14 HAZARDOUS MATERIALS AND HAZARDS

The Hazardous Materials and Hazards chapter of the EIR describes existing and potentially occurring hazards and hazardous materials within the project area. This chapter discusses potential impacts posed by these hazards to the environment, as well as to workers, visitors, and residents within and adjacent to the project area. More specifically, the chapter describes potential effects on human health that could result from adjacent wildland and soil contamination stemming from past uses of the site, or from exposure to hazardous materials. The Hazardous Materials and Hazards chapter is based on information drawn from the *Placer County General Plan* (PCGP),[1] the *PCGP EIR*,[2] the *Granite Bay Community Plan* (GBCP),[3] the *GBCP EIR*,[4] and the *Phase I Environmental Site Assessment*[5] (See Appendix N) and *Phase II Soil Investigation*[6] (See Appendix O) for the project site.

Impacts that have already been identified in the Rancho Del Oro Estates Initial Study as having *no impact*, as having *less-than-significant* levels, or impacts that include required mitigation measures to reduce the impacts to a *less-than-significant* level (i.e., create a significant hazard to the public or the environment through the routine handling, transport, use, or disposal of hazardous or acutely hazardous materials; emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school; be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment; for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area; for a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing in the project area; create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; create any health hazard or potential health hazard) are not further addressed within this chapter. The impacts identified as *potentially significant* in the Initial Study are addressed in this chapter. Required mitigation measures from the Initial Study have been included in Chapter 2, Executive Summary, of this Draft EIR.

14.1 Environmental Setting

Regional Setting

The 119.4-acre proposed project site is located in the community of Granite Bay (See Figure 3-1, Regional Location) and consists of one parcel located on the north side of Olive Ranch Road, 0.25 miles east of Cavitt-Stallman Road. The project site is bounded on the north by Miners Ravine, on the east and west by single-family agricultural properties, and on the south, across Olive Ranch Road, by single-family residential properties. The Granite Bay area includes 25 square miles of developing countryside. The general terrain features vary from nearly flat, gently rolling lands to fairly steep hillsides.

Existing Site Conditions

The term hazardous substance refers to both hazardous materials and hazardous wastes. A material is defined as hazardous if the material appears on a list of hazardous materials prepared by a federal, State or local regulatory agency or if the material has characteristics defined as hazardous by such an agency.

The California Environmental Protection Agency, Department of Toxic Substances Control (CAL-EPA, DTSC) defines hazardous waste, as found in the California Health and Safety Code Section 25141(b), as follows:

> […] its quantity, concentration, or physical, chemical, or infections characteristics: (1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; (2) pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of, or otherwise managed.

The proposed project site is currently undeveloped land used for cattle grazing and is characterized by varying topography, with rolling hills along the western, southern, and eastern edges and a relatively flat area located in the central portion of the site. The topography of the site is moderately sloped, with elevations ranging between 245 feet and 300 feet above mean sea level. Vegetation consists of a dense growth of trees along the western, southern, and eastern edges of the property with a moderate growth of grass throughout the entire project site. The project site is composed of mixed oak woodland and annual grassland, and contains wetlands and associated riparian habitats. Annual grassland is found mainly in the central portion of the site, but is also interspersed within the oak woodland vegetation throughout the remainder of the site. The densest portion of oak woodland is found in the eastern and southeastern portions of the site.

<u>Background</u>

A Phase I Site Assessment was prepared for the project site by Youngdahl Consulting Group (YCG) in March 2006. The Phase I Environmental Site Assessment conducted a regulatory record search that determined hazards related to documented hazardous sites within the project vicinity would be less-than-significant. Areas of soil staining, or strong, pungent, or noxious odors were not found on or adjacent to the project site. The Phase I Site Assessment determined several dredge tailings, ditches, and water pits from historic mining features are located on-site and require further investigation.

A Phase II Soil Investigation was prepared by YCG in March 2008. The Phase II Soil Investigation included the excavation of 16 test pits throughout the project site to a total depth of 13 feet below ground surface. Evidence of surface mining was observed throughout the site.

On-Site Hazards of Concern

This section describes the hazards of concern that exist within the proposed project area. These hazards may pose various threats to humans and resources should they come in contact with the materials or contaminated areas.

