CALIFORNIA COASTAL COMMISSION

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LCP-3-SCO-20-0067-2 (SAFETY ELEMENT UPDATE) FEBRUARY 11, 2022 HEARING EXHIBITS

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AUTHORITY, REQUIREMENTS 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; <u>liquefaction</u>; 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.

Safety Elements revised after January 2009 must reference or incorporate: FEMA flood maps, information about flood hazards available from the Army Corp of Engineers, dam failure maps from the Department of Water Resources, maps of levee protection zones, identification of areas subject to inundation in the event of failure of levees or floodwalls, historical data on flooding including areas vulnerable to flooding after wildfires and areas of repetitive loss due to floods, and identify existing and planned development in flood hazard zones. Goals, policies, objectives and feasible implementation measures related to protecting the community from unreasonable risks of flooding are required to be established, with an emphasis on avoiding risks to new development, maintaining the structural and operational integrity of essential public facilities during flooding, locating new essential public facilities outside of flood hazard zone, and establishing cooperative working relationships among public agencies with responsibility for flood protection.

Safety Elements revised after January 2014 must address the risk of fire for land classified as state responsibility areas, and land classified as very high fire hazard severity zones. The Element must reference or incorporate: fire hazard severity zone maps available from the State Department of Forestry and Fire Protection, historical data about wildfire hazard areas from the US Geological Survey and local records, identification of the general location of existing and planned uses of land within very high fire hazard severity zones and in state responsibility areas, and identification of local, state and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services. As with flood hazards, goals, policies, objectives and feasible implementation measures for protecting the community from unreasonable risks of fire are required to be established, for the same factors identified in the preceding paragraph.

Safety Elements revised after January 2017 must address climate change and resiliency strategies, and must include a vulnerability assessment that identifies the risks that climate changes poses to the local jurisdiction and geographic areas at risk, and include information from other agencies to assist with developing the vulnerability assessment. A set of adaptation and resilience goals, policies, objectives, and feasible strategies and implementation measures to avoid or minimize climate change impacts must be included, especially for new land uses, essential public facilities, and public infrastructure. "Natural infrastructure" that may feasibly be used in adaptation projects to increase resiliency, such as existing or restored natural features and ecosystem processes, are to be identified. Floodplain and wetlands restoration or preservation, combining levees with restored natural systems to reduce flood risk, and urban tree planting to mitigate high heat days and reduce greenhouse gas effects are examples.

Adopted Local Hazard Mitigation Plans and adopted floodplain management ordinances that have been approved by FEMA can be attached or referenced in the General Plan to comply with certain Safety Element requirements. California Government Code Section 65302(g)(4)(D)(ii) allows local governments to

summarize and incorporate by reference a climate adaptation plan or document to meet Safety Element requirements if the material substantially complies or is substantially equivalent. Santa Cruz County approved a Climate Action Strategy in February 2013 and adopted an updated Local Hazard Mitigation Plan in June 2016, and these documents substantially comply with the State's new climate change requirements for Safety Elements. These documents are hereby incorporated by reference. A summary showing how the requirements are met is provided within the Climate Change: Resilience and Adaptation section.

In Santa Cruz County, the impacts of climate change and sea level rise are projected to accelerate hazards to coastal bluffs and beaches, and therefore this Safety Element establishes new and modified goals, policies, objectives and implementation measures for property located on coastal bluffs and for beaches and lagoons. Approaches differ for urbanized properties located within the Urban and Rural Services Lines, and the remaining rural and open space areas along the coast. Within the urban areas where development intensity is higher and existing coastal armoring is common, more extensive project analysis is required to address increased risks due to climate change, sea level rise, wave attack, and coastal flooding. In the more rural areas, however, parcels are larger, development intensity is lower, and the increased risks related to sea level rise can be adequately addressed with a lessor level of project analysis compared to projects in the urban area.

