

CHAPTER SEVEN



HEALTH AND SAFETY

7. Health and Safety

The Health and Safety section establishes policies to protect the community from natural and manmade hazards. It is intended to guide land use planning by providing pertinent data regarding noise, seismic, fire and flood hazards. The main purpose of this section is to provide standards for reducing the risk of exposure to the hazards. When distilled, the rules are quite simple: build above the floodwaters, where the fire fuel is low, and on stable ground. Police protection is discussed in Chapter 10.

Natural hazards are processes such as earthquakes, flooding, and wildfires, and have been occurring for thousands, even millions of years. These natural processes have played an essential role in shaping the topography and landscape of Placer County, and become “hazards” when they disrupt or otherwise affect the lives and property of people.

This Health and Safety section is closely linked to the Land Use and Natural Resources chapters of the Community Plan. The Land Use section designates the general distribution of land uses within the planning area, as well as standards for population density and building intensity. To avoid unreasonable public risk, the Land Use section must take into account the public safety hazard identification and evaluation in the Health and Safety chapter. By limiting development density in areas that may be subject to significant geologic and other safety hazards, the risk of loss of life and property can be minimized. One of the purposes of the Natural Resources chapter is to preserve open space for public health and safety, including areas that require special management and regulation because of hazardous or special conditions (e.g., flood plains and high fire risk areas).

7.1 NOISE

A Noise Element is a mandatory component of General Plans pursuant to the California Government Code Section 65302(f). The Placer County General Plan recognizes the guidelines adopted by the Office of Planning and Research pursuant to Section 46050.1 of the Health and Safety Code. The purpose of this Noise chapter is to set forth policies that regulate the ambient noise environment and to protect residents from exposure to excessive noise.



Figure 7.1.1: Union Pacific crossing at Sheridan Lincoln Boulevard.

Noise is primarily a concern with respect to noise sensitive land uses such as residences and schools. Places of worship and meeting facilities are noise sensitive with respect to interior conditions, but are generally not sensitive to exterior noise levels.

Noises vary widely in their source and volume ranging from individual occurrences such as a “warning horn blast” from a passing train, to intermittent disturbances of overhead aircraft, to fairly constant noise generated by vehicular traffic on highways.

The principle noise source in Sheridan is related to vehicular traffic on Highway 65 and the Union Pacific railway crossing at Sheridan Lincoln Boulevard. Other noise sources include overflights from the Lincoln airport and Beale Air Force Base, and agricultural operations in and around the Plan area. Noise produced by industrial or commercial activity has a negligible effect on the Community’s ambient noise environment.

The need for increased attention to noise in the planning process is a consequence of the potential for continued elevation of ambient noise levels, the spread of noise producing activities into formerly quiet areas, and heightened awareness of the impact of noise on human health. Noise affects both physiological and psychological well-being. In addition to causing hearing loss, noise interferes with activities such as communication, sleep, and thought. Noise can be a source of great annoyance for many persons and may be a contributing factor in stress-related health disorders.

The Noise Element in the General Plan provides a systematic approach to identifying and appraising noise problems in the community; quantifying existing and projected noise levels; addressing excessive noise exposure; and community planning for the regulation of noise.

The purpose of this section of the Sheridan Community Plan is to establish a policy framework for the identification and reduction of potential noise sources. Noise, often described as unwanted sound, can be an intrusive part of our daily lives. Therefore, it is important to determine critical noise areas and provide a means to achieve noise-compatible land uses in the vicinity of existing or planned noise producing sources.

Sound is defined as any pressure variation in the air that the human ear can detect. If the pressure variations occur frequently enough, they can be heard and hence are called sound. The decibel scale is used to measure sound. The hearing threshold is defined as 0 dB. Other sound pressures are then compared to this reference pressure and a logarithm is taken to keep the numbers in a practical range.

For planning purposes, noise is a measure using a weighted scale. Sound levels are then expressed in terms of dBA. Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise associated with a given environment;

it usually is a composite of sounds from many sources, near and far. It is desirable to control ambient noise level to reduce the adverse effects of noise.

