 300 cubic yards of concrete per day), 2,000 gallons per day for property maintenance (site cleanup, truck cleaning), 180 gallons per day for staff consumption (assuming 12 employees onsite), and 300 gallons per day for the caretaker residence should it be constructed. Usage amounts for landscaping and fire protection are not included. The 72-hour constant head and recovery pump test (Diamond Well Drilling, 2007) indicated a yield of 25 gpm, which is equal to 36,000

gallons per day. The State of California standards recommend assigning a capacity of 25% of the pumping rate for wells drilled into hard rock formations, such as the existing well onsite. Based on this standard, the well would be assigned a capacity of 9,000 gallons per day. The estimated use of between 7,000 and 10,000 gallons per day would represent a use of 19% to 28% of the established well yield. The Placer County EHS has determined that this estimated daily volume of well water usage is within an acceptable range of the State recommendation of 25% of the established yield.

Other water sources for the project's operations include recycled washwater in the EM40 Enviromatic reclaim system and captured stormwater. The project would rely on these alternate sources of water before using groundwater. The Well Completion Report for the onsite well indicates that the fracture system transmitting the groundwater resource is located at depths of 235 to 237 feet. Based on these depths relative to the depths of other wells in the vicinity, the likelihood of this system connecting to existing wells in the vicinity of the project, including all wells within a ¼ mile radius of the project site, is considered extremely remote. Additionally, a neighboring well was observed throughout the 72-hour constant head and recovery pump test. This well showed less than one foot of drop of the depth to water level during the test, indicating that there is minimal connection between the onsite well and this offsite well. Based on the Well Completion Reports and the 72-hour test results, it is expected that the project would have no potential to affect other nearby wells by pumping from the onsite well.

The onsite well would be abandoned when water supply from PCWA is available. At that time, the project would connect to the public water supply in accordance with PCWA's requirements (*Mitigation Measure 6.3a*). As required by Mitigation Measure 6.3b, well abandonment would be performed in accordance with DHS requirements.

Because most of the operational portion of the site would be paved and the detention basin would be concrete lined, potential impacts to groundwater quality due to the proposed project are considered less than significant. With implementation of Mitigation Measures requiring that the well be abandoned once PCWA water is available to the site, the well would only be used temporarily until PCWA water is available and the amount of water pumped would be within an acceptable range of the State recommendation for well capacity, the project's potential to impact to other nearby water supply wells is considered less than significant.

The bacteriological test included in the 72-hour constant head and recovery pump test indicated that the water in the existing onsite well tested positive for coliform bacteria. To ensure that no impacts occur as a result of using contaminated water, *Mitigation Measure 6.3c* requires that the project applicant provide for treatment of the water and completion of a bacteriological test demonstrating that the well water meets potable water standards.

IMPACT 6.4:	Operational Impacts To Hydrology
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	Mitigation Measures 6.4a and 6.4b
Significance After Proposed Mitigation:	Less than Significant
Recommended:	None
RESIDUAL SIGNIFICANCE:	Less than Significant

The proposed project would increase the amount of impervious surface present on the site. The proposed project consists of the construction and operation of a concrete batch plant on approximately 4.9 acres. The project would include a 1,440-square-foot office building, a 1,800-square-foot warehouse building, a batch plant, and parking and wash areas for the concrete trucks. The project may also include a 900-square-foot single story apartment to provide a caretaker residence. The majority of the project site, approximately 73 percent, would be paved. Portions of the site that would not be paved include the septic area in the southeast portion of the site (approximately 0.4 acres) and the landscaped areas along the eastern and northern property lines (approximately 0.9 acres).

Development of the site would result in an increase in impervious surfaces due to the construction of buildings, parking lots and interior drive aisles. Therefore, peak flow rates of stormwater runoff would increase during storm events. Currently, stormwater runoff leaves the site and is discharged via overland flow into an existing drainage ditch along Ophir Road. Stormwater runoff from approximately 1.83 acres of the site flows towards the northeast and stormwater from approximately 3.07 acres flows towards the northwest. The proposed project would grade and pave most of the site, such that stormwater runoff from approximately 1.33 acres would flow towards the northeast and from approximately 3.57 acres would flow towards the northwest (refer to *Figure 3-4* in **CHAPTER 3 PROJECT DESCRIPTION**).

Stormwater runoff from the eastern portion of the site, which includes the access driveway, parking lot, warehouse and apartment building and septic leach field, would be discharged directly offsite. Although the amount of impervious area would be increased, the proposed grading of the site would reduce the runoff area (from 1.83 acres to 1.33 acres). The net result would be a decrease in peak flow discharged offsite as shown in *Table 6.3*. Based on a preliminary analysis by Ourada Engineering (2006), the estimated un-mitigated peak flow for the 100-year event for post-development conditions would be less than 90 percent of the peak flow for existing conditions. Since this would satisfy the requirements of the Placer County's SWMM, there would be no need to detain the post-project flows from the eastern portion of the site prior to discharge offsite.