In 2016, the State of California also adopted requirements for General Plans to address environmental justice for disadvantaged communities. Disadvantaged communities are defined as low-income areas (at or below 80% of area median household income) that are disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure or environmental degradation. While the unincorporated area of Santa Cruz County does not contain communities that meet the technical definition, certain sub-area of unincorporated Santa Cruz County can at times be of similar status as a disadvantaged community, depending upon how the geographic limits are defined and upon economic circumstances of the area population as the economy and housing market changes. This Safety Element therefore incorporates environmental justice requirements and generally addresses these unique or compounded health risks for these certain sub-areas that may at times qualify as disadvantaged communities, including policies regarding promotion of civil engagement in public decision making, and prioritization of improvements and programs that address the needs of disadvantaged communities.

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:

- (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 OF GREATEST SHORT-TERM RISKS TO 2050, AND INTERMEDIATE- TO LONG-TERM RISKS TO 2100

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.

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 be 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).

The Climate Action Strategy (CAS) Vulnerability Assessment concluded that over the next 30+ years to 2050, it is expected that the highest risks to the County of Santa Cruz will come from:

- <u>Potential water shortages due to the combination of increasing temperatures, changes in precipitation patterns increasing climatic water deficit, increased saltwater intrusion, decreased groundwater recharge, and higher demand. This has a very high probability of occurrence and also significant (high) consequences.</u>
- <u>Rising water table beneath the Rio Del Mar Esplanade is already an issue. As sea level continues to rise, the present problems will be exacerbated. The consequence of a continuing water table rise on commercial and residential structures and infrastructure, including the wastewater pump station is high, and the likelihood of this taking place in the immediate future is high.</u>

- Potential increase in future coastal storm frequency and/or intensity will increase cliff retreat rates as well as cause potential damage to oceanfront property or public infrastructure. The coastlines of northern California, Oregon and Washington have experienced increasingly intense winter storms and greater wave heights over the last 25 years, both of which may be leading to more severe winter erosion (Allan and Komar, 2000). The consequence of coastal bluff erosion is high due to the extent of high-value public and private improvements (infrastructure, structures, etc.)
- Flooding in Santa Cruz County has occurred in each of the primary drainages and will continue to occur in the future given certain sets of meteorological conditions. Previous occurrences are well documented for all primary drainages with the exception of Aptos Creek, which is not gauged. In addition, low-lying areas such as Rio Del Mar Esplanade/Flats will experience more frequent flooding and inundation from sea level rise and increased wave heights. As a result, the consequence would be high in terms of structural and economic loss, with the probability of such an event occurring also being high.
- Groundwater extraction rates from the Pajaro River Valley groundwater basin have exceeded sustainable pumping rates for decades, causing groundwater levels to drop significantly, resulting in areas of saltwater intrusion and rendering some coastal groundwater wells unsuitable for use. With the rise in sea level in the coming decades, saltwater intrusion will be exacerbated. The probability of saltwater intrusion is high due to the current groundwater overdraft situation in the Pajaro Valley, and the consequence of this occurring is high due to the economic effects of fallowing large expanses of farmland to reduce groundwater pumping. However, efforts are being developed to reduce groundwater pumping and to stop saltwater intrusion. The success of these efforts will be challenged by the additional effects of climate change.
- Many of the wells located within the boundaries of the Soquel Creek Water District are also threatened with saltwater intrusion. A reduction in groundwater pumping will likely be necessary to meet the protective and target water levels necessary to avoid saltwater intrusion into the wells.
- <u>Heat waves in Santa Cruz County are likely to become more frequent in the future due to climate change; however, due to the marine climate, temperature increases would be moderate. As a result, the consequence would be low while the probability of such an event occurring is high.</u>
- Climate change is expected to result in additional risk of increased fire frequency, size, and severity beyond the historic range of natural wildfire variability due to increasing length of the fire season, drier fuels, and decreasing forest health. These changes are being driven by alterations in temperature and precipitation regimes (generally, warmer and drier). As a result, the consequence would be high while the probability of such an event occurring is low.