A common statistical tool to measure ambient noise levels is the average or equivalent sound level over the period of an hour. This average is expressed as Leq. A further refinement of the community noise measurement process is the day-night average level (Ldn) which is based on a 24-hour noise level average, with weighting given to nighttime noise, given the increased sensitivity to nighttime noise.

According to the State of California Office of Planning and Research General Plan Guidelines, an acoustical study may be required in cases where these noise-sensitive land uses are located in an area of 60 Community Noise Equivalent Level (CNEL) or greater. Any land use that is exposed to levels higher than 65 CNEL will require noise attenuation measures.

Railroad Noise

Rail operations on the Union Pacific Railroad line contribute to the ambient noise level in Sheridan. According to Union Pacific officials, between 20 and 25 freight trains per day pass through Sheridan which consists of one track that crosses Sheridan Lincoln Boulevard north of Riosa Road. The passing of trains is randomly distributed throughout the day and nighttime hours and speeds at the crossing range from 20 mph up to 65 mph.



Figure 7.1.2: Union Pacific crossing at Sheridan Lincoln Boulevard.

Existing and planned residential development and other noise-sensitive land use development within 1,000 feet of the Union Pacific line could be potentially exposed to unacceptable noise levels associated with passing freight trains. Exposure to unacceptable noise levels can be counteracted by the implementation of land use designs that factor in noise concerns. Berming, landscaping, site planning, improvements to building facades, and windows or other effective measures may be used to achieve required interior and exterior noise level standards. Policies in this Chapter establish criteria for noise sensitive land uses to ensure that exposure to noise levels will not exceed acceptable levels.

Traffic Noise

Vehicular traffic on Highway 65, Sheridan Lincoln Boulevard, and Riosa Road is a significant contributor to the ambient noise environment in Sheridan. Traffic noise depends on the speed of traffic, the road surface type, and the percentage of truck traffic. The primary source of noise from automobiles is high frequency tire noise, which increases with speed. There are also unpaved roads in the western portion of the Plan area that can be both noisy and dusty when traveled upon. In addition, trucks and automobiles produce engine and exhaust noise. Trucks also generate wind noise. While tire noise from autos is generally located at ground level, truck noise sources can be located as high as 10 to 15 feet above the roadbed due to tall exhaust stacks and higher engine placement.

Along the Highway 65 bypass, soundwalls were not considered at isolated rural residences on large lots because they did not meet the Caltrans/FHWA reasonableness criteria. Soundwalls for rural and single family residences would not be reasonable from a cost perspective because the cost of the soundwall per residence was too high.

Industrial and Commercial Noise Sources

Noise is inherent at many industrial, mining, or commercial enterprises, even when the best available acoustical technology is applied. The noise levels within an industrial facility are controlled by Federal and State employee health regulations (OSHA and Cal-OCHA). Exterior noise levels are governed by County ordinance. Noise produced by industrial and commercial sources has a negligible effect on Sheridan's ambient noise environment.



Figure 7.1.3: Light Industrial uses along Riosa Road.

New industrial development within Sheridan could bring additional noise issues. Design review and site specific mitigation should be identified and follow the guidelines set forth in this Chapter.

Agricultural Noise Sources

There are active agricultural uses both within and adjacent to the Community Plan area. Due to the wide array of equipment types and conditions under which that equipment is used in the agriculture industry, noise generated by agricultural processes varies substantially.

Placer County adopted a Right-to-Farm Ordinance (Ord. 5.24.040) to reduce the loss of the county’s commercial agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. The Ordinance in part reads:

No agricultural activity, operation, or facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, as established and followed by similar agricultural operations, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after the same has been in operation for more than one year if it was not a nuisance at the time it began.

Noise Nuisances

Excessive sound and vibration are a serious hazard to the public health and welfare, safety, and the quality of life. Placer County prohibits unnecessary, excessive, and offensive sounds. At certain levels, such sounds become noise and are detrimental to the health and welfare of the citizenry and, in the public interest, are systematically proscribed. Therefore, in 2004 the County established local community standards for noise regulation (Ord. 5280-B, 2004) to work in concert with and supplement Penal Code Section 370 (Public Nuisances) and Section 415 (Disturbing the Peace).