Drainage from the paved surfaces of the operation area (approximately 3.07 acres) would be collected in a basin proposed for the northwestern corner of the paved area. This basin would be designed to contain as much stormwater and re-claimed washwater as possible and reuse it in the batch plant operations, as is done at other existing Livingston's Concrete Batch Plant sites in the greater Sacramento area. The basin would be designed to retain the runoff from a 10-year storm event and detain runoff from a 100-year storm event. Preliminary calculations indicate that the onsite detention pond would provide approximately 6,000 cubic feet of storage

(Ourada, 2006). It would be approximately four feet deep with an approximate surface area of 1,200 square feet. During the year, water would be managed to make use of the recycled water and stormwater, which would be supplemented during the dry summer months; initially the supplementing water would come from the groundwater well. At the time that PCWA public water is available at the project site, this would be the source of the supplementing water. During the rainy season, typically November through March, the plant generally would supplement the recycled water with stormwater rather than groundwater or PCWA water.

Based on preliminary estimates by Ourada Engineering, the estimated peak flows for pre-project, unmitigated post-project and mitigated post-project conditions are summarized in *Table 6.4*. The preliminary estimates indicate that post-project flows (i.e., the regulated outflow from the proposed stormwater detention system) would be less than pre-project flows for all storm events. During detailed design, the facilities would be sized to achieve the required reduction in flows in accordance with the SWMM. To support the design of the detention facilities, and as required by *Mitigation Measure 6.4a*, a project drainage report, including drainage calculations, would be prepared for review and approval by Placer County ESD.

These preliminary estimates show that there would be no increase in peak discharge to downstream storm drain systems (e.g., the roadside ditch along Ophir Road) due to the proposed project. To support the design of the proposed conveyance systems, a project drainage report, including drainage calculations, would be prepared for review and approved by Placer County ESD. As required by *Mitigation Measure 6.4b*, these calculations would include an evaluation of the conditions and capacity of the storm drain system along Ophir Road and an evaluation on the ability of the proposed onsite detention system to not increase discharge offsite. The applicant's drainage report indicates that the runoff from this project is not tributary to Caltrans' right-of-way and therefore has no impacts on their facilities.

The stormwater runoff from the area upstream of the site (approximately 11.25 acres south of I-80) would be directed through a lined or cobbled swale along the western edge of the property line. Flows from this upstream area would not be detained or treated by the proposed project; i.e., flows would continue to discharge to the existing roadside ditch, the same as under existing conditions.

With implementation of the mitigation measures identified in this Draft EIR, the impact of the proposed project on runoff rate is considered less than significant. Mitigation measures include requirements that the design and construction of an onsite stormwater basin provide detention to reduce the peak flow to less than the existing flow rate, and that stormwater must be used in plant operations.

Table 6.4
Pre-Project, Post-Project Unmitigated and Post-Project Mitigated Flows

Condition	Area Designation	Area (acres)	10-Year Runoff Peak Flow (cfs)	10-Year Runoff Volume (acre-feet)	100-Year Runoff Peak Flow (cfs)	100-Year Runoff Volume (acre-feet)
Pre-Project	A1 (to east)	1.83	3.11	NA	5.49	NA
	A2 (to west)	3.07	3.29	NA	6.13	NA
	Total	**4.9**	**6.4**	**NA**	**11.62**	**NA**

Condition	Area Designation	Area (acres)	10-Year Runoff Peak Flow (cfs)	10-Year Runoff Volume (acre-feet)	100-Year Runoff Peak Flow (cfs)	100-Year Runoff Volume (acre-feet)
Post- Project Unmitigated	A3 (to east)	1.33	2.66	NA	4.79	NA
	A2 (to west)	1.40	3.07	NA	5.76	NA
	A1 (to west)	2.17	2.76	NA	4.83	NA
	Subtotal to west (A1+A2)	3.57	5.83	NA	10.59	NA
	Total	**4.9**		**NA**		**NA**
Post- Project Mitigated	A3 (to east)	1.33	2.66	NA	4.79	NA
	Outflow from pond (to west)	3.57	0	NA	5.52	NA
	Total	**4.9**	**2.66**	**NA**	**10.31**	**NA**

Notes:
Source: Ourada Engineering, 2006.
NA = not available, values not provided in Drainage Report. In addition, Drainage Report only provides values for 10-year and 100-year events.
1. Combining the peak flows is considered conservative, since it does not account for differences in time when the peak flow would occur for each area.

IMPACT 6.5:	Construction Impacts To Surface Water Quality
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	Mitigation Measures 6.5a through 6.5d
Significance After Proposed Mitigation:	Less than Significant
Recommended:	None
RESIDUAL SIGNIFICANCE:	Less than Significant

The proposed project will disturb the majority of the approximately 4.9-acre project site. To construct the improvements proposed, significant disruption of soils will occur, including grading, compaction for parking/circulation areas, and construction of a series of three retaining walls, with a total finished elevation of approximately 20 feet above the plant site. A significant amount of cut material has been identified on the preliminary grading plan. Preliminary calculations indicate approximately 22,500 cubic yards of cut and about 1,200 cubic yards of fill for a net export of 21,300 cubic yards.

