Chapter 6

PUBLIC SAFETY AND NOISE

- SEISMIC HAZARDS
- SLOPE STABILITY
- EROSION
- FLOOD HAZARDS
- FIRE HAZARDS
- HAZARDOUS AND TOXIC MATERIALS
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- ELECTRIC AND MAGNETIC ENERGY
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AUTHORITY AND PURPOSE

This chapter combines two closely related and required elements of the General Plan: the Public Safety Element and the Noise Element.

The requirements for a Safety Element are established by State Planning law (Section 65302 g) as follows:

> "A safety element for the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides, subsidence and other geologic hazards known to the legislative body; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, peakload water supply requirements, and minimum road widths and clearances around structures, as those items relate to identified fire and geologic hazards.
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> To the extent that a county's safety element is sufficiently detailed and contains appropriate policies and programs for adoption by a city, a city may adopt that portion of the county's safety element that pertains to the city's planning area in satisfaction of the requirement imposed by this subdivision.
>
> Each county and city shall submit to the Division of Mines and Geology of the Department of Conservation one copy of the safety element and any technical studies used for developing the safety element."

The requirements for a Noise Element are established by State Planning law (Section 65302 f) as follows:

> "A noise element which shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:
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> (1) Highways and freeways.
> (2) Primary arterials and major local streets.
> (3) Passenger and freight on-line railroad operations and ground rapid systems.
> (4) Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.
> (5) Local industrial plants, including, but not limited to, railroad classification yards.
> (6) Other ground stationary noise sources identified by local agencies as contributing to the community noise environment."

SUMMARY

The goals, objectives, policies and programs of this chapter are derived from the necessity to protect the community from natural hazards, as well as from hazards produced from the built environment. This chapter is divided into sections based on the particular hazards.

The Seismic Hazards section addresses geologic review requirements for development within designated fault zones. The second section addresses policies relating to slope stability. This section includes specific policies on Coastal Bluffs and Beaches as well as general requirements for when geologic review is required. The third section on Erosion is closely related to slope stability and addresses the need for drainage and erosion control plans for all development and sets forth standards for the prevention of erosion and siltation.

The policies of the Flood Hazards section require new development to be located outside of the flood hazard area, wherever possible.

The Fire Hazards section is the last section relating to natural hazards and establishes road standards and development requirements for fire protection.

The section on Hazardous and Toxic Materials outlines the objectives and policies which relate to the management of hazardous wastes, and also outlines the County's desire to minimize the use and dissemination into the environment of hazardous and toxic materials generally.

The Hazardous Waste Management section addresses the siting of hazardous waste facilities as required by the Hazardous Waste Management Plan.

An Electric and Magnetic Fields section has been included, which sets forth policies for development near high voltage electric power transmission and distribution lines which could create health hazards.

The section on Noise includes policies relating to land use, ground transportation and air transportation.

Substantial background data on these hazards are available in chapter 5, Resources and Hazards, of the General Plan Update Background Report (1991) covering the urban area, and in the Technical Appendix (1991) as well as various specialized studies and planning documents (see references).

GOALS

The overall goals guiding the Public Safety and Noise Element are as follows:

- **Public Health and Safety (LCP):** To protect human life, private property and the environment, and to minimize public expenses by preventing inappropriate use and development or location of public facilities and infrastructure in those areas which, by virtue of natural dynamic processes or proximity to other activities, present a potential threat to the public health, safety and general welfare.

- **Noise Hazards:** To protect the public and sensitive wildlife habitat areas from harmful noise sources such as industrial facilities, automobiles, airplanes, motorcycles, construction noise, surface mining operations, chainsaws, off-road vehicles, loud music, and other noise sources.

SEISMIC HAZARDS

The Loma Prieta Earthquake

At 5:04 p.m. on October 17, 1989, a magnitude 7.1 earthquake rocked the Monterey Bay and San Francisco Bay regions. The initial quake lasted only 22 seconds, although in the two weeks that followed, more than 4,000 aftershocks were recorded, with 20 of these greater than magnitude 5 on the Richter Scale. The epicenter of the Loma Prieta earthquake was about 10 miles east-northeast of the City of Santa Cruz in the Aptos planning area on the San Andreas fault.

