

## 3.10 OTHER VALUES

### 3.10.1 NOISE

#### *ACOUSTICAL BACKGROUND AND TERMINOLOGY*

Noise is often defined as unwanted sound. Pressure variations occurring frequently enough (at least 20 times per second), that the human ear can detect are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called hertz (Hz).

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable. Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB. Another useful aspect of the decibel scale is that changes in levels (dB) correspond closely to human perception of relative loudness.

#### *NOISE EXPOSURE AND COMMUNITY NOISE*

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ) over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the Day-Night Average Level noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise. **Table 3.10-1** contains definitions of acoustical terminology used in this section. **Table 3.10-2** shows examples of noise sources that correspond to various sound levels.

The Day-Night Average Level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10 decibel weighting applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. Additional weight is placed on nighttime readings based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.  $L_{dn}$ -based noise standards are commonly used to assess noise effects associated with traffic, railroad and aircraft noise sources.

**TABLE 3.10-1**  
ACOUSTICAL TERMINOLOGY

<b>Term</b>	<b>Definition</b>
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
Decibel or dB	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 to 10 p.m.) weighted by a factor of 3 and nighttime hours weighted by a factor of 10 prior to averaging.
L <sub>dn</sub>	Day-Night Average Sound Level. Similar to CNEL but with no evening weighting.
L <sub>eq</sub>	Equivalent or energy-averaged sound level.
L <sub>max</sub>	The highest root-mean-square (RMS) sound level measured over a given period of time.

SOURCE: Beranek, 1998.

**TABLE 3.10-2**  
TYPICAL A-WEIGHTED SOUND LEVELS OF COMMON NOISE SOURCES

<b>Loudness Ratio</b>	<b>Decibels (dBA)</b>	<b>Description</b>
128	130	Threshold of pain.
64	120	Jet aircraft take-off at 100 feet.
32	110	Riveting machine at operator's position.
16	100	Shotgun at 200 feet.
8	90	Bulldozer at 50 feet.
4	80	Diesel locomotive at 300 feet.
2	70	Commercial jet aircraft interior during flight.
1	60	Normal conversation speech at 5 to 10 feet.
1/2	50	Open office background level.
1/4	40	Background level within a residence.
1/8	30	Soft whisper at 2 feet.
1/16	20	Interior of recording studio.

SOURCE: Beranek, 1998.

### ***Existing Noise Environment***

#### *Madera Site*

Existing traffic noise levels were evaluated using the Sound 2000 Prediction Model. Traffic volumes and speeds of 65 miles per hour along State Route 99 and 50 miles per hour along Golden State Boulevard were entered into the model to estimate noise levels at the proposed location for Alternatives A, B, and C. For Alternative D, traffic volumes and speeds of 35 miles per hour along Mission Drive were entered into the model.

To assess existing noise conditions, current traffic counts and existing geometric conditions data was compiled. Noise level measurements were taken on the Madera site on September 8, 2005. Measurements were conducted during peak hours and while aircraft from the Madera Municipal Airport were in the air. The purpose of the measurements was to evaluate the accuracy of the model in describing traffic noise exposure within the Madera site.

Noise monitoring equipment consisted of an Extech Type 2 sound level meter datalogger. Noise measurements were conducted in terms of the equivalent energy sound level ( $L_{eq}$ ). Measured  $L_{eq}$  values were compared to  $L_{eq}$  values calculated (predicted) by the Sound 2000 model. Traffic volumes, truck mix and vehicle speeds were used as inputs to the model. Existing noise level measurements on the Madera site were between 53.2 dBA and 55.1 dBA, which are below the FHWA standards for exterior noise (**Appendix O**).

Madera Municipal Airport is located approximately 1.5 miles south of the Madera site. There are approximately 139 Aircraft operations per day. The airport accommodates business jet and turbojet type aircrafts (no commercial airlines) (AirNav, 2005). Typical approach and departure noise produced by business type aircrafts are presented in the noise study in **Appendix O**. Existing noise measurements were taken while an aircraft was in the air and it was noted that the noise meter would jump to approximately 58.0 to 60.0 dB. Based on the existing noise level analysis and typical aircraft noise pollution, the Madera Municipal Airport does not significantly effect the noise environment on the Madera site.

Adjacent to the north and south of the Madera site there are a few rural residential homes. The residential homes to the south of the Madera site are especially sensitive because a majority of the project traffic will travel north and south on Golden State Boulevard as the traffic flows to and from Avenue 17. Existing ambient noise levels at the nearest receptor were identified to be approximately 63.3 dBA, which is currently below the FHWA standards for exterior noise.