The grading involved in preparing the project site for construction would decrease vegetative cover and increase the potential for soil erosion, and thereby could cause an increase in suspended solids in runoff and local receiving waters. In addition to impacts from erosion, impacts to runoff water quality during construction could potentially result from leaks or spills of fuel or hydraulic fluid used in construction equipment; outdoor storage of construction materials; or spills of paints, solvents, or other potentially hazardous materials commonly used in construction.

As required by *Mitigation Measure 6.5a* and *Mitigation Measure 6.5b*, Improvement Plans and a grading plan for the project would be submitted to the Placer County ESD for review and approval. The Best Management Practices (BMPs) to be implemented during construction to minimize discharge of sediments offsite would be included on the erosion control plan. Sediment generated by grading or construction activities for the proposed project would be contained on the construction site and controlled using BMPs. Once the proposed construction project is completed, the site would be covered with asphalt, landscaping, and buildings, so that sediment production from erosion would be negligible. The applicant has prepared a preliminary grading plan. Some of the BMPs that could be implemented during construction include silt fences, sand bags, fiber rolls, and a stabilized construction entrance. Final grading plans will include all proposed grading, drainage improvements, and vegetation and tree removal. Final grading and erosion control plans would be prepared as part of the project's Improvement Plans and in accordance with the Placer County Land Development Manual and Grading Ordinance. These plans would be reviewed and approved by the County prior to commencement of construction, as required by these mitigation measures.

Construction activities involving the disturbance of one or more acres must be covered under the SWRCB's NPDES General Permit for Storm Water Discharges Associated with Construction Activities (*Mitigation Measure 6.5c*). To obtain coverage under the permit, the applicant would submit a Notice of Intent with the required permit fee and prepare a project-specific Storm Water Pollution Prevention Plan (SWPPP) for construction. The SWPPP would include the following four major elements (*Mitigation Measure 6.5d*):

1) Identify pollutant sources, including sources of sediment, that may affect the quality of stormwater discharges from the construction site;
2) Identify non-stormwater discharges;
3) Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges, from the construction site during construction; and
4) Identify, construct, implement in accordance with a time schedule, and assign maintenance responsibilities for post-construction BMPs those measures to be installed during construction that are intended to reduce or eliminate pollutants after construction is completed.

The SWPPP for construction activities will include development of site-specific structural and operational BMPs to prevent and control impacts to runoff quality, measures to be implemented before each storm event, inspection and maintenance of BMPs, and monitoring of runoff quality by visual and/or analytical means. The contents of the SWPPP are set forth in detail in the permit application package. Several potential construction BMPs are described in the *Auburn/Bowman Community Plan*, Appendix D, Hydrology Study (JMM, 1992). The California Stormwater BMP Handbook for Construction (California Stormwater Quality Association, 2004) also provides examples of BMPs that could be used. BMPs that could be included in the SWPPP are as follows:

- Scheduling materials deliveries to provide for minimal onsite storage and/or providing covered storage for materials wherever practical;

- Designating specific areas for overnight construction equipment storage and maintenance and providing runoff control around those areas to minimize the potential for runoff to contact spilled materials;
- Procedures for daily work site cleanup and immediate cleanup of spilled materials and contaminated soil;
- A program of site inspections to ensure that BMPs are consistently implemented and effective;
- Visual monitoring of onsite runoff quality;
- Placing fiber rolls around drain inlets to prevent sediment and construction-related debris from entering the inlets;
- Placing fiber rolls along the perimeter of the site to reduce runoff flow velocities and prevent sediment from leaving the site, and sandbags around potentially affected offsite inlets to prevent sediments from entering the inlets;
- Placing silt fences downgradient of disturbed areas to slow down runoff and retain sediment; and
- Specifying that all disturbed soil will be seeded, mulched or otherwise protected by October 15.

Potential significant impacts to water quality due to construction activities would be mitigated to a less than significant level by preparing final Improvement Plans, Grading Plans, and Landscaping Plans for the proposed project in accordance with the provisions of the Placer County Grading Ordinance and by implementing a SWPPP for construction activities developed in accordance with the requirements of the NPDES General Permit for Storm Water Discharges Associated with Construction Activities.

IMPACT 6.6:	Operational Impacts To Surface Water Quality
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	Mitigation Measures 6.6a through 6.6c
Significance After Proposed Mitigation:	Potentially Significant
Recommended:	Mitigation Measure 6.6d
RESIDUAL SIGNIFICANCE:	Less than Significant

The project proposes to construct and operate a ready-mix concrete plant. This facility would include a batch plant, bulk material storage area, hazardous material storage as described in the proposed Hazards Materials Business Plan, truck tire washing facility, truck and employee parking lot(s) and administration/maintenance building(s). The pollutants of concern include particulates, metals, oil and grease, and high alkalinity washwater.

The proposed project would increase the overall amount of impervious surface, thereby increasing runoff from most of the site. Following construction of the proposed project,

stormwater runoff quality would be expected to decline, as more potential pollutants would be generated by site activities. Operations at the proposed facility would include: receiving aggregates and cement, concrete batching, and transporting ready-mix concrete to offsite customers. The main process at the facility would include weighing and mixing aggregate, sand, water, and various non-hazardous additives with Portland cement and fly ash. The product would be discharged into concrete mix trucks for transport to offsite customers. Returning trucks would be washed out and excess material recycled onsite. Other operations at the site include fueling of trucks and some minor servicing of trucks (e.g., adding oil or hydraulic fluids). Concrete trucks would be parked onsite overnight. Major maintenance and repair of trucks would be performed offsite.