The Loma Prieta earthquake was the largest to strike California since 1906, causing 62 deaths, 3,757 injuries, leaving more than 12,000 people homeless, disrupting transportation, utilities, and communications, and causing more than $6 billion in property damages.

In Santa Cruz County, 674 dwellings, 32 mobile homes and 310 businesses were destroyed in the earthquake. The State Office of Emergency Services estimated that damages to residential buildings was $176 million and $98 million to commercial structures in the County.

As of January 1991, Santa Cruz County had issued 7,460 building permits for reconstruction or repair of earthquake damaged structures, and had provided related services to 19,909 members of the public. Replacement of unreinforced masonry chimneys made up the majority of residential repairs, followed by foundation replacement on older wood frame houses which predated current building codes and lacked basic seismic safety features such as foundation bolts and sufficient structural bracing.

Significant damage to streets, water systems, sewer systems and other public infrastructure was related to liquefaction and subsidence. Repair of infrastructure was financed in part by a voter-approved half cent sales tax levied over 6 years in Measure E, and a $33 million bond issue.

An evaluation of the response by the Santa Cruz County Emergency Operations Center concluded that the response to the earthquake was a success, with the OEC being fully operational within 25 minutes of the earthquake. Due to the County's susceptibility to earthquakes and other natural hazards, disaster response planning is an on-going process.

Objective 6.1 Seismic Hazards

(LCP) To reduce the potential for loss of life, injury, and property damage resulting from earthquakes by: regulating the siting and design of development in seismic hazard areas; encouraging open space, agricultural or low density land use in the fault zones; and increasing public information and awareness of seismic hazards.

Policies

6.1.1 Geologic Review for Development in Designated Fault Zones

(LCP) Require a review of geologic hazards for all discretionary development projects, including the creation of new lots, in designated fault zones. Fault zones designated for review include the Butano, Sargent, Zayante, and Corralitos complexes, as well as the State designated Seismic Review Zones.Required geologic reviews shall examine all potential seismic hazards, and may consist of a Geologic Hazards Assessment and a more complete investigation where required. Such assessment shall be prepared by County staff under supervision of the County Geologist, or a certified engineering geologist may conduct this review at the applicant's choice and expense.

6.1.2 Geologic Reports for Development in Alquist-Priolo Zones

(LCP) Require a preliminary geologic report or full engineering geology report for development on parcels within Alquist-Priolo State-designated seismic review zones.

6.1.3 Engineering Geology Report for Public Facilities in Fault Zones

(LCP) Require a full engineering geology report by a certified engineering geologist whenever a significant potential hazard is identified by a Geologic Hazards Assessment or Preliminary Geologic Report, and prior to the approval of any new public facility or critical structure within the designated fault zones.

6.1.4 Site Investigation Regarding Liquefaction Hazard

(LCP) Require site-specific investigation by a certified engineering geologist and/or civil engineer of all development proposals of more than four residential units in areas designated as having a high or very high liquefaction potential. Proposals of four units and under and non-residential projects shall be reviewed for liquefaction hazard through environmental review and/or geologic hazards assessment, and when a significant potential hazard exists a site-specific investigation shall be required.

6.1.5 Location of New Development Away From Potentially Hazardous Areas

(LCP) Require the location and/or clustering of development away from potentially hazardous areas where feasible and condition development permits based on the recommendations of the site's Hazard Assessment or other technical reports.

6.1.6 Siting of New Reservoirs

(LCP) Require a full engineering geologic investigation prior to the construction of new reservoirs, and if an unmitigable hazard exists, relocation of the reservoir.

6.1.7 Dam Safety Act

(LCP) New dams shall be constructed according to high seismic design standards of the Dam Safety Act and as specified by structural engineering studies. Smaller reservoirs will be reviewed for potential seismic hazards as a part of the environmental review process.

6.1.8 Design Standards for new Public Facilities

(LCP) Require all new public facilities and critical structures to be designed to withstand the expected ground shaking during the design earthquake on the San Andreas Fault.

6.1.9 Recordation of Geologic Hazards

(LCP) Require the owner of a parcel in an area of potential geologic hazards to record, with the County Recorder, a Notice of Hazards and the level of geologic and/or geotechnical investigation conducted as a condition of development approval.