The Noise Ordinance set limits for sensitive receptors and made it unlawful for any person at any location to create any sound that:

- Causes exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by five dBA; or,
- Exceeds the sound level standards set forth in Table 7.1.1

**Table 7.1.1
Sound Level Standards (on-site)**

Sound Level Descriptor	Daytime (7 AM to 10 PM)	Nighttime (10 PM to 7 AM)
Hourly Leq, dB	55	45
Maximum Level (Lmax) dB	70	65

See Ordinance 5280-B, 2004 for additional information.

7.1.1 GOALS AND POLICIES

GOAL

1. Provide for the health, safety and welfare of the Sheridan residents by providing a livable environment free from excessive noise.

POLICIES

1. Encourage the use of greenbelts or natural areas along roadways as a design feature of any development in order to mitigate noise impacts. In keeping with the rural character of the community, noise attenuation walls shall not be allowed in the Plan area. Other practical design-related noise mitigation measures should be integrated into the project as a means of achieving noise standards.
2. Ensure compliance with noise standards adopted in the General Plan Noise Element.
3. Avoid the interface of noise-producing and noise-sensitive land uses.
4. Where proposed non-residential land uses are likely to produce noise levels exceeding County performance standards of the General Plan at existing or planned noise-sensitive uses, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are contained in the General Plan.
5. The County shall employ procedures to ensure that noise mitigation measures required pursuant to an acoustical analysis are implemented in the project review process and, as may be determined necessary, through the building permit process.
6. Protect Placer County's agricultural resources from noise complaints that may result from routine farming practices, through the enforcement of the Placer County Right-to-Farm Ordinance.

7.2 SEISMIC SAFETY

The purpose of this section is to identify and appraise seismic hazards in the area and recommend goals and policies to reduce the loss of life, injuries, damage to property, and economic and social dislocations resulting from future seismic activity. Seismicity refers to an area's propensity for earthquakes. Seismicity can be evaluated based on the occurrence of faults, both active and inactive. According to the 1977 Placer County Seismic and Safety Element, "the fault history of Placer County began about 140 million years ago with the folding, crushing, and faulting of marine sedimentary and volcanic deposits."

The area is considered to be in a high geologic and seismic hazard category. Sheridan is within Zone 3 in the Uniform Building Code, the second highest seismic risk category. The closest active seismic source is the Foothill-Melones Fault System located along the Sierra Nevada Mountain front. Faults within the System include the Cleveland Hills, Swain Ravine, Wolf Creek, and Spenceville faults. The Spenceville Fault is located approximately four miles northeast of Sheridan. Seismic activity has occurred on some of these faults within the last 100,000 years. The maximum credible earthquake for the Foothill-Melones Fault System is thought to be a 6.5 Richter Magnitude event.

Under the Alquist-Priolo Earthquake Fault Zoning Act, a fault is considered "active" if evidence of surface rupture in the last 11,000 years is identified. The only fault within the Foothills-Melones Fault System identified as active is a portion of the Cleveland Hills Fault located near Oroville, 44 miles north of Sheridan. Fault rupture is not expected because there are no known active or identified faults of any kind within the Plan area. The area would be subject to moderate ground shaking on nearby and regional faults.

7.2.1 Goals and Policies

GOAL

1. Protect the lives and property of the citizens of the Sheridan area from unacceptable risk resulting from seismic and geologic hazards.

POLICIES

1. Maintain strict enforcement of seismic safety standards for new construction contained in the Uniform Building Code.
2. Review future developments using all available seismic data and considering recommendations from the Health and Safety Chapter of the Countywide General Plan Policy Document.
3. Require soils or geologic reports for construction or extensive grading in identified geologic hazard areas.

7.3 FIRE PROTECTION AND EMERGENCY SERVICES

Fire protection, police protection, and emergency services are among the most crucial of community needs. The quality of life within the community is dependent on the adequacy of these services.