Wastewater generated in washing cement trucks and ready-mix plant equipment is typically very alkaline and may contain metals in concentrations that exceed the water quality objectives. Untreated process water resulting from concrete batch operations typically have pH values in the range of 11 to 12. While some ready-mix plants produce concrete that contain hexavalent chromium, Livingston Concrete has stated in a letter dated September 13, 2005, that hexavalent chromium (Cr^{+6}) will not be directly used in their process although trace quantities of this material may be present in some products used in the proposed concrete production. As discussed above, appropriate management of the process water as required by Placer County and the Central Valley RWQCB would ensure that impacts associated with this and other constituents will not occur. In addition, as indicated in the Hazardous Materials Business Plan for the project (Livingston's Concrete Services, 2005), large quantities of hazardous materials would not be stored at this site.

Potential source areas that could contribute to storm water contamination are as follows:

- Parking area: Stormwater runoff from areas where employees park their vehicles during the day and where concrete trucks are parked overnight could potentially be contaminated by leaking fluids from the parked vehicles. Potential contaminants could include petroleum hydrocarbons.
- Warehouse: Maintenance and fueling activities would be performed on ready-mix concrete trucks in the warehouse. Materials that would be stored in this area include 55 gallons of motor oil and 55 gallons of coolant; these materials would be stored within the warehouse under appropriate cover. Stormwater runoff from the perimeter of the warehouse area could be potentially contaminated by fluids leaking from the vehicles or spills and leaks at the fueling station. Potential contaminants could include petroleum hydrocarbon and antifreeze.
- Truck unloading area: Trucks would unload aggregate in the unloading area. Stormwater runoff from this area could be potentially contaminated by fluids leaking from the trucks or by materials spilled onto the ground. Potential contaminants could include petroleum hydrocarbons and particulates.
- Truck washout area: Trucks would be washed in the truck washout area. This would include washing the interior of the truck drums and the exterior surfaces of the trucks. Stormwater runoff from this area could be potentially contaminated by fluids leaking from the trucks or by materials washed onto the ground. Potential

contaminants could include petroleum hydrocarbons, particulates, and washwater with high pH.

- Ready-Mix Manufacturing area: The manufactured cement would be loaded into the ready-mix truck at the loading area. Stormwater runoff from this area could be potentially contaminated by fluids leaking from the trucks or by materials washed onto the ground. Potential contaminants could include petroleum hydrocarbons and particulates, as well as batch plant water with high pH.
- Material Storage area: Material used in the concrete mix, such as aggregate, would be stored in four concrete bays located in the southeastern portion of the site. Stormwater runoff from this area could be potentially contaminated by particulates.

Stormwater runoff from approximately 1.33 acres of the site (Area 3 on *Figure 6-4*), which includes the access driveway, employee parking area, warehouse and apartment building, and the septic field would be discharged directly offsite to the existing roadside ditch along Ophir Road. As discussed in Impact 6.4, post-development discharge to the northeast would be less than pre-development conditions, due to a smaller area of contribution (from 1.83 acres to 1.33 acres). In order to prevent offsite discharge of particulates and oil/grease, the County requires that the applicant collect and convey stormwater runoff from the paved portion of this area to an oil/grit separator prior to discharge. Because of the operations at the site, the roof of the warehouse and apartment building could collect particulates that could then be picked up by precipitation falling on the roof. This requires that runoff from the building roof should also be directed to the oil/grit separator. Stormwater runoff from the non-paved areas would flow offsite as overland sheet flow.

The conceptual storm water management plan for the operational portion of the site is shown in *Figure 6-4*. The proposed project would collect all stormwater runoff from the operational portion of the site (approximately 3.6 acres or approximately 73 percent) and convey it to an onsite detention basin. This portion of the site would be paved and sloped so that runoff would flow to the basin. Runoff from the driveways would be collected and conveyed via ditches to the basin. Similar to its other concrete sites, the applicant proposes to recycle approximately 50 to 70 percent of the stormwater collected from the site and use it in the batch plant operations (Ourada Engineering, 2006).

Approximately 99% of all returned concrete would be recycled at the reclaim station in an EM40 Enviromatic Recycling System by Stephens Manufacturing Company. Waste (leftover) concrete would be recycled through this equipment. The recycled aggregates, cement fines, and water would be reused in concrete production at the facility. The EM40 Enviromatic Recycling System includes a 7,000-gallon water tank. This water would be managed through reuse in the plant operations while process water and water from truck cleaning operations discharged to the surface of the project site would be collected in a 30-foot by 40-foot boat ramp style basin, which would have a holding capacity of approximately 30,000 gallons.

Non-reclaimable material would be washed into washout holding tanks that would allow solids to drop out. Environment Canada reports that generally one hour of settling in a properly designed basin can provide 80 to 90 percent reduction in settleable solids and that this type of

treatment system is common practice in the ready-mix concrete industry (Envirochem, 1993). The recovered water would then be used for rinsing of trucks or reused in the production of concrete. This water would be directed to the basin in the northwest portion of the site.