6.1.10 Density Recommendations for Proposed Development

(LCP) Approve the final density of a development proposal only if it is consistent with the recommendations of the technical reports. Deny the location of the proposed development if it is found that the hazards on the site cannot be mitigated to within acceptable risk levels.

6.1.11 Setbacks from Faults

(LCP) Exclude from density calculations for land divisions, land within 50 feet of the edge of the area or fault induced offset and distortion of an active or potentially active fault trace. In addition, all new habitable structures on existing lots of record shall be set back a minimum of fifty (50) feet from the edge of the area of fault induced offset and distortion of an active or potentially active fault trace. This setback may be reduced to a minimum of twenty-five (25) feet based upon paleoseismic studies that include observation trenches. Reduction of the setback may only occur when both the consulting engineering geologist preparing the study and the County Geologist observe the trench and concur that the reduction is appropriate. Critical structures and facilities shall be set back a minimum of one hundred (100) feet from the edge of the area of fault induced offset and distortion of an active or potentially active fault traces. *(Revised by Res. 81-99)*

6.1.12 Minimum Parcel Size in Fault Zones

(LCP) Outside the Urban Services Line and Rural Services Line, require a minimum parcel of 20 gross acres for the creation of new parcels within state and County designated seismic review zones if proposed building sites lie within the fault zone. Require a minimum parcel of 10 gross acres for the creation of new parcels within the portions of the County designated seismic review zones that are not part of a State Alquist-Priolo Earthquake Fault Zone, and which lie outside the Urban and Rural Services Lines and the Coastal Zone, if 25% or more of the parcel perimeter is bounded by parcels 1-acre or less in size. Inside the Urban Services Line and Rural Services Line, allow density consistent with the General Plan and LCP Land Use designation if all structures are to be set back at least 50 feet from fault traces and meet all other conditions of technical reports. *(Amended by Res. 204-2008)*

Programs

a. Periodically update seismic design criteria and the Grading ordinance with the advice of qualified professionals as information becomes available in order to aid buildings and homeowners in constructing safe structures. (Responsibility: Planning Department)

b. Continue to evaluate existing public facilities to determine whether they can maintain structural integrity during the design earthquake (Responsibility: Public Works, Board of Supervisors, California Department of Forestry)

c. Investigate the feasibility of requiring all new structures within fault zones and in areas subject to high or very high liquefaction potential, to be constructed to withstand ground shaking generated up to the design earthquake on the San Andreas fault. (Responsibility: Planning Department, Board of Supervisors.)

d. Identify critical structures that were constructed prior to the adoption of current Uniform Building Code earthquake design requirements, and strengthen them structurally if possible or phase out their use. (Responsibility: County Office of Emergency Services, Public Works, Board of Supervisors, State of California)

e. Target the following structures to meet UBC Zone 4 seismic safety standards:
(1) Buildings constructed prior to 1955;
(2) Critical facilities:
- Essential facilities: buildings whose use is necessary during an emergency;
- Buildings whose occupancy is involuntary;
- High occupancy buildings.

(Responsibility: Planning Department, Public Works, Board of Supervisors, State of California)

f. Support seismic retrofit programs for residential properties. (Responsibility: Planning Department, Santa Cruz County Housing Authority, Board of Supervisors)

g. Comprehensively map the Geologic Hazard Combining Zone District to include areas having a high, moderate or uncertain surface rupture potential in order to place all existing regulations into one concise ordinance, and to notify future buyers of these policies as they pertain to individual parcels. (Responsibility: Board of Supervisors, Planning Commission, Planning Department)

h. Comprehensively map the Geologic Hazard Combining Zone District to include areas subject to high liquefaction hazard when precise technical information regarding the extent and activity of liquefiable materials is available. (Responsibility: Board of Supervisors, Planning Commission, Planning Department)

i. Revise existing seismic hazard maps as new, reliable information becomes available. (Responsibility: Planning Department)

j. Evaluate the probable response of community service agencies and emergency facilities to a damaging earthquake, and develop contingency plans for post-disaster emergency operations, including evacuation procedures. (Responsibility: County Office of Emergency Services)

k. Develop public education programs to increase public awareness of seismic hazards, and to inform the public of proper procedures before, during and after an earthquake that can help to minimize injury and property loss. (Responsibility: Planning Department, County Office of Emergency Services)

Objective 6.2 Slope Stability

(LCP) To reduce safety hazards and property damage caused by landslides and other ground movements affecting land use activities in areas of unstable geologic formations, potentially unstable slopes and coastal bluff retreat.