Naturally Occurring Asbestos

Placer County has been identified by the California Department of Conservation, as an area where Naturally Occurring Asbestos (NOA) is located. Asbestos includes fibrous minerals found in certain types of rock formations. Natural weathering or human disturbance could generate microscopic NOA fibers which are easily suspended in air.

Arsenic, Mercury, and Cadmium

The northern portion of the site contains dredge tailings and water pits created from mining activities. Elevated concentrations of mercury could potentially occur at dredge tailing and water pit locations.

Wildland Fires

The project site is surrounded by subdivisions, existing and proposed, as well as open space areas. Natural vegetation in the vicinity of the project site includes mixed Oak woodland/forest and annual mixed grasslands

The California Department of Forestry and Fire Protection (CAL FIRE) identifies the project site as being in a Wildland-Urban Interface (WUI) area, which is a location where existing homes and vegetation meet and compound the risk of wildland fires. Approximately 7.8 million acres of California lands are developed with housing densities that meet the WUI criteria. Within a WUI area, a wildland fire could spread to structures and/or structures could ignite vegetation and create a wildland fire.

A “Fire Threat” is a term based on an index of expected fire frequencies and potential fire behaviors. Fire Threats are qualified from lowest to highest in terms of “High, Very High, and Extreme.” As illustrated on the County’s *Fire Hazard Severity Zone Map*, the project site and immediate vicinity are located in areas with a “Moderate” fire potential.

Locally, the South Placer Fire District (SPFD) is responsible for local emergency fire, rescue, and medical aid services for the Granite Bay Area, which includes the project site. Regionally, the CAL FIRE identify that the project site is located in a Local Responsibility Area (LRA). The SPFD is the LRA that has the primary responsibility for preventing and suppressing fires including, but not limited to, lands covered wholly or in part by timber, brush, undergrowth or grass, lands not owned by federal government, and unincorporated lands.

14.2 Regulatory Setting

The following discussion contains a summary review of regulatory controls pertaining to hazardous substances, including federal, State, and local laws and ordinances.

Federal Regulations

Federal agencies that regulate hazardous materials include the Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), the Department of Transportation (DOT), and the National Institute of Health (NIH). The following federal laws and guidelines govern hazardous materials:

- Federal Water Pollution Control Act;
- Clean Air Act;
- Occupational Safety and Health Act;
- Federal Insecticide, Fungicide, and Rodenticide Act;
- Comprehensive Environmental Response, Compensation, and Liability Act;
- Guidelines for Carcinogens and Biohazards;
- Superfund Amendments and Reauthorization Act Title III;
- Resource Conservation and Recovery Act;
- Safe Drinking Water Act; and
- Toxic Substances Control Act.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was the EPA under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the DTSC was authorized to implement the State's hazardous waste management program for the EPA. The federal EPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA).

State Regulations

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable State laws include the following:

- Public Safety/Fire Regulations/Building Codes;
- Hazardous Waste Control Law;
- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act; and
- Porter-Cologne Water Quality Control Act.

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of

hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL).

Local Regulations

The GBCP does not include goals and policies that are applicable to hazardous materials and hazards.

14.3 Impacts and Mitigation Measures

Standards of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they would result in a significant adverse impact on the environment. For the purposes of this EIR, a hazards impact is considered significant if the proposed project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Create any health hazard or potential health hazard; and/or
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Method of Analysis

Site conditions and impacts for this chapter are based on the PCGP, the *PCGP EIR*, the GBCP, the *GBCP EIR*, a Phase I Environmental Site Assessment performed by Youngdahl Consulting Group, Inc., and a Phase II Soil Investigation preformed by Youngdahl Consulting Group, Inc., in April 2008.

Phase I Environmental Assessment

The windshield survey of the project site and surrounding area was performed by Youngdahl Consulting Group, Inc. on February 21, 2006. Youngdahl also employed the services of Environmental Data Resources to perform a Radius Map search with Geocheck to identify sites listed on regulatory agencies' databases on February 27, 2006. In addition, Youngdahl interviewed the property owner, Mr. George Tsakopoulos, on March 8, 2006.