As described above, stormwater from the industrial portions of the site and washwater could have high levels of petroleum hydrocarbons and particulates with relatively high pH values. An oil/grit separator would be installed to collect oils, greases, and particulates. Water would then flow through a bark media to filter out a portion of the suspended solids and reduce the pH prior to discharge into the basin. The basin would allow suspended solids that were not intercepted by the oil/grit separator or bark media to settle. This water would be sampled and monitored prior to discharge offsite. The oil/grit separator would be maintained and solids removed and disposed as needed. The bark media would be replaced periodically as needed to ensure that it is still effective in lowering the pH. The applicant has used this method effectively at its other concrete facilities (Ourada, 2006). Data provided by the applicant for another ready-mix concrete facility shows that the discharge that had passed through the bark media had pH values ranging on the order of 5.8 to 9.6. Prior to installation of the bark media, discharges typically had pH values on the order of 10 to 12 (Hersh, 2006).

As noted in the NOP comment letter from the Central Valley RWQCB, the project would be required to provide a containment system for all concrete washwater to prevent discharges of this water onto the ground surface. The proposed onsite drainage and collection system complies with this requirement by directing all process wastewater to the onsite settling basin and the Enviromatic Recycling System, and by providing for reuse of process wastewater.

As an industrial facility, the proposed project would be required to comply with the requirements of the NPDES General Permit for Discharge of Storm Water Associated with Industrial Activities (General Industrial Permit). Prior to operation, the project applicant would submit a Notice of Intent (NOI) to the RWQCB to comply with the General Industrial Permit (*Mitigation Measure 6.6a*). In addition, because the facility is located within Placer County, the proposed project must also comply with requirements of the NPDES Phase II Rule permit for MS4s.

A Storm Water Pollution Prevention Plan (SWPPP) for operations would be prepared in accordance with the General Industrial permit and NPDES II permit requirements (*Mitigation Measure 6.6b*). The General Industrial Permit SWPPP checklist developed by the RWQCB provides guidance on the items to be included in the document. The items in the checklist are derived from the current General Industrial Permit requirements and would be reviewed for applicability to the proposed project. Typical contents include:

- Pollution Prevention Team
- Existing Facility Plans
- Facility Site Map
- List of Significant Materials
- Description of Potential Pollution Sources
- Assessment of Potential Pollutant Sources

- Storm Water BMPs
- Annual Comprehensive Site Compliance Evaluation

For compliance with the NPDES Phase II Rule Permit, the SWPPP must also include elements that will reduce the discharge of pollutants to the "maximum extent practicable" (MEP) to protect water quality.

Similar to BMPs used at its other concrete batch plant operations, the proposed project would include the following BMPs to address water quality impacts:

- Practice good housekeeping to control containment dispersal.
- Pave, curb, and slope operational areas of the site, to contain possible sand and gravel spills and facilitate cleanup.
- Divert stormwater around the facility to minimize the volume of water that may cause erosion onsite and/or come into contact with potential pollutants. This could be accomplished via perimeter ditches, berms, or curbs.
- Provide drip pans in warehouse area to collect leaking fluids.
- Do not include any floor drains or plumbing in the warehouse.
- Place aggregates in raised bins to avoid contact with stormwater.
- Install energy dissipating discharge aprons at discharge points to reduce flow velocities and minimize erosion potential. These structures would be made of concrete and include rip-rap.
- Provide pH treatment, e.g., filter stormwater runoff and washwater though redwood bark media to reduce pH.
- Detain stormwater and washwater in a basin to allow particulates and pollutants to settle.
- Maximize water reuse in plant operations.
- Sampling and monitoring to measure BMP performance.

The detention system temporarily detains runoff and releases flows at low rates. This detention allows sediments and particulates to settle in the basin. The basin would be designed to provide sufficient collection volume for contaminated waters and manage effluent in high precipitation periods. These detention facilities combined with the other BMPs listed above would minimize the release of pollutants to downstream environments.

With implementation of the proposed BMPs, release of pollutants would be expected to be minimal. The project would contain and re-use as much stormwater and reclaimed waste water as possible in its operations. As described in Impact 6.4, the onsite detention basin would be designed to retain the runoff from a 10-year storm event and detain runoff from a 100-year storm event; therefore, discharge would only occur during storm events greater than or equal to a 100-year event. Any pollutants that would be discharged would have minimal effect on degradation of water quality in receiving streams due to dilution effects. Peak discharge from the onsite detention system during a 100-year storm event is estimated to be approximately

six cfs (see *Table 6.3*). In comparison, estimated peak flows for Auburn Ravine downstream of North Ravine are approximately 3,000 cfs for a 10-year storm event and approximately 6,000 cfs for a 100-year storm event (see *Table 6.2*). As such, the discharge from the onsite detention system is only a small fraction of the flow in Auburn Ravine (less than one percent). Although some small amounts of pollution could enter the aquatic environment, the resulting water quality degradation would not be substantial, and this impact would be less than significant.