#### *North Fork Site*

The North Fork site is located within four miles of the community of North Fork, which has a population of approximately 3,600 area residents. North Fork is located in the Sierra Nevada Mountains adjacent to the Sierra National Forest, about 30 miles south of Yosemite National

Park, and 50 miles north of Fresno. The North Fork site is located on land that is currently in trust for the Tribe with individual trust land surrounding the North Fork site. Ambient noise sampling locations were limited to three on-site rural residential uses. Existing ambient noise levels in the vicinity of the North Fork site were measured to be approximately 39.5 dBA.

### **3.10.2 HAZARDOUS MATERIALS**

#### ***INTRODUCTION***

Hazardous materials are those materials that may pose a material risk to human health or the environment. These materials are subject to numerous laws and regulations at several levels of government. At the Federal level, human exposure to chemical agents, and in some cases environmental and wildlife exposure to such agents, is regulated primarily by four regulatory agencies: the EPA, the Food and Drug Administration (FDA), the Occupational Safety and Health Administration (OSHA), and the Consumer Product Safety Commission (CPSC). The CPSC plays a limited role in regulating hazardous substances; it deals primarily with the labeling of consumer products. The FDA also plays a limited role in regulating hazardous substances; it primarily regulates food additives and contaminants, human drugs, medical devices, and cosmetics. In addition to these regulatory agencies, the U.S. Department of Transportation (DOT) regulates the interstate transport of hazardous materials.

Analytical Environmental Services (AES) conducted Phase I Environmental Site Assessments (ESA) for the Madera and North Fork sites in May and September 2005 (**Appendix P**). An update of the Phase I for the Madera site was conducted by AES and the Bureau of Indian Affairs (BIA) in July 2007 (**Appendix P**). The purpose of the Phase I ESAs are to identify environmental conditions and hazardous materials involvement that may pose a material risk to human health or to the environment, or may in any way affect the proposed use of the Madera site. The ESAs were performed in conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard Practice E1527-00.

#### ***EXISTING CONDITIONS***

##### ***Madera Site***

The ESA included site visits to the Madera site on February 12, 2004, February 9 and 10, 2005, and July 12, 2007. Historically, the Madera site has been used for agriculture. Non-irrigated feed crops have been grown on the site for the past 10 years. There is a residence located on the southeast corner of the site; tenants occupied the residence during the 2005 site visit. Several barns and associated out buildings located adjacent to the residence were being used as storage. Items that were stored include agricultural and welding equipment, tractors, vehicles and a boat in the area adjacent to the residence. An empty 500-gallon diesel aboveground storage tank (AST) was present. There were two 55-gallon drums located in an area adjacent to a metal storage building. One of the drums was empty while the other contained used oil filters from farming

equipment and automobiles. Several agricultural wells with associated piping and electrical circuit boxes are located throughout the site. A majority of the circuit boxes did not appear functional and were in various forms of disrepair. There were several cattle feeders located in the southeastern portion of the site. Each feeder consisted of a cement foundation with metal chains for feeding collars. Inside one of the feeders was an uncontained yellow powder. The powder appeared to be elemental sulfur, which is used as a fungicide and as an insect repellent on cattle (**Appendix P**).

A representative from the BIA accompanied AES during the July 12, 2007 site visit. The conditions noted above did not change during the time between site visits with the exception of the following additional conditions. The residence was vacant during the 2007 site visit. Miscellaneous non-hazardous debris was noted in the barn, corral, and storage areas next to the residence including items such as farming equipment, household items (clothes, furniture), and various wood and metal debris. Additionally, several five-gallon buckets of waste oils, two 55-gallon drums, and several unmarked one-gallon containers of suspected paint or paint thinners were noted in one of the barns and corral area.

#### ***North Fork Site***

The ESA included a site reconnaissance visit of the site and adjacent properties on February 15, 2005. There are three residential structures located on the North Fork site. One of the structures is comprised of wood framing with a concrete slab foundation; the second and third structure were mobile/modular homes. All residences were occupied at the time of the site reconnaissance visit. Water is supplied to the residences through individual wells. One of the residents reported that her water has an unpleasant taste and odor and that her family no longer consumes the water. A Tribal member not residing on the site reported that there is an oily sheen on the surface of the well water. Title 22 water quality testing was performed in 1998 and 2004; the testing did not check for total petroleum hydrocarbons such as gasoline (TPHg) and diesel (TPHd) or other constituents that would cause a sheen to be present on the surface of water. The ESA recommends collection of soil and ground water samples both up gradient and down gradient with respect to the anticipated groundwater flow direction on the site, is recommended prior to initiation of site development. The samples should be analyzed for the presence of TPHg, TPHd, and volatile organic constituents (VOCs).