Phase II Soil Investigation

On February 29, 2008, Youngdahl completed soil sampling at the project site. Six test pits, two mining tailings and dredge ponds, and four surface background samples were collected throughout the project site. A total of 14 soil samples were collected from 12 locations and analyzed for CAM 17 metals and mercury. The EPA Region 9 Preliminary Remediation Goals (PRG) were created from a combination of current EPA toxicity values with standard exposure factors to estimate contaminant concentrations in environmental media. Chemical concentrations above these levels would not automatically trigger a response action. However, exceeding PRG suggests that further evaluation of the potential risks that may be posed by site contaminants is appropriate. The EPA Region 9 PRG concentrations are based on exposure pathways for which generally accepted methods, models, and assumptions have been developed for specific land-use conditions. PRGs are chemical concentrations that correspond to fixed levels of risk.

The EPA Region 9 "Cal-modified" PRG, California Code of Regulations (CCR), Title 22 Solubility Threshold Limit Concentrations (STLC) and Total Threshold Limit Concentrations (TTLC), and California Environmental Protection Agency (Cal-EPA) California Human Health Screening Levels (CHHSL) for arsenic, mercury, and cadmium hazards at residential developments are listed in Table 14-1.

Table 14-1
Regulatory Threshold Concentrations

	Arsenic			**Mercury**	**Cadmium**
		Cancer Risk of 10^{-6}	Chronic Risk Hazard Quotient of 1		
EPA Region 9 PRG	Soil-Inhale	740 mg/kg	No value	23 mg/kg	37 mg/kg
	Soil-Dermal	0.71 mg/kg	280 mg/kg		
	Soil-Ingested	0.067 mg/kg	23 mg/kg		
	Integrated	0.062 mg/kg	22 mg/kg		
CCR Title 22, STLCs	5.0 mg/l			0.2 mg/l	1.0mg/l
CCR Title 22, TTLC	500 mg/kg			20 mg/kg	100 mg/kg
Cal-EPA CHHSL	0.07 mg/kg			18 mg/kg	1.7 mg/kg

Source: Youngdahl Consulting Group, Inc., Phase II Soil Investigation, 2008.

As stated earlier, impacts identified as *potentially significant* within the Initial Study are addressed below. All other impacts related to the Standards of Significance listed above have previously been addressed in the Initial Study and have been identified as having *no impact*, a *less-than-significant* impact, or include mitigation measures to reduce the proposed project's potential for an adverse impact to a *less-than-significant* level.

Project-Specific Impacts and Mitigation Measures

14-1 Impacts related to exposure to naturally occurring asbestos.

Naturally occurring asbestos (NOA) has been documented in portions of Placer County. Asbestos is most often found in ultramafic rock formations including serpentine rock. In addition, a high probability for asbestos-containing rock exists within fault zone areas. The proposed project site is not located near any ultramafic rock formations or fault zone areas. In addition, the Department of Conservation, *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California* determined that the proposed project site is within an area classified as least likely to contain naturally occurring asbestos.[7] Therefore, the project site is not located near likely sources of NOA and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

14-2 Impacts related to soil contamination.

The Phase II Soil investigation collected 14 soil samples from 12 locations and analyzed the samples for mercury and other concentrations of heavy metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. The project site mercury concentration levels were determined to range from non-detectable levels to 0.028 mg/kg, which is within acceptable levels for residential development. The concentrations of the metals detected were below the Title 22 TTLC values, the EPA Region 9 PRG values, and the Cal-EPA CHHSL values, except for the PRG cancer endpoint value for arsenic and Cal-EPA CHSSL values for arsenic and cadmium.

Arsenic

Historic USGS arsenic concentrations in Placer County range between 1.6 to 16.5 mg/kg, with a median concentration of 4.55 mg/kg. The Phase II Soil investigation determined the project site arsenic concentration levels to range between non-detectable levels to 4.0 mg/kg. Arsenic concentration levels were determined to range from non-detectable levels to 4.0 mg/kg, which is above the cancer endpoint PRG of 0.062 mg/kg. However, the concentrations of arsenic are below the DTSC threshold for Removal Action Clean-up and are within naturally occurring levels.

Cadmium

Cadmium concentrations within the project site range between 1.0 mg/kg to 3.4 mg/kg. The maximum cadmium concentration is below the EPA PRG and the Title 22 TLC values. However, the cadmium concentrations exceed the CAL-EPA CHHSL value of 1.7 mg/kg. Background samples were collected throughout non-disturbed/native locations on the project site to identify potential background and naturally occurring values of cadmium. Two of the background samples contained concentrations of cadmium above the CAL-EPA CHHSL value. Cadmium is a natural element found in all soils and rocks, and the Phase II Soil Investigation indicated that further action regarding cadmium is not required.