In accordance with the NPDES General Industrial and NPDES Phase II Rule Permit requirements, project design will be required to incorporate BMPs as described in *Mitigation Measures 6.6b* to reduce the discharge of stormwater pollution to the MEP. Potential significant impacts to water quality during operations would be mitigated to a less than significant level by designing the project to include appropriate and effective BMPs.

6.4 MITIGATION MEASURES

Construction Impacts to Groundwater

No mitigation measures are necessary.

Operational Impacts to Groundwater from Septic System

Proposed Mitigation

Mitigation Measure 6.2a: The project applicant shall prepare the final septic system design, which shall be submitted to Placer County for review and approval. Due to the proximity of the adjacent property to the east and planned cut to the north, the design for the septic system shall include measures to maximize system performance, including additional disposal trench, and means to block potential run-on storm water flows from the south (e.g., surface berm and/or subsurface shallow impermeable curtain wall) to minimize the potential for untreated wastewater to become surface flow at the cut or other down gradient area(s). The septic system design shall be in accordance with Placer County wastewater regulations (Placer County Code Article 8.24) and the Placer County *On-site Sewage Manual*. The onsite sand filter sewage disposal system shall be subject to a renewable operating permit from the Placer County Department of Health and Human Services, Environmental Health Division as required by Section 8.24.080.B.2 of the Placer County Code and page 41, Chapter 24 of the *On-site Sewage Manual*.

Mitigation Measure 6.2b: The project applicant shall obtain a permit for the use of an onsite septic system. The project must submit an application for a Septic Construction Permit, along with the septic system design, prior to construction. The application must include plot plans and final designs, as described in the Placer County *On-site Sewage Manual*, and all applicable fees. The applicant shall work with the Placer County Department of Health and Human Services, Environmental Health Division to ensure that all proposed and recommended mitigation measures are incorporated into the septic system design as specific design details and subsequently as permit conditions. The project is expected to use an "Intermittent Sand Filter Septic System" which requires a renewable operating permit and system monitoring and maintenance in conformance with the permit requirements.

Recommended Mitigation

Mitigation Measure 6.2c: To facilitate future connection to the County sewer collection and treatment system, the onsite collection system shall be designed and constructed with sewer stub-outs toward the future point of connection, so that cut over to the permanent system and subsurface excavation and construction will be minimized.

Mitigation Measure 6.2d: The onsite septic system shall be abandoned when public sewer service is extended to area. The proposed septic system is intended to be used temporarily. Once the public sewer service is available, the onsite septic system should be abandoned in accordance with County requirements that are in effect at the time of abandonment and in accordance with the procedures specified in the Placer County *On-site Sewage Manual*.

Mitigation Measure 6.2e: The proposed Livingston's Concrete Batch Plant shall retain no more than 13 full-time equivalent employees (inclusive of a caretaker if a caretaker's apartment is constructed).

Operational Impacts to Groundwater

Proposed Mitigation

Mitigation Measure 6.3a: The Conditional Use Permit for the Livingston's Concrete Plant will limit the operations to 300 cubic yards of concrete production each day so that the maximum demand of water usage for concrete production does not exceed 7,500 gallons per day. The Livingston's Concrete Batch Plant shall connect to public water supply when it is available. To facilitate this future connection, the onsite water supply/delivery system shall be designed and constructed with stub-outs toward the future point of connection. The project applicant shall coordinate with PCWA on this design for future connection. Public water is considered available for connection if the water supply is within 1,000 feet of any boundary of the property, as measured in a straight line, and the connection can be legally and physically achieved.

Mitigation Measure 6.3b: Livingston's Concrete Service, Inc. shall abandon the existing onsite well when PCWA water is available, in accordance with State of California Well Standards Bulleting 74-90, as revised.

Recommended Mitigation

Mitigation Measure 6.3c: Livingston's Concrete Service, Inc. shall provide for treatment of the onsite well to remove bacteriological contaminants. Following treatment, Livingston's Concrete Services shall provide for completion of a bacteriological test. The well water must meet potable water standards prior to issuance of a certificate of occupancy for the proposed project.

Operational Impacts to Hydrology

Proposed Mitigation

Mitigation Measure 6.4a: The project applicant shall prepare and submit with the project Improvement Plans, a drainage report in conformance with the requirements of

Section 5 of the Land Development Manual and the Placer County Storm Water Management Manual that are in effect at the time of submittal, to the Engineering and Surveying Department for review and approval. The report shall be prepared by a Registered Civil Engineer and shall, at a minimum, include: A written text addressing existing conditions, the effects of the improvements, all appropriate calculations, a watershed map, increases in downstream flows, proposed onsite and offsite improvements and drainage easements to accommodate flows from this project. The report shall identify water quality protection features and methods to be used both during construction and for long-term post-construction water quality protection. Best Management Practice (BMP) measures shall be provided to reduce erosion, water quality degradation, and prevent the discharge of pollutants to stormwater to the maximum extent practicable. No retention/detention facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.

Mitigation Measure 6.4b: The drainage report required by *Mitigation Measure 6.4a* shall evaluate offsite drainage facilities for conditions and capacity. The project applicant shall upgrade or replace any offsite drainage facilities as needed and as specified by ESD. This includes any existing drainage facility immediately downstream of the site that would receive drainage and would be changed by the proposed project.