The Local Hazard Mitigation Plan concluded that over the intermediate to long term (2050 to 2100), in addition to water shortages and a rise in the water table, it is expected that other climate change related events would increase to high and very high levels of risk within the County:

- Potential water shortages, as described for the period 2010-2050, shift from a high probability of occurrence to a very high probability of occurrence as climate change progresses.
- Even though many of the areas of highest vulnerability have already been armored with riprap or seawalls, coastal cliff erosion continues to take place. The value of property and infrastructure in this area is very high, and in the long-term, with a rising sea level and increased winter wave attack, this risk is expected to increase to a very high level.
- Rise in the water table beneath the Rio Del Mar Esplanade as described for the period 2010-2050 shifts from a high probability of occurrence to a very high probability of occurrence as sea level rise progresses.

- Shoreline inundation would affect a number of developed areas along the County shoreline, particularly at the maximum projected sea level values for 2050-2100. The potential for flooding of the Rio Del Mar Esplanade and Beach Drive, for example, has a very high probability of occurring with a high consequence if it were to happen. If winter precipitation increases in the longer-term future, although it is not clear from the models that have been run to date that this will occur, the probability will increase, raising the risk of flooding.
- Flooding, as described for the period 2010-2050, shifts from a high probability of occurrence to a very high probability of occurrence as climate change progresses.
- Salt water intrusion of groundwater as described for the period 2010-2050 would continue as sea level rise progresses. The probability of saltwater intrusion increases to very high, and the consequence is very high due to the economic effects of fallowing large expanses of farmland to reduce groundwater pumping. Efforts are underway to reduce groundwater pumping to stop saltwater intrusion; however, the success of these efforts will be challenged by the additional effects of climate change.
- Heat waves as described for the period 2010-2050 shift from a high probability of occurrence to a very high probability of occurrence as climate change progresses.
- <u>Climate change is expected to continue to contribute to increased wildfires as described for the period</u> 2010-2050 with the probability of occurrence shifting from low to moderate as climate change progresses.

SAFETY ELEMENT GOALS REGARDING HAZARDS AND CLIMATE CHANGE

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.

The goals, objectives, policies and implementation measures of this Public Safety Element are derived from the necessity to protect the community from natural hazards, as well as from hazards produced from the built environment. Primary goals of the Safety Element include:

SE-1: To protect human life, private property and the environment.

<u>SE-2:</u> 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.

Santa Cruz strives to be a disaster-resistant county that can avoid, mitigate, survive, recover from, and thrive after a disaster while maintaining its unique character and way of life. County government should be able to provide critical services in the immediate aftermath of a devastating event of any kind. The people, buildings and infrastructure of Santa Cruz should be resilient to disasters. A key County objective stated in the Local Hazard Mitigation Plan (LHMP) is to have basic government services and commercial functions resume quickly after a damaging earthquake or other significant event. The LHMP has four primary goals for reducing disaster risk in Santa Cruz, which are incorporated into this Safety Element:

SE-3: Avoid or reduce the potential for loss of life, injury and economic damage to Santa Cruz residents from earthquakes, wildfires, floods, drought, tsunami, coastal erosion, landslide and dam failure.

SE-4: Increase the ability of the County government to serve the community during and after hazard events.

<u>SE-5:</u> Protect Santa Cruz's unique character, scenic beauty and values from being compromised by hazard events.

SE-6: Encourage mitigation activities to increase the disaster resilience of institutions, private companies and systems essential to a functioning Santa Cruz.

The projected increases in levels of fire, flood, erosion and coastal bluff hazards due to climate change require adjustments in preparation and responses, including modified approaches to regulating properties on coastal bluffs and beaches, new flood and fire hazard reduction policies, and ensuring functionality of essential public facilities and infrastructure. Table 7.1 of the County's Climate Action Strategy presents a comprehensive series of strategies designed to respond to the following CAS climate adaptation goals, which are incorporated into this Safety Element:

SE-7: Protect the unique character, scenic beauty and culture in the natural and built environment from being compromised by climate change impacts.

SE-8: Support initiatives, legislation, and actions to respond to climate change.