Conclusion

Concentrations of mercury and other heavy metals detected were below the Title TTLC values the EPA Region 9 PRG values, and the Cal-EPA CHHSL values, except for the PRG cancer endpoint value for arsenic and the Cal-EPA CHHSL value for arsenic and cadmium. However, the concentrations of cadmium and arsenic found are within naturally occurring ranges. The DTSC reviewed the Phase II Soil Investigation and determined further investigation and possible cleanup would be needed.

On May 20, 2009, the DTSC provided their "Approval of the Supplemental Site Investigation Report and Site Closure Request for Rancho Del Oro Estates,"[8] which functions as a "No Further Action Letter" for the project site (See Appendix R). According to the "No Further Action Letter," the metal concentrations detected in characterization soil samples appeared to be consistent with naturally-occurring concentrations when compared to site-specific background metals data, with the exception of cadmium, copper, nickel, and silver. However, all of these maximum concentrations reported were well below the Cal-EPA CHHSL values and, based on the analytical results of the soil sampling conducted, DTSC determined that the concentrations of the metals reported at the site do not pose a risk to public health or the environment. Therefore, further investigation and cleanup of the site is not required and a ***less-than-significant*** impact would occur.

Mitigation Measure(s)
None required.

14-3 Impacts related to wildland fires.

The proposed project includes the development of 89 single family residential units on 119.4 acres of land in the Community of Granite Bay in Placer County. The project site is surrounded by existing and proposed subdivisions, and open space, which includes oak woodland with annual grasslands. As identified on the County's Fire Hazard Severity Zone Map, the project site is in an area with a "Moderate" fire potential. On September 20, 2007, the Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the CCR, Title 24, Part 2, known as the 2007

California Building Code (CBC). Section 701A.3.2 of the CBC states that new buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with the CBC. Therefore, as the project is located within a Wildland-Urban Interface Fire Area, the applicant would be required to comply with, but would not be limited to, the following CBC requirements:

- Prior to construction, the applicant shall submit a building official certification that all building materials and construction methods complies with all state and local building standards for wildfire exposure, for review and approval of the Community Development Resource Agency;
- Prior to issuance of occupancy permit, the applicant shall submit proof of a final inspection report that demonstrates that all buildings comply with all State and local building standards for wildfire exposure, for review and approval of the Community Development Resource Agency; and
- Prior to building permit final approval, the applicant shall show proof that the property is in compliance with the vegetation clearance requirements prescribed in California Public Resources Code 4291 California Government Code Section 51182, for review and approval of the Community Development Resource Agency.

The proposed project includes emergency vehicle access (EVA) connection between the existing South Placer Fire District's station located along Olive Ranch Road and Cavitt-Stallman Road. With the incorporation of the EVA, emergency responders would be able to drive along the private South Shadow Oaks Lane in shorter time frames and be able to serve the project site. Through traffic by non-emergency vehicles would be prohibited by the emergency access gates. Improvements to South Shadow Oaks Lane would assist in emergency response calls to the project site and project vicinity. With the incorporation of the EVA easements and compliance with CBC measures, potential impacts related to wildland fires would be ***less-than-significant***.

<u>Mitigation Measure(s)</u>
None required.

Endnotes

[1] Placer County, *Placer County General Plan*, August 1994.
[2] Placer County, *Placer County General Plan EIR*, October 1993.
[3] Placer County, *Granite Bay Community Plan*, May 1989, amended March 2008.
[4] Placer County, *Granite Bay Community Plan FEIR*, May 2004.
[5] Youngdahl Consulting Group, Inc., *Phase I Environmental Site Assessment for Rancho Del Oro Estates*, March 2006.
[6] Youngdahl Consulting Group, Inc., *Phase II Soil Investigation*, April 2008.

[7] Department of Conservation, *Special Report 190: Relative Likelihood for the Presence of Naturally Occurring Asbestos in Placer County, California*, November 4, 2008.
[8] Department of Toxic Substances Control, *Approval of the Supplemental Site Investigation Report and Site Closure Request for Rancho Del Oro Estates, Assessor's Parcel Number (APN) 046-090-012, Granite Bay, Placer County, California*, May 20, 2009.