Recommended Mitigation

No additional mitigation measures are recommended.

Construction Impacts to Surface Water Quality

Proposed Mitigation

Mitigation Measure 6.5a: The applicant shall prepare and submit Improvement Plans, specifications and cost estimates (per the requirements of Section II of the Land Development Manual [LDM] that are in effect at the time of submittal) to the Engineering and Surveying Department (ESD) for review and approval. The plans shall show all conditions for the project as well as pertinent topographical features both onsite and offsite. All existing and proposed utilities and easements, onsite and adjacent to the project, which may be affected by planned construction, shall be shown on the plans. All landscaping and irrigation facilities within the public right-of-way (or public easements), or landscaping within sight distance areas at intersections, shall be included in the Improvement Plans. The applicant shall pay plan check and inspection fees. (NOTE: Prior to plan approval, all applicable recording and reproduction costs shall be paid). The cost of the above-noted landscape and irrigation facilities shall be included in the estimates used to determine these fees. It is the applicant's responsibility to obtain all required agency signatures on the plans and to secure department approvals. If the Design/Site Review process and/or DRC review is required as a condition of approval for the project, said review process shall be completed prior to submittal of Improvement Plans. Record drawings shall be prepared and signed by a California Registered Civil Engineer at the applicant's expense and shall be submitted to the ESD prior to acceptance by the County of site improvements.

Mitigation Measure 6.5b: All proposed grading, drainage improvements, vegetation and tree removal shall be shown on the Improvement Plans and all work shall conform to provisions of the County Grading Ordinance (Ref. Article 15.48, Placer County Code) that are in effect at the time of submittal. No grading, clearing, or tree disturbance shall occur until the Improvement Plans are approved and all temporary construction fencing has been installed and inspected by a member of the DRC. All cut/fill slopes shall be at 2:1 (horizontal:vertical) unless a soils report supports a steeper slope and the Engineering and Surveying Department (ESD) concurs with said recommendation.

The applicant shall revegetate all disturbed areas. Revegetation undertaken from April 1 to October 1 shall include regular watering to ensure adequate growth. A winterization plan shall be provided with project Improvement Plans. It is the applicant's responsibility to assure proper installation and maintenance of erosion control/winterization during project construction. Where soil stockpiling or borrow areas are to remain for more than one construction season, proper erosion control measures shall be applied as specified in the Improvement Plans/Grading Plans. The Improvement and Grading plans shall provide for erosion control where roadside drainage is off of the pavement, to the satisfaction of the ESD.

The project applicant shall submit to the ESD a letter of credit or cash deposit in the amount of 110 percent of an approved engineer's estimate for winterization and permanent erosion control work prior to Improvement Plan approval to guarantee protection against erosion and improper grading practices. Upon the County's acceptance of improvements, and satisfactory completion of a one year maintenance period, unused portions of said deposit shall be refunded to the project applicant or authorized agent.

If, at any time during construction, a field review by County personnel indicates a significant deviation from the proposed grading shown on the Improvement Plans, specifically with regard to slope heights, slope ratios, erosion control, winterization, tree disturbance, pad elevations and configurations, and/or sewage disposal area disturbance, the plans shall be reviewed by the DRC/ESD for a determination of substantial conformance to the project approvals prior to any further work proceeding. Failure of the DRC/ESD to make a determination of substantial conformance may serve as grounds for the revocation/modification of the project approval by the appropriate hearing body.

***Mitigation Measure 6.5c*:** This project is subject to construction stormwater quality permit requirements of the Federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) program. The project applicant shall obtain any required permits through the State Regional Water Quality Control Board prior to issuance of a grading permit. Because the project would disturb more than one acre of land, the project must submit a Notice of Intent (NOI) to comply with the NPDES General Permit for Stormwater Discharges Associated with Construction Activities. The NOI for coverage under this permit must be submitted to the RWQCB at least 30 days prior to construction activities. The project applicant shall also provide to the

Engineering and Surveying Department evidence of a state-issued Waste Discharge Identification (WDID) number or filing of an NOI and fees prior to start of construction.

Mitigation Measure 6.5d: The project applicant shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for the construction phase. Water quality treatment facilities shall be designed according to the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction (or other similar source as approved by the ESD). BMPs for the project include, but are not limited to silt fencing (Sediment Control -1), straw bale barriers (Sediment Control -9), fiber rolls (Sediment Control -5), storm drain inlet protection (Sediment Control -10), hydraulic mulch (Erosion Control -3), and stabilized construction entrance (Tracking Control -1).

