

*Issues (and Supporting Information Sources)*

**XI. NOISE -- Would the project result in:**

	<u>Potentially Significant Impact</u>	<u>Potentially Significant Unless Mitigation Incorporation</u>	<u>Less than Significant Impact</u>	<u>No Impact</u>
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport of public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**SETTING**

Noise is defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of pain. Pressure waves traveling through air exert a force registered by the human ear as sound. Human response to noise is subjective and can vary greatly from person to person. Factors that can influence individual response include intensity, frequency, and time pattern of the noise; the amount of background noise present prior to the intruding noise; and the nature of work or human activity that is exposed to the noise. The adverse effects of noise include interference with concentration, communication, and sleep. At the highest levels, noise can induce hearing damage.

Environmental noise is usually measured in A-weighted decibels (dBA).<sup>1</sup> Environmental noise typically fluctuates over time, and different types of noise descriptors are used to account for this variability. Typical noise descriptors include maximum noise level (L<sub>max</sub>), the energy-equivalent

<sup>1</sup> A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called “sound level”) measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response to the typical human ear at commonly encountered noise levels.

noise level ( $L_{eq}$ ), and the day-night average noise level (DNL).<sup>2</sup> The noise level experienced at a receptor depends on the distance between the source and the receptor, presence or absence of noise barriers and other shielding features, and the amount of noise attenuation (lessening) provided by the intervening terrain.

Transportation sources, such as automobiles, trucks, trains, and aircraft, are the principal sources of ambient noise. Industrial and commercial equipment and operations also contribute to the ambient noise environment in their vicinities. Burney Falls, Bowman Ditch, the Ahjumawi Property, and the McArthur Swamp and Glenburn Dredge Site are mainly undeveloped lands located in unincorporated Shasta County with existing land uses being mainly for conservation and recreational purposes.

### ***BURNEY FALLS, BOWMAN DITCH, AND AHJUMAWI PROPERTY***

The ambient noise environment in Burney Falls is mainly influenced by traffic on Highway 89. Noise from natural streams, traffic on minor access roads and recreational users is minimal. Noise generated at Bowman Ditch is primarily attributable to water flowing in natural streams, the man made canals and boat traffic on the Tule and the Little Tule rivers. The Ahjumawi property is a natural wilderness area with camping sites. Ambient noise at this property is mainly influenced by activities at the camping sites and watercrafts.

The only sensitive noise receptors at Burney Falls are visitors using the park and Camp Britton for recreation, and possible resident rangers at the McArthur Burney Falls Memorial State Park. Bowman Ditch and Ahjumawi are located in remote areas where sensitive noise receptors would include infrequent and seasonal recreational users.

### ***MCARTHUR SWAMP PROPERTY***

Noise generated at the McArthur Swamp is primarily attributable to water flowing in natural streams and man-made canals, limited and seasonal vehicle traffic and recreation use including hunting, and occasional PG&E activities associated with the maintenance of its transmission and distribution equipment. McArthur Swamp is located in a remote area where there are no sensitive noise receptors.

Sources of noise at the Glenburn Dredge Site are similar to those mentioned above for the McArthur Swamp, but also include occasional noise from the dredge. The Glenburn Dredge Site is rurally located and when the dredge is moved from its mooring location, it can be heard by a small number of local residents and recreational users. Once moved to a dredging location, noise

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<sup>2</sup> The maximum noise level ( $L_{max}$ ) refers to the highest instantaneous noise level observed in a given period.  $L_{eq}$ , the energy-equivalent noise level (or "average" noise level), is the equivalent steady-state continuous noise level which, in a stated period of time, contains the same acoustic energy as the time-varying sound level that actually occurs during the same period. DNL, the day-night average noise level, is a weighted 24-hour noise level. With the DNL descriptor, average noise levels (in terms of  $L_{eq}$ ) between 10:00 p.m. and 7:00 a.m. are adjusted upward by 10 dBA to take into account the greater annoyance of nighttime noise as compared to daytime noise. All  $L_{max}$ ,  $L_{eq}$  and DNL values reported herein reflect A-weighted decibels unless stated otherwise.

from its operation would be heard by any receptors located along the route of travel and at the particular dredging location. Due to the remote and rural nature of McArthur Swamp and Glenburn Dredge Site, there are few permanent noise receptors in the vicinity of the area. Temporary sensitive receptors include recreation users.

## REGULATORY SETTING

As a general matter, federal and state agencies regulate mobile noise sources, and local agencies regulate stationary noise sources and activities. Federal and state agencies regulate noise from mobile sources by establishing and enforcing noise standards on vehicle manufacturers. Local agencies regulate noise through three principal means: enforcement of local noise ordinances; implementation of noise-related policies contained in the local general plan, such as noise land use compatibility guidelines; and enforcement of noise-related conditions on permit approvals.