Policies

6.2.1 Geologic Hazards Assessments for Development On and Near Slopes

(LCP) Require a geologic hazards assessment of all development, including grading permits, that is potentially affected by slope instability, regardless of the slope gradient on which the development takes place. Such assessment shall be prepared by County staff under supervision of the County Geologist, or a certified engineering geologist may conduct this review at the applicant's choice and expense.

6.2.2 Engineering Geology Report

(LCP) Require an engineering geology report by a certified engineering geologist and/or a soils engineering report when the hazards assessment identifies potentially unsafe geologic conditions in an area of proposed development.

6.2.3 Conditions for Development and Grading Permits

(LCP) Condition development and grading permits based on the recommendations of the Hazard assessment and other technical reports.

6.2.4 Mitigation of Geologic Hazards and Density Considerations

(LCP) Deny the location of a proposed development or permit for a grading project if it is found that geologic hazards cannot be mitigated to within acceptable risk levels; and approve development proposals only if the project's density reflects consideration of the degree of hazard on the site, as determined by technical information.

6.2.5 Slope Considerations for Land Division Calculations

(LCP) Exclude land with slopes exceeding 30 percent in urban areas and 50 percent in rural areas and land with recent or active landslides from density calculations for land divisions.

6.2.6 Location of Structures and Drainage Considerations in Unstable Areas

(LCP) Require location and/or clustering of structures away from potentially unstable slopes whenever a feasible building site exists away from the unstable areas. Require drainage plans that direct runoff and drainage away from unstable slopes.

6.2.7 Location of Septic Leachfields

(LCP) Prohibit the location of septic leachfields in areas subject to landsliding, unless investigation by a certified engineering geologist demonstrates that such placement will not adversely affect slope stability.

6.2.8 Road Construction *(deleted by Res. 81-99)*

6.2.9 Recordation of Geologic Hazards

(LCP) Require the owner of a parcel in an area of potential geologic hazards to record, with the County Recorder, a Notice of Hazards and the level of prior geologic and/or geotechnical investigation conducted as a condition of development approval.

Programs

a. Implement a program to document the public and private costs of landslides, to identify existing landslides, and revise County maps as additional information becomes available. Require property owners and public agencies to control landslide conditions which threaten structures or roads. (Responsibility: Planning Department)

b. Maintain and periodically update public information brochures concerning landslide hazards and guidelines for hillside development as new information becomes available. (Responsibility: Planning Department)

COASTAL BLUFFS AND BEACHES

Policies

6.2.10 Site Development to Minimize Hazards

(LCP) Require all developments to be sited and designed to avoid or minimize hazards as determined by the geologic hazards assessment or geologic and engineering investigations. *(Revised by Res. 81-99)*

6.2.11 Geologic Hazards Assessment in Coastal Hazard Areas

(LCP) Require a geologic hazards assessment or full geologic report for all development activities within coastal hazard areas, including all development activity within 100-feet of a coastal bluff. Other technical reports may be required if significant potential hazards are identified by the hazards assessment. *(Revised by Res. 81-99)*

6.2.12 Setbacks from Coastal Bluffs

(LCP) All development activities, including those which are cantilevered, and non habitable structures for which a building permit is required, shall be set back a minimum of 25 feet from the top edge of the bluff. A setback greater than 25 feet may be required based on conditions on and adjoining the site. The setback shall be sufficient to provide a stable building site over the 100-year lifetime of the structure, as determined through geologic and/or soil engineering reports. The determination of the minimum 100 year setback shall be based on the existing site conditions and shall not take into consideration the effect of any proposed shoreline or coastal bluff protection measures. *(Revised by Res. 81-99)*