#### ***PROJECT AREA DATABASE REPORT***

##### ***Madera Site***

A regulatory agency database report was performed to identify locations of past and current hazardous materials involvement. Regulatory agency databases were searched for records of known storage tank sites, known sites of hazardous materials generation, storage, or contamination, or violations pertaining to storage and use of hazardous materials. Databases

were searched for sites and listings up to two miles from a point roughly equivalent to the center of Madera site. The environmental database review was accomplished by using the services of a computerized search firm, *Environmental Data Resources, Inc.* (EDR). EDR uses a geographical information system to plot locations of past and/or current hazardous materials involvement. The EDR report was conducted in February 2005 and is included in the Phase I ESAs. A summary of the databases accessed by EDR is listed in **Table 3.10-3**. AES reviewed the database report to determine if any hazardous materials releases have occurred that would affect surface and subsurface conditions on the Madera site. The following paragraph summarizes the findings of the database report.

**TABLE 3.10-3**  
DATABASES SEARCHED IN SITE ASSESSMENT

Database	Type of Record	Agency
NPL	National Priority List	USEPA
CORRACTS <sup>1</sup>	RCRA <sup>2</sup> Corrective Actions	USEPA
CERCLIS/ NFRAP <sup>4</sup>	Sites currently or formerly under review by the USEPA	USEPA
TSD	RCRA permitted treatment, storage, disposal facilities	USEPA
US BROWNFIELDS	U.S. Brownfields sites	USEPA
VCP	Voluntary Cleanup Program	STATE
SPL	State equivalent priority	STATE
SCL	State equivalent CERCLIS <sup>3</sup> list	STATE
LUST	Leaking underground storage tanks	State Regulatory Commission
SWLF	Permitted as solid waste landfills, incinerators or transfer stations	State/Regional Regulatory Commission
DEED RSTR	Sites with deed restrictions	STATE
CORTESE <sup>5</sup>	State index of properties with hazardous waste	STATE
TOXIC PITS	Toxic pits cleanup facilities	STATE
WATER WELLS	Federal and State Drinking Water Sources	USGS/STATE
RCRA Viol	RCRA violations/ enforcement actions	USEPA
TRIS	Toxic Release Inventory Database	USEPA
UST/AST	Registered underground or aboveground storage tanks	STATE
HIST UST	Historical UST Registered Database	STATE
RCRIS SQG <sup>6</sup>	Sites that generate hazardous materials	USEPA
HAZNET	Hazardous Waste Information System	STATE
WDS <sup>7</sup>	Waste Discharge System	STATE

NOTES: <sup>1</sup>CORRACTS: Corrective Action Report System, a USEPA database of corrective actions taken at a RCRA-regulated site.

<sup>2</sup>RCRA: Resource Conservation and Recovery Act.

<sup>3</sup>CERCLIS: Comprehensive Environmental Response, Compensation and Liability Information System.

<sup>4</sup>NFRAP: No further remedial action planned (archived CERCLIS sites).

<sup>5</sup>CORTESE: Based on input from 14 state databases.

<sup>6</sup>RCRIS SQG: Resource Conservation and Recovery Information System small quantity generator. According to Federal guidelines, a SQG produces less than 1,000 kg/month of non-acutely hazardous wastes.

<sup>7</sup>WDS: California Water Resources Control Board Waste Discharge System

SOURCE: EDR Report, 2005.

The Madera site was not listed on any regulatory agency database as having previous or current hazardous materials involvement. The database search located five sites with known history of storage, use, or release of hazardous materials within a one-mile search radius of the Madera site.

**Table 3.10-4** summarizes the findings of the database report.

The first site is the AICO site located adjacent to the Madera site at 17486 Road 23. The AICO site is listed on the HAZNET database as producing 0.0208 tons of off-specification, aged, or surplus organics. The organics were taken off-site for recycling.

**TABLE 3.10-4**  
MADERA SITE: OFF-SITE HAZARDOUS MATERIALS

Database	Site Name / Address	Material	Media Affected	Case Status
HAZNET	AICO 17486 Road 23 Madera, CA	Off-specification, aged, or surplus organics	No reported releases or violations	Materials are removed off site for recycling
HAZNET	Madera Municipal Golf Course 23200 Avenue 17 Madera, CA	Aqueous solution with less than 10% total organic residues	No reported releases or violations	Treatment tank
HAZNET	Andrew Tahan. 23783 Avenue 17 Madera, CA	Asbestos containing waste	No reported releases or violations	Disposal/ Land Fill
CA FID UST	Valley Grains Products 23865 Avenue Madera, CA	Not Reported	No reported leaks	Inactive USTs
HAZNET	Valley Grains Products 23865 Avenue Madera, CA	1. Liquids with chromium (VI). 2. Liquids with pH less than 2 with metals. 3. Liquids with halogenated organic compounds	No reported illegal releases or violations	Materials are removed off site to a transfer station
WDS	Valley Grains Products 23865 Avenue Madera, CA	Water	No reported illegal releases or violations	Active
HAZNET	A – Z Manufacturing 17462 Baldwin Street Madera, CA	Oxygenated solvents <sup>1</sup>	No reported releases or violations	Materials are removed off site to a transfer station

NOTES: <sup>1</sup>Acetone, Butanol, Ethyl Acetate  
Source: EDR, 2005.

The second site is the Madera Municipal Golf Course site located approximately 0.30 miles south of the Madera site at 23200 Avenue 17. The Golf Course site is listed on the HAZNET database as having a treatment tank that treats an aqueous solution with less than 10% total organic residues.

The third site is the Andrew Tahan site located approximately 0.45 miles south of the Madera site at 23783 Avenue 17. The Andrew Tahan site is listed on the HAZNET database as producing 2.53 tons of asbestos-containing wastes that were transferred to a landfill.

The fourth site is the Valley Grains Products, Inc. site located approximately 0.75 miles west of the Madera site at 23865 Avenue 18. The Valley Grains Products, Inc. site is listed on three databases including the California Facility Inventory Database (CA FID UST) as the location of an inactive underground storage tank. The site is listed on the HAZNET database as producing liquids with the following constituents: chromium, pH less than two with metals, and halogenated organic compounds. The site is also listed on the California Water Resources Control Board Waste Discharge System (WDS) database as a facility that has been issued waste discharge requirements by the state. The EDR report identifies the site as an industrial facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, and water pumping. The waste type is classified as process waste, which is waste produced as part of the industrial and manufacturing process. The site is identified as a Category C facility, which is a facility having no treatment systems, such as cooling water dischargers or those who must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds. The EDR report did not list any reported leaks or spills associated with the Valley Grains Products, Inc. site.

The fifth and final site is the A-Z Manufacturing site located approximately 0.75 miles west of the Subject Property at 17462 Baldwin Street. The A-Z Manufacturing site is listed on the HAZNET database as producing 0.1485 tons of oxygenated solvents that are taken off site to a transfer station.

### ***North Fork Site***

The North Fork site was not listed on any regulatory agency database for storage, use or release of hazardous materials. The database search located one site within a one-mile search radius with a known history of storage, use, and release of hazardous materials (**Table 3.10-5, Appendix P**). The former North Fork Mill site is located approximately 0.85 miles southwest of the Subject Property at 57839 Road 225. The site was operated as a lumber mill from 1942 to 1994. South Fork Timber Industries was the last operator of the lumber mill. In 1994 the property was donated to the redevelopment agency of Madera County. Pentachlorophenol was used in the dip solution to retard fungal growth on the lumber until its use as a fungicide was discontinued in the 1980's. A wood waste-fired cogeneration plant was operated on site from 1987 to 1994. The facility was fired by wood waste generated in the production of lumber at the sawmill, as well as

by wood from outside sources. Ash generated by the co-generation plant was stored on site pending removal and off-site disposal. All equipment and buildings at the cogeneration plant have been entirely removed.

**TABLE 3.10-5**  
NORTH FORK SITE: OFF-SITE HAZARDOUS MATERIALS

Database	Site Name / Address	Material	Media Affected	Case Status
VCP	Former North Fork Mill Site 57839 Road 225 North Fork, CA	Not Reported	Soil and Groundwater	Not Reported
CERSLIS- NFRAP	Dinuba Timber Inc North Fork 57839 Road 225 North Fork, CA	Not Reported	Not Reported	Archived 7/20/1990
State LUST	Dinuba Timber Inc North Fork 57839 Road 225 North Fork, CA	Diesel	Soil	Case Closed 10/27/1987
HAZNET	Dinuba Timber Inc North Fork 57839 Road 225 North Fork, CA	1. Asbestos containing waste 2. Waste oil and mixed oil 3. Liquids with PCBs	No reported violations	1. Removed to landfill waste 2. Removed off site for recycling 3. Incinerated
HIST UST	Dinuba Timber Inc North Fork 57839 Road 225 North Fork, CA	Diesel, waste oils, and unleaded gasoline	NA	Not Reported
State LUST	Sequoia Forest Products 57839 Road 225 North Fork, CA	Gasoline	Groundwater	Active

Source: EDR, 2005

The database report contained a number of alternate names for the former North Fork Mill site. These include Bendix Forrest Products and American Forest Products (AFP). According to the database report the AFP site has been a lumber mill processing plant since 1942. From 1948 until 1968, pine boards were dipped into a preservative to retard staining. Copper 8-quinolinolate (PQ-8) and pentachlorophenol (PCP) were two of the preservatives used. Wastewater generated by the mill and wood waste generated by the cogeneration facility was disposed of to an existing pond system. In 1986 Regional Water Quality Control Board (RWQCB) and California Department of Toxic Substances Control (DTSC) sampled water in an area near dip pond #2. PCP and 2, 3, 4, 5- tetrachlorophenol were detected at 6 µg/L. AFP is currently operating on a Waste Discharge Requirement Permit under RWQCB oversight. RWQCB currently monitors the pond and any discharge to the nearby creek.

The former North Fork Mill site is listed on the Federal Brownfields database as a targeted site that will undergo assessments. A Brownfield property is real property, the expansion,

redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. The site is also listed on the CERCLIS-NFRAP database as Dinuba Timber, Inc., North Fork site. CERCLIS-NFRAP assessment history listed in the database report identifies the site as being archived in 1990. The former mill site is also listed as a small quantity generator with no violations. The former mill site is also listed on the Leaking Underground Storage Tank (LUST) database as a closed case. Soils were excavated and treated to remove diesel fuels from soil. The former mill site is also listed on the HAZNET database as having produced 1.68 tons of asbestos-containing waste that were removed off site to a landfill. The former mill site also produced 3.336 tons of waste oil and mixed oils that were removed off site and recycled. The mill is also listed on the State Historical Underground Storage Tank (HIST UST) database as the site of 14 USTs. The USTs were used for unleaded gasoline, diesel fuel, and waste oils. The tanks ranged in size from 300 gallons to 14,000 gallons (**Appendix P**).

In the late 1990's and over a period of about two years, USEPA representatives completed soil assessment related activities at the site. As a result of the work, and other recent assessment work, pentachlorophenol has been identified in site soils, and diesel and other fuels have been identified in groundwater. In 2003, Madera County was the recipient of a Brownfields Assessment Grant from the USEPA. This grant is intended to provide the funds necessary for completing needed assessment work at the North Fork Mill site. The Regional Water Quality Control Board (RWQCB) is overseeing assessment work associated with the diesel and other fuels in groundwater at the site. A pending Voluntary Cleanup Agreement (VCA) with Madera County includes provisions for the Department of Toxic Substances Control (DTSC) to provide review and oversight of other assessment-related activities for the former mill site. These include a remedial investigation, risk assessment, and a feasibility study. Madera County received a \$200,000 assessment grant from the USEPA. Madera County plans to complete a Remedial Investigation, Health-Based Risk Assessment, and Feasibility Study. A provision for the Department of Toxic Substances Control (DTSC) to provide oversight is included in the VCA.

The former North Fork mill site is located more than 0.5 miles from the North Fork Rancheria and down gradient with respect to the anticipated groundwater flow direction. It is therefore not likely that contaminants migrated such a distance and affected subsurface conditions on the Subject Property.

### **3.10.3 VISUAL RESOURCES**

#### ***MADERA SITE***

The Madera site is located in a rural, agricultural area on the outskirts of the City of Madera in unincorporated Madera County. The Madera site is undeveloped except for a ranch house and barn complex located on the site's southeastern corner. The Madera site is used for agriculture,

rural residential, and open space purposes. The only public viewpoints of the Madera site are from surrounding roadways. The views from Road 23, Avenue 18, Golden State Boulevard, and State Route 99 (SR-99) are relatively unobstructed. The topography of the project site is level, with above-ground power lines present through the center of the site. The site is vegetated with agricultural crops and very few trees are present except in the vicinity of the ranch complex. The site is bounded on the north by Avenue 18, rural residential land, light industrial land, and vacant land; on the east by Golden State Boulevard and SR-99; on the south by agricultural and rural residential land; and on the west by Road 23 and agricultural land. The Madera site is not visible from any local or State-designated scenic corridors.

***NORTH FORK SITE***

The North Fork site is located in a rural area in unincorporated Madera County near the Community of North Fork. The North Fork site is currently utilized for rural residential purposes. The topography of the North Fork site is mountainous, with slopes of approximately 25% from the site's eastern to western border. Vegetation on the site consists primarily of mixed oak/conifer woodlands. There are no public viewpoints of the North Fork site. The North Fork site is surrounded by rural residential land uses; it is not visible from any local or State designated scenic corridors.