Residents of Placer County are well aware of the fire hazard problem and the destruction that uncontrolled wildfires can cause. However, sensitive land use planning and effective development regulations can go a long way toward reducing fire hazard.



Figure 7.3.1: Sheridan's Fire Station, 4952 Riosa Road.

Fires can cause significant life, property, and environmental losses, and can occur in both urban and rural settings. Urban fire hazards can be influenced by a variety of factors, including building location and construction characteristics, access constraints, the storage of flammable and hazardous materials, as well as inadequate supplies of fire suppression water, and response time for fire suppression personnel. Fire-related hazards in rural areas generally result from the development of residences in hillside or other areas with dense vegetation.

The combination of highly flammable fuel and long dry summers creates a significant natural hazard of large wildland fires in many areas of Placer County. Wildland fire results in death, injury, economic losses, and a large public investment in firefighting efforts. Woodlands and other natural vegetation are destroyed resulting in the loss of timber, wildlife habitat, scenic quality and recreation. Soil erosion, sedimentation of fisheries and reservoirs, and downstream flooding can also occur.

Weather conditions, the type of construction, preventive measures, and the extent of fire suppression services are the chief factors which determine how far wildland fires spread.

Fire Safe Measures

Discretionary permits for new development in fire hazard areas may be conditioned to include the following:

- Creation of defensible space around structures
- Cleared fire breaks and fuel breaks
- Long-term comprehensive fuel management program
- Secondary emergency access

The CDF Fire Hazard Severity Classification System was used to map the extreme, high, and moderate fire hazard areas in Sheridan and throughout Placer County. While there are no extreme hazard ratings, the entire portion of the Community Plan area east of Sheridan Lincoln Boulevard is located in a 'high' hazard area. As development continues in this rural environment, the fire protection needs change. The fire protection issues focus on survivability of structures in the event of a major wildland/urban interface fire.

Fire safety standards adopted by the County include the Uniform Fire Code, National Fire Code, Uniform Building Code and companion codes, and the Zoning Ordinance. In the Subdivision Ordinance, the County already requires that special procedures be followed in fire hazard areas. Subdivision proposals in high hazard areas may be required to assess wildfire potential and construct and maintain fuel breaks or other needed mitigation measures.

7.3.1 Goal and Policies

GOAL

1. Protect the citizens of the Sheridan area from loss of life while protecting property and natural resources from fire.

POLICIES

1. Ensure that all proposed developments are reviewed for compliance with fire safety standards by the applicable fire district per the *California Fire Code*, fire district standards, and County ordinances.
2. Maintain strict enforcement of the Uniform Building Code and the Uniform Fire Code.
3. Continue a program whereby new development pays the cost of new capital improvements necessary to provide the fire district with new fire stations, equipment and apparatus necessary to maintain the desired level of service, and to serve new development in the Sheridan area.
4. Require the modification of vegetation around structures and developments as suggested by Fire Safe Standards.

Fire Agencies

Placer County Fire and the California Department of Forestry and Fire Protection (CAL FIRE) through its Nevada-Yuba-Placer County Unit cooperatively provide fire protection and emergency response services to the Plan area. Initial response to the Sheridan area is provided by Fire Station 70 located at 1112 Wise Road in Lincoln, seven miles from the Sheridan townsite. A minimum of two full-time staff members are available at this station to provide fire protection and emergency response services 24 hours a day. A minimum of four firefighting personnel are present during fire season on two separate pieces of apparatus, generally May through early November.

Mutual aid with the City of Wheatland is in place under CAL FIRE's dispatching system. Response times from Placer County Fire agencies south of Lincoln into the Sheridan area have decreased with the completion of the Highway 65 bypass.

Supplemental fire protection services are provided through the Placer County Fire's volunteer fire company based at 4952 Riosa Road near the corner of Sheridan Lincoln Boulevard. Response times vary as volunteers do not stand by in the station, but wear pagers and respond when called.