6.2.13 Exception for Foundation Replacement and/or Upgrade

(LCP) Foundation replacement and/or foundation upgrades that meet the definition of development activity shall meet the 25-foot minimum and 100-year stability setback requirements. An exception to those requirements may be granted for existing structures that are located partly or wholly within the setback if the Planning Director determines that:

1) the area of the structure that is within the setback does not exceed 25% of the area of the structure, OR

2) the structure cannot be relocated to meet the setback due to inadequate parcel size.
(Revised by Res. 81-99)

6.2.14 Additions to Existing Structures

(LCP) Additions, including second story and cantilevered additions, shall comply with the setback requirements of 6.2.12. *(Revised by Res. 81-99)*

6.2.15 New Development on Existing Lots of Record

(LCP) Allow development activities in areas subject to storm wave inundation or beach or bluff erosion on existing lots of record, within existing developed neighborhoods, under the following circumstances:

(a) A technical report (including a geologic hazards assessment, engineering geology report and/or soil engineering report) demonstrates that the potential hazard can be mitigated over the 100-year lifetime of the structure. Mitigations can include, but are not limited to, building setbacks, elevation of the structure, and foundation design;

(b) Mitigation of the potential hazard is not dependent on shoreline or coastal bluff protection structures, except on lots where both adjacent parcels are already similarly protected; and

(c) The owner records a Declaration of Geologic Hazards on the property deed that describes the potential hazard and the level of geologic and/or geotechnical investigation conducted.
(Revised by Res. 81-99)

6.2.16 Structural Shoreline Protection Measures

(LCP) Limit structural shoreline protection measures to structures which protect existing structures from a significant threat, vacant lots which through lack of protection threaten adjacent developed lots, public works, public beaches, or coastal dependent uses.

Require any application for shoreline protection measures to include a thorough analysis of all reasonable alternatives, including but not limited to, relocation or partial removal of the threatened structure, protection of the upper bluff or area immediately adjacent to the threatened structure, engineered shoreline protection such as beach nourishment, revetments, or vertical walls. Permit structural protection measures only if non-structural measures (e.g. building relocation or change in design) are infeasible from an engineering standpoint or not economically viable.

The protection structure must not reduce or restrict public beach access, adversely affect shoreline processes and sand supply, increase erosion on adjacent properties, or cause harmful impacts on wildlife and fish habitats or archaeological or paleontological resources.

The protection structure must be placed as close as possible to the development requiring protection and must be designed to minimize adverse impacts to recreation and to minimize visual intrusion.

Shoreline protection structures shall be designed to meet approved engineering standards for the site as determined through the environmental review process.

Detailed technical studies shall be required to accurately define oceanographic conditions affecting the site. All shoreline protective structures shall incorporate permanent survey monuments for future use in establishing a survey monument network along the coast for use in monitoring seaward encroachment or slumping of revetments or erosion trends.

No approval shall be given for shoreline protective structures that do not include permanent monitoring and maintenance programs. Such programs shall include a report to the County every five years or less, as determined by a qualified professional, after construction of the structure, detailing the condition of the structure and listing any recommended maintenance work. Maintenance programs shall be recorded and shall allow for County removal or repair of a shoreline protective structure, at the owner's expense, if its condition creates a public nuisance or if necessary to protect the public health and safety. *(Revised by Res. 81-99)*

6.2.17 Prohibit New Building Sites in Coastal Hazard Areas

(LCP) Do not allow the creation of new building sites, lots, or parcels in areas subject to coastal hazards, or in the area necessary to ensure a stable building site for the minimum 100-year lifetime, or where development would require the construction of public facilities or utility transmission lines within coastal hazard areas or in the area necessary to ensure a stable building site for the minimum 100-year lifetime.

6.2.18 Public Services in Coastal Hazard Areas

(LCP) Prohibit utility facilities and service transmission systems in coastal hazard areas unless they are necessary to serve existing residences. *(Revised by Res. 81-99)*

6.2.18.1 Density Calculations

(LCP) Exclude areas subject to coastal inundation, as defined by geologic hazard assessment or full geologic report, from use for density calculations. *(Added by Res. 81-99)*

6.2.19 Drainage and Landscape Plans

(LCP) Require drainage and landscape plans recognizing potential hazards on and off site to be approved by the County Geologist prior to the approval of development in the coastal hazard areas. Require that approved drainage and landscape development not contribute to offsite impacts and that the defined storm drain system or Best Management Practices be utilized where feasible. The applicant shall be responsible for the costs of repairing and/or restoring any off-site impacts.

6.2.20 Reconstruction of Damaged Structures on Coastal Bluffs

(LCP) Permit reconstruction of structures on or at the top of a coastal bluff which are damaged as a result of coastal hazards, including slope instability and seismically induced landslides, or are damaged by non-coastal related hazards (fire, etc.), and where the loss is less than 50 percent of the value, in accordance with the recommendations of the hazards assessment. Encourage relocation to a new footprint provided that the new location is landward of the previous site at the best possible site not affecting resources (e.g. the most landward location, or landward of the area necessary to ensure a stable building site for the minimum 100-year lifetime, or not necessitating a future shoreline protective structure).

When structures located on or at the top of a coastal bluff are damaged as a result of coastal hazards, including slope instability and seismically induced landslides, and where the loss is greater than 50 percent of the value, permit reconstruction if all applicable regulations can be met, including minimum setbacks. If the minimum setback cannot be met, allow only in-kind reconstruction, and only if the hazard can be mitigated to provide stability over a 100 year period.

For structures damaged by other than coastal hazards, where the loss is greater than 50% of the value, allow in-kind reconstruction, subject to all regulations except for the minimum setback. Allow other than in-kind reconstruction only if the minimum setback is met.

Exemption: Public beach facilities and replacements consistent with Coastal Act Policy 30610(g). *(Revised by Res. 81-99)*

6.2.21 Reconstruction of Damaged Structures due to Storm Wave Inundation

(LCP) Permit reconstruction of individual structures located in areas subject to storm wave inundation, which are damaged as a result of coastal hazards, and loss is less than 50 percent of the value, in accordance with recommendations from the geologic hazards assessment and other technical reports, as well as with policy 6.2.16.

When structures located in areas subject to storm wave inundation are damaged as a result of coastal hazards and the loss is greater than 50 percent of the value, permit reconstruction if all applicable regulations can be met. If the minimum setback cannot be met, allow only in-kind reconstruction, and only if the hazard can be mitigated to provide stability over a 100 year period.

For structures damaged greater than 50 percent of the value by other than coastal hazards, allow in-kind reconstruction which meets all regulations except for the coastal bluff setback. Allow other than in-kind reconstruction only if the minimum setback is met.

Exceptions: Public beach facilities and replacements consistent with Coastal Act Policy 30610(g). *(Revised by Res. 81-99)*

Programs

(LCP) a. Relocate if feasible, essential public facilities such as ser lines to locations outside of coastal hazard areas when they are due for expansion or replacement. (Responsibility: Public Works)

b. Zone areas subject to coastal erosion, inundation, and potential bluff failure to the Geologic Hazards Combining district (Responsibility: Planning Department)

(LCP) c. Develop and implement a program to correct existing erosion problems along coastal bluffs caused by public drainage facilities. (Responsibility: Public Works)

d. Review existing coastal protection structures to evaluate the presence of adverse impacts such as pollution problems, loss of recreational beach area, and fishkills and implement feasible corrective actions (Responsibility: Environmental Health, Planning Department)

(LCP) e. Support, encourage, and seek funding from FEMA and other appropriate agencies for the initiation of a review of all shoreline protective structures to evaluate their effectiveness and potential for becoming public hazards. Shoreline protective structures can become public hazards, for example, if they are in such a state of disrepair that portions haven fallen or are in iminent danger of falling onto beaches. Where it is determined that such structures are public hazards or where they provide ineffective protection due to inadequate maintenance, consider notifying the property owner and requiring the property owner to either maintain the structure to a reasonable level or remove and replace the structure within one year of the notice. Consider County action to maintain or remove and replace the structure and recover costs by a lien against the property if the property owner does not act within one year of such notice. (Responsibility: Planning Department, Board of Supervisors)

(LCP) f. Support, encourage, seek funding, and cooperate with the Coastal Conservancy, Coastal Commission, State Lands Commission, and the Corps of Engineers for the establishment and maintenance of a permanent survey monument monitoring network along the coast. Utilize existing monuments set by Caltrans, other public agencies, geologic consultants, and others to the greatest degree possible. Incorporate the use of these monuments into all future planning for shoreline protective structures. Provide geo-reference (latitude and longtitude) for each monument and structure. (Responsibility: Planning Department, Public Works)

Objective 6.3 Erosion

(LCP) To control erosion and siltation originating from existing conditions, current land-use activities, and from new developments, to reduce damage to soil, water, and biotic resources.

Policies

6.3.1 Slope Restrictions

(LCP) Prohibit structures in discretionary projects on slopes in excess of 30 percent. A single family dwelling on an existing lot of record may be excepted from the prohibition where siting on greater slopes would result in less land disturbance, or siting on lesser slopes is infeasible.

6.3.2 Grading Projects to Address Mitigation Measures

(LCP) Deny any grading project where a potential danger to soil or water resources has been identified and adequate mitigation measures cannot be undertaken.

6.3.3 Abatement of Grading and Drainage Problems

(LCP) Require, as a condition of development approval, abatement of any grading or drainage condition on the property which gives rise to existing or potential erosion problems.

6.3.4 Erosion Control Plan Approval Required for Development

(LCP) Require approval of an erosion control plan for all development, as specified in the Erosion Control ordinance. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.

6.3.5 Installation of Erosion Control Measures

Require the installation of erosion control measures consistent with the Erosion Control ordinance, by October 15, or the advent of significant rain, or project completion, whichever occurs first. Prior to October 15, require adequate erosion control to be provided to prevent erosion from early storms. For development activities, require protection of exposed soil from erosion between October 15 and April 15 and require vegetation and stabilization of disturbed areas prior to completion of the project. For agricultural activities, require that adequate measures are taken to prevent excessive sediment from leaving the property.

6.3.6 Earthmoving in Least Disturbed or Water Supply Watersheds

Prohibit earthmoving operations in areas of very high or high erosion hazard potential and in Least-Disturbed or Water-Supply Watersheds between October 15 and April 15, unless preauthorized by the Planning Director. If such activities take place, measures to control erosion must be in place at the end of each day's work.

6.3.7 Reuse of Topsoil and Native Vegetation Upon Grading Completion

Require topsoil to be stockpiled and reapplied upon completion of grading to promote regrowth of vegetation; native vegetation should be used in replanting disturbed areas to enhance long-term stability.

6.3.8 On-Site Sediment Containment

(LCP) Require containment of all sediment on the site during construction and require drainage improvements for the completed development that will provide runoff control, including onsite retention or detention where downstream drainage facilities have limited capacity. Runoff control systems or Best Management Practices shall be adequate to prevent any significant increase in site runoff over pre-existing volumes and velocities and to maximize on-site collection of non-point source pollutants.

6.3.9 Site Design to Minimize Grading

(LCP) Require site design in all areas to minimize grading activities and reduce vegetation removal based on the following guidelines:

(a) Structures should be clustered;
(b) Access roads and driveways shall not cross slopes greater than 30 percent; cuts and fills should not exceed 10 feet, unless they are wholly underneath the footprint and adequately retained;
(c) Foundation designs should minimize excavation or fill;
(d) Building and access envelopes should be designated on the basis of site inspection to avoid particularly erodable areas;
(e) Require all fill and sidecast material to be recompacted to engineered standards, reseeded, and mulched and/or burlap covered.

6.3.10 Land Clearing Permit

(LCP) Require a land clearing permit and an erosion control plan for clearing one or more acres, except when clearing is for existing agricultural uses. Require that any erosion control and land clearing activities be consistent with all General Plan and LCP Land Use Plan policies.

6.3.11 Sensitive Habitat Considerations for Land Clearing Permits

(LCP) Require a permit for any land clearing in a sensitive habitat area and for clearing more than one quarter acre in Water Supply Watershed, Least Disturbed Watershed, very high and high erosion hazard areas no matter what the parcel size. Require that any land clearing be consistent with all General Plan and LCP Land Use policies.