The SWPPP will include development of site-specific structural and operational BMPs to prevent and control impacts to runoff quality, measures to be implemented before each storm event, inspection and maintenance of BMPs, and monitoring of runoff quality by visual and/or analytical means. The contents of the SWPPP are set forth in detail in the permit application package. The California Stormwater BMP Handbook for Construction (California Stormwater Quality Association, 2004a) also provides examples of BMPs that could be used. Representative examples of BMPs that may be included in the SWPPP for the project are:

- Scheduling materials deliveries to provide for minimal onsite storage and/or providing covered storage for materials wherever practical;
- Designating specific areas for overnight construction equipment storage and maintenance and providing runoff control around those areas to minimize the potential for runoff to contact spilled materials;
- Establishing procedures for daily work site cleanup and prepare and implement a Spill Mitigation Plan for construction-related activities;
- Developing a program of site inspections to ensure that BMPs are consistently implemented and effective;
- Conducting visual monitoring of onsite runoff quality;
- Placing fiber rolls around onsite drain inlets to prevent sediment and construction-related debris from entering the inlets;
- Placing fiber rolls (wattles) along the perimeter of the site to reduce runoff flow velocities and prevent sediment from leaving the site and sandbags around potentially affected offsite inlets to prevent sediments from entering the inlets;
- Placing silt fences downgradient of disturbed areas to slow down runoff and retain sediment;
- Specifying that all disturbed soil will be seeded, mulched, or otherwise protected by October 15;

- Including storm drain inlet protection which may consist of a sediment filter or an impounding area around or upstream of a storm drain, drop inlet, or curb inlet;
- Stabilizing construction entrance to reduce the tracking of mud and dirt onto public roads by construction vehicles; and
- Applying hydraulic mulch that temporarily protects exposed soil from erosion by raindrop impact or wind.
- Stockpiling and/or vehicle staging areas shall be identified on the Improvement Plans and located as far as practical from existing dwellings and protected resources in the area.

Recommended Mitigation

No additional mitigation measures are recommended.

Operational Impacts to Surface Water Quality

Proposed Mitigation

Mitigation Measure 6.6a: This project is subject to storm water management requirements of the Federal Clean Water Act National Pollutant Discharge Elimination System (NPDES) program. The project applicant shall obtain any required permits through the State Regional Water Quality Control Board prior to issuance of a grading permit. The project must submit a Notice of Intent (NOI) to comply with the NPDES General Permit for Stormwater Discharges Associated with Industrial Activities. The NOI for coverage under this permit must be submitted to the RWQCB at least 30 days prior to start of operations. In addition, the project must comply with the NPDES Phase II Rule General Permit requirements. The project applicant shall also provide to the Engineering and Surveying Department evidence of a state-issued WDID number or filing of a Notice of Intent and fees prior to start of construction.

Mitigation Measure 6.6b: The project applicant shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) for industrial operations. The plan shall comply with the NPDES General Industrial Permit and the Phase II Rule General Permit (PCPW, 2004 and SWRCB, 2004). The General Industrial SWPPP checklist provides guidance on the items to be included in the document. The items in the checklist are derived from the current General Permit and should be reviewed for applicability to the proposed project. Typical contents include:

- Pollution Prevention Team
- Existing Facility Plans
- Facility Site Map
- List of Significant Materials
- Description of Potential Pollution Sources
- Assessment of Potential Pollutant Sources

- Storm Water BMPs
- Annual Comprehensive Site Compliance Evaluation

The components of the SWPPP will include BMPs for the protection and enhancement of the stream environment, prevention of erosion and adverse effects on water quality, incorporation of regional stormwater management goals, and assurance of the growth and development of the project to minimize its adverse impacts. BMPs will be included in the plan, as well as a mitigation monitoring program to ensure long-term success of the BMPs.

Mitigation Measure 6.6.c: The project applicant shall prepare and submit a design for the wastewater management system prior to approval of the Improvement Plans. The project applicant shall demonstrate that concrete washwater will be managed consistent with Title 27 of the California Code of Regulations. The applicant will be required to submit a Report of Waste Discharge (RWD) to the RWQCB to apply for Waste Discharge Requirements (WDRs) and must construct a containment system designed to prevent discharges of concrete washwater to the ground surface. Depending on the selected wastewater management option, the containment system may qualify for an exemption from Title 27, but the design criteria will be essentially the same. Monitoring will be required to demonstrate continued effectiveness of the containment system.

Recommended Mitigation

Mitigation Measure 6.6d: Storm drainage from onsite impervious surfaces proposed for the eastern portion of the project site (i.e., areas not collecting wastewater from the proposed concrete production process and/or from site cleanup and truck washing) shall be collected and routed through specially designed catchbasins, vegetated swales, vaults, infiltration basins, water quality basins, filters, etc., for entrapment of sediment, debris and oils/greases or other identified pollutants, as approved by the Engineering and Surveying Department (ESD). The applicant shall provide for the establishment of vegetation, where specified, by means of proper irrigation, for effective performance of BMPs. Water quality treatment facilities shall be designed according to the California Stormwater Quality Association Stormwater Best Management Practice Handbook for Industry (or other similar source as approved by ESD). BMPs for the project include, but are not limited to: (a) Water Quality Inlets (TC-50), (b) Vortex Separators (MP-51), and (c) Drain Inserts (MP-52).

Maintenance of these facilities shall be provided by the project owners/permittees unless, and until, a County Service Area is created and said facilities are accepted by the County for maintenance. Contractual evidence of a monthly parking lot sweeping and vacuuming, and catchbasin cleaning program shall be provided to ESD upon request. Failure to do so will be grounds for discretionary permit revocation. Prior to Improvement Plan approval, easements shall be created and offered for dedication to the County for maintenance and access to these facilities in anticipation of possible County maintenance. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.