Currently, Placer County Fire/CAL FIRE provides commercial and residential structural fire protection, wildland fire protection, rescue services, emergency hazardous materials services, emergency medical services, advanced life support paramedic services and basic life support, and a variety of other non-emergency related services.

Paramedic transportation response is provided by American Medical Response (AMR). An engine from Placer County Fire/CAL FIRE Station 70 is also dispatched to medical emergencies.

Hospitals

Sheridan is served by three high-quality, comprehensive regional hospitals. Rideout Memorial Hospital, more commonly referred to as RMH, is located in Marysville, approximately 16 miles north of Sheridan. It is a member of the Fremont-Rideout Health Group (FRHG) and is the only hospital in the Yuba-Sutter area with an emergency room, which is a Level III trauma center.



Figure 7.3.2: Sutter Roseville Medical Center.

Kaiser Permanente and Sutter Roseville Medical Center in Roseville have 24-hour emergency departments and trauma centers. Sutter Roseville is 18.6 miles south of Sheridan. Kaiser Permanente is slightly further at 20 miles. Each has undertaken significant expansion and renovation projects in recent years. Sutter Auburn Faith Hospital is located 20.5 miles east of Sheridan.

7.4 FLOOD HAZARDS

Streams and riparian corridors form an integral part of the land and water-related ecosystem and are a critical piece of Placer County's overall open space network. It is the responsibility of the County, in consultation with federal and state agencies, to ensure that the natural heritage features, functions, linkages, and hazards associated with the watercourse corridors are respected.

One of the most important flood control issues facing the County concerns regulation of development in areas prone to flooding. In addition to the policies included in this Community Plan, the Placer County General Plan has policies with respect to watercourse protection and flood plain management. Development and site alteration is not permitted within a floodplain given the risk to public health and safety and/or property damage. Placer County has adopted a General Plan policy to "maintain natural conditions within the 100-year floodplain of rivers and streams" (Policy 8.B.1).

Flood hazards are estimated by the area flooded by the maximum storm event expected over a 100-year period. The Federal Emergency Management Agency (FEMA) and Federal Insurance Administration have assessed flood hazards for most major streams in the county. They have prepared maps showing the areas with a one percent chance of being flooded in any year. These areas are considered a part of the 100-year regulatory floodplain. These areas are usually low lands adjoining a watercourse. In addition to the 100-year floodplains defined by FEMA, there are other local drainageways within the Sheridan area that have 100-year floodplains. For current flood control programs to be effective, it is important that the flood-carrying capacity of streams and floodway areas not be impaired.

In much of the Sheridan Community Plan area, floodplains are narrow or insignificant. As tributaries converge, flooding becomes a more serious issue west and south of the Plan area. Floodplains exist along drainages north and south of Riosa Road at Andressen Road. Floodplains are located south of Dalby Road, at the Dalby Road/Placer Road intersection, along the Bear River, and a significant 100-year flood plain along Coon Creek.

7.4.1 Goal and Policies

GOAL

1. Protect the lives and property of the citizens of the Sheridan area from unacceptable risk resulting from flood hazards.

POLICIES

1. Work closely with the Federal Emergency Management Agency (FEMA), the Central Valley Flood Protection Board, and the Placer County Flood Control and Water Conservation District in defining existing and potential flood problem areas.
2. Evaluate potential flood hazards in an area prior to the approval of any future development.
3. Land development projects should be designed to minimize potential loss of property and threat to human life caused by flooding.
4. Retain natural flow conditions within the 100-year floodplain of all streams except where work is required to maintain the stream's natural drainage characteristics as determined by Placer County Flood Control and Water Conservation District.
5. Discourage new construction within 100 feet of the centerline of permanent streams and 50' of intermittent streams, or within the 100 year floodplain, whichever is greater.

Flood Control Planning

The Placer County Flood Control and Water Conservation District does not have a comprehensive drainage plan for the Sheridan area to address storm drainage. Therefore, new development within the Community Plan area will address storm drainage changes/impacts during the permit process on a project-by-project basis. The District's Storm Water Management Manual does provide general hydrologic and hydraulic guidelines for all of Placer County.

Floodplain Management

Climate change is expected to lead to a greater fraction of seasonal precipitation occurring as rain rather than snow and sea levels will rise. These trends appear to be already established and, if they continue as expected, they will put increasing stress on California's flood management system. Floodplain risk assessments and development constraints will likely be adjusted accordingly. For example, the 100-year and 200-year flood events, calculated based on historical flood events, may become larger for many watersheds, with long-term effects on National Flood Insurance Program map ratings, flood insurance costs, floodplain development, and the economic viability of floodplain communities.

Floodplain management involves two different aspects. The first is based on controlling building in the floodplain and the second is based on controlling the changes that are made in the floodplain. Controlling building in the floodplain is based on the assumption that it is better to keep people away from the water rather than keeping the water away from the people. Specific strategies for proper floodplain management include preventing new construction in designated floodplains or floodways. Impervious surfaces created by development, such as parking lots, roads, and roofs, can substantially increase runoff within a watershed and also impede floodwater flow.

The second element of floodplain management involves controlling what changes are made to the stream channels and floodplains. One of the basic guidelines included in the General Plan is that no floodplain clearing or channel improvement will be allowed along any stream without appropriate approvals from the Department of Fish and Wildlife. These streams are designated as natural streams and are to be open channels and are to remain in their natural state as much as possible. The County's Grading Ordinance has specific provisions which address the protection of floodplains from any development activity which would alter the flood characteristics of the stream.

New California Requirements

Flood legislation passed in October 2007 linked system-wide flood management planning to local land use planning in a direct manner. The passage of Senate Bill 5 requires that urban areas be provided with at least 200-year (0.5% annual chance) flood protection as a condition for further development. A 200-year level of flood protection standard appears to apply to all urban or urbanizing portions of western Placer County defined as areas with existing populations exceeding or projected to exceed 10,000 persons within 10 years. The Department of Water Resources is developing criteria (*Urban Level of Flood Protection Criteria*) to guide local jurisdiction compliance with this requirement for urban, urbanizing and rural areas.

The Central Valley Flood Protection Board's *Central Valley Flood Protection Plan (2012)* describes a vision for improving integrated flood management in the Sacramento-San Joaquin Valley. It recommends actions that can be taken to reduce flood risks, and describes a framework for implementing future improvements.

The impact from these efforts on the Sheridan Community Plan area is uncertain. The level of flood protection for rural-agricultural areas is expected to remain unchanged.

Bear River Levee

Improvements are needed along the Bear River levee north of Sheridan. The levee (identified as RD, 1001, Unit 3, Segment 246) is a non-urban project levee on the left bank of the Bear River in Yuba and Placer counties. The segment extends from roughly 2 miles east of Wheatland to the confluence of the Bear River and Yankee Slough. Levee heights range from eight to 18' and slopes are typically 2:1 landside and 3:1 waterside.



Figure 7.4.1: Bear River at Highway 65.

The Bear River levee was constructed under the Flood Control Act of 1917 and a 1941 map shows the levee as complete. Maps also show that levee sections west and east of Highway 65 were completed to State Plan of Flood Control standards by 1955 and 1964 respectively. River levees of this era were typically constructed of sandy soil dredged out of the rivers and dumped on the natural silty soil levee areas adjacent to the rivers. It is considered unlikely that these levee fills were significantly compacted when they were constructed. The Bear River levee's foundation is believed to consist of hydraulic mining debris which is predominantly sand with some silt and gravel overlying gravel, silt, sand, and minor clay deposits of Pleistocene-age Sierran alluvial fans.

Analysis and history show the levee has a high potential for underseepage, through seepage, and instability/breaches. Based on available information, levee erosion occurred during the 1986 and 1997 floods. Riverbank erosion occurred at two locations during the 1986 flood and a 75' long section eroded during the 1997 flood. Crown damage also occurred when a 4,858' long segment was overtopped during the 1997 flood. Breaches have also occurred along the levee in 1951 and 1993, but no documentation on their potential causes has been found. There are no documented reports of underseepage, through seepage, or slope instability.