SE-9: Encourage and support actions that reduce risks and vulnerabilities now, while recognizing the importance of identifying, making decisions about, and preparing for impacts and risks that may develop in the future.

<u>SE-10:</u> Support the reduction of risks from other environmental hazards, noting the strong interrelationships and benefits between reducing risk from climate change, non-climate change-related disasters, and most other environmental hazards.

SE-11: Build resilience into all programs, policies and infrastructure.

<u>SE-12:</u> Encourage climate change resilience planning and actions in private companies, institutions, and systems essential to a functioning County of Santa Cruz.

SE-13: Encourage community involvement and public-private partnerships to respond to potential climate impacts, particularly for those most vulnerable.

SE-14: Ensure that the County of Santa Cruz remains a safe, healthy and attractive place with a high quality of life for its residents, businesses and visitors.

This Safety Element incorporates these goals of the LHMP and CAS in order to recognize climate change projections and to support adaptation approaches that improve the resilience of essential facilities, public infrastructure, coastal natural resources, and human communities to the impacts of climate change and sea level rise; and to ensure informed acceptance of risk and liability releases by private property owners who elect to develop or make improvements in areas subject to hazards.

Additional goals (beyond the above goals contained in the LHMP and CAS) related to climate change, regarding geologic, flooding and wave run-up hazards along the shoreline and coastal bluffs, include the following:

SE-15: Seek funding for and encourage public, special district and private activities to prepare more specific plans for how various portions of the shoreline/coastal bluff that are located within the urban/rural services lines should transition in the future, to a feasible outcome that could exist in the near- to mid-term with a design that improves impacts on coastal resources while continuing to protect important coastal infrastructure, existing development and other visitor-serving built and natural environments.

SE-16: Ensure that public investments along the shoreline consider projections for sea level rise, and prioritize and design projects to avoid and minimize risks to the improvements, considering the desired expected life for such public improvements.

SE-17: Seek to internalize private costs of repair, replacement and/or abatement of structures on shorelines and coastal bluffs to private property owners, while also recognizing that in some locations public agencies, special districts and private property owners should work together to achieve mutually beneficial conditions in the near- to mid-term, while recognizing that the long-term may mean that improvements must be relocated or removed.

This Safety Element is divided into sections based on the particular hazards that exist in Santa Cruz County and related topics. Information and discussion about each of these hazards or topics is presented at the start

of each section, followed by the relevant objectives, policies and implementation measures for the hazard or topic. The hazards and topics are presented in the following order:

- 1. Seismic and Soil Hazards: Earthquakes, Tsunami, Liquefaction
- 2. Climate Change: Resilience and Adaptation
- 3. Slope Stability, Landslides and Other Adverse Soil Conditions
- 4. Coastal Bluffs and Beaches
- 5. Grading and Erosion
- 6. Flood Hazards
- 7. Wildland and Urban Fire Hazards
- 8. Air Quality
- 9. Hazardous and Toxic Materials
- 10. Hazardous Waste Management
- 11. Electric and Magnetic Energy, and New Electrical Facilities
- 12. Environmental Justice

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 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 un-reinforced 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 voterapproved 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 ongoing process.

SEISMIC HAZARDS: EARTHQUAKES, TSUNAMI, LIQUEFACTION

EARTHOUAKES. An earthquake is a sudden release of energy in the earth's crust. Caused by movement along fault lines, earthquakes vary in size and severity. The focus of an earthquake is found at the first point of movement along the fault line, and the epicenter is the corresponding point above the focus at the earth's surface. Damage from earthquakes varies with the local geologic conditions, the quality of construction, the energy released by the earthquake, the distance from the earthquake's focus, and the type of faulting that generates the earthquake. Ground motion is the primary cause of damage and injury during earthquakes and can result in surface rupture, liquefaction, landslides, lateral spreading, differential settlement, tsunamis, building failure and broken utility lines, leading to fire and other collateral damage. Typically, areas underlain by thick, water-saturated, unconsolidated material will experience greater shaking motion than areas underlain by firm bedrock, but in some cases relief may intensify shaking along ridge tops. Fires and structural failure are the most hazardous results of ground shaking. Most earthquake-induced fires start because of ruptured power lines and gas or electrically powered stoves and equipment, while structural failure is generally the result of age and type of building construction. Fault rupture and earthquake related Ground Cracking could occur in several locations within the County of Santa Cruz. Several fault zones cross Santa Cruz County, and movement along these faults can cause fault-related surface deformation (e.g., surface fault rupture) where the fault reaches the surface of the ground. Both the County of Santa Cruz and the State of California have identified zones where the San Andreas and other active faults have and can cause fault-related surface deformation. Within these zones it is likely that movement along these faults will damage structures, roads, utilities, and other fixed facilities. In addition to these zones, other ground cracking was observed during the Loma Prieta earthquake and the San Francisco earthquake of 1906. Many of these ground cracks can be attributed to movement or consolidation of large and moderate sized landslides while other ground cracks were most likely related to ridge spreading. Although much of the ground cracking was found near the fault zones and in the Summit area of the county, other ground cracking was found on ridge tops throughout the County of Santa Cruz.

In geologic time, Santa Cruz County was very recently the epicenter of a very significant earthquake. At 5:04 PM on October 17, 1989, a magnitude 7.1 event 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 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. In Santa Cruz County, 674 dwellings, 32 mobile homes and 310 businesses were destroyed in the earthquake. Replacement of un-reinforced masonry chimneys made up the majority of subsequent 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. Due to the County's susceptibility to earthquakes and other natural hazards, disaster response planning is an on-going process.

TSUNAMI. A tsunami is a series of waves generated by an impulsive disturbance in a large body of water such as an ocean or large lake. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. Sudden vertical movement of the ocean or lake floor by a fault, landslide or similar movement displaces the overlying water, creating a wave that travels outward from the source. The waves can travel across oceans and maintain enough energy to damage distant shorelines. The most recent tsunami in Santa Cruz County occurred as a result of the magnitude 9.0 earthquake in Japan on March 11, 2011. In Japan nearly 16,000 deaths occurred as a result of the earthquake and tsunami, which generated a wave of water up to 113 feet in height travelling inland up to six miles, and which also caused meltdown of a nuclear energy plant. This 2011 tsunami hit the Santa Cruz Harbor with waves estimated to

be several feet, combined with swift and chaotic currents causing approximately \$20 million in damage. Santa Cruz County is at risk from both local and distant source tsunamis.

LIQUEFACTION. Liquefaction is the transformation of loose, water-saturated granular materials (such as sand or silt) from a solid to a liquid state. Liquefaction commonly, but not always, leads to ground failure such as subsidence. Liquefaction potential varies significantly and site-specific analysis is needed to accurately determine liquefaction potential in earthquake prone areas.

Objective 6.1-1 Seismic Hazards: Earthquakes

(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.

Objective 6.1-2Seismic Hazards: Tsunami

(LCP) To reduce the potential for loss of life, injury, and property damage resulting from tsunamis by: providing signage and warning systems in tsunami hazard areas to increase public awareness of hazard and actions to take in event of tsunami, publicizing evacuation routes, and designing structures as feasible to withstand tsunamis or to minimize damage that may occur due to tsunamis.

Objective 6.1-3Seismic Hazards: Liquefaction and Subsidence

(LCP) To reduce the potential for loss of life, injury, and property damage resulting from location of improvements in areas that contain soils subject to liquefaction and subsidence by: avoiding location of critical and essential facilities in areas subject to these conditions, and adopting building codes that, for areas where development is allowable, requires site-specific analysis and adequate mitigations to be incorporated into project designs.

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/or a more complete geologic investigation report where required by the County. Such An assessment shallmay be prepared by County staff under supervision of the County Geologist, or a certified engineering registered geologist may conduct this review at the applicant's choice and expense. Any Geologic Hazards Assessment or Geologic Investigation Report must be accepted by the County Geologist in order to use its findings and/or incorporate its mitigations into a proposed development project.

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 <u>certified engineering registered