The Noise Element of the Shasta County General Plan has established performance standards for new projects including non-transportation noise sources as well as transportation-related noise sources. Transportation noise sources include traffic on public roadways, railroad line operations and aircraft operations. Non-transportation noise sources may include industrial operations, outdoor recreation facilities, HVAC units, loading docks, etc. The Noise Element prohibits new development where the hourly Leq level as measured immediately within the property line, due to non-transportation noise sources will exceed 55 dB during the daytime hours of 7 a.m. to 10 p.m. and 50 dB during nighttime hours of 10 p.m. to 7 a.m. For transportation noise sources, the maximum allowable exposure as specified by the Noise Element of the General Plan is shown in **Table X1-1**. Shasta County does not have a noise ordinance but regulates construction hours through conditions of approval for local permits.

## NOISE IMPACT DISCUSSION

- a) The project involves the market appraisal, transfer of ownership of a portion of the PG&E owned lands to the California Department of Parks and Recreation (DPR) and the California Waterfowl Association (CWA) in northeastern Shasta County. No changes in land use that would result in significant changes of noise levels would occur as a result of the transfer of ownership. It is anticipated that the new owners will continue to engage in maintenance activities that may lead to short term or intermittent noise related to traffic on roads accessing the project sites. Modifications made to the sites may result in incidental increases in recreational uses at the project sites. However no significant changes in traffic levels are expected to occur as a result of the ownership transfer.

Activities subsequent to transfer of lands would mainly be actions to improve, protect and create wildlife habitat, stabilize levees and improve vegetation and grazing management. These would be implemented over a period of five years following the land transfers. Many of these activities would most likely involve some sort of physical disturbance of the area and minimal construction activities (e.g. stabilizing levees). Use of heavy machinery like

excavators, pavers, rollers and trucks could lead to a temporary increase in ambient noise levels in the surrounding area over the construction period. However, construction would be

**TABLE XI-1  
MAXIMUM ALLOWABLE NOISE EXPOSURE FROM TRANSPORTATION NOISE  
SOURCES**

Land use	Ldn/CNEL at outdoor activity area or property line of receiving land use, dB	Interior Spaces	
		Ldn/CNEL, dB	Worst case hourly Leq, dB
Residential	60	45	---
Transient Lodging	60	45	---
Hospitals, Nursing Homes	60	45	---
Theatres, Auditoriums, Music Halls	---	---	35
Churches, Meeting Halls	60	---	40
Office Buildings	---	---	45
Schools, Libraries, Museums	---	---	45
Playgrounds, Neighborhood parks	70	---	---

SOURCE: Environmental Science Associates, 2001.

temporary and would take place during daylight hours in accordance with any requirements specified in the Noise Element of the Shasta County General Plan.

Due to the absence of permanent noise-sensitive receptors in the immediate project vicinity and due to the temporary nature of the construction noise, these subsequent activities would not expose persons to or generate noise levels in excess of standards established in local General Plan. Therefore, the project would have no significant short-term impacts on the ambient noise levels of the environment. As the project would introduce no new permanent noise sources, there would be no long-term project impacts on the ambient noise levels of the surrounding area.

- b) As discussed above, actions subsequent to the land transfers could involve some level of construction activities, during which operation of heavy equipment could generate a minimal amount of localized ground borne vibration and ground borne noise. As there are no residences or other sensitive uses in the immediate vicinity of the project site where the ground borne vibration or noise would be perceptible and due to the temporary nature of the

construction activities, this would be considered a less than significant impact. There would be no long-term impacts as the project would not introduce any new noise sources or significantly increase noise levels of existing sources.

- c) As described under questions (a.) and (b.) above, the project would not introduce any new permanent sources of noise at the site. Therefore, the project would have no long-term impact on the ambient noise levels in the project vicinity above levels existing without the project.
- d) In the years following the land transfers, the new owners of this land would take specific actions to create, improve and maintain wildlife habitat, improve grazing and vegetation management, and stabilize levees. These planned activities would involve a minimal amount of construction during which period there could be an increase in temporary and intermittent noise increases due to construction activities. The effect of this noise would depend upon how much noise the equipment generated, the distance between construction activities and the nearest noise-sensitive uses, and the existing noise levels at those sensitive uses. Given compliance with local standards related to allowable construction hours, absence of noise sensitive receptors in the immediate vicinity of the project area, and the temporary nature of the construction activities, the temporary increase in noise due to project construction would not be significant.
- e) The project site does not fall within the jurisdiction of an airport land use plan. Although the Sky Ranch airstrip is located just outside of the two mile radius in a direction from the project site. The project does not involve the development of a noise-sensitive land use, and thus, would not expose people to excessive aircraft noise.
- f) The Sky Ranch Airport is located about two miles south of the project site however, the project does not involve the development of a noise-sensitive land use, and thus, would not expose people to excessive aircraft noise.

## REFERENCES

Shasta County Planning Division. 2000. Shasta County General Plan, Section 5.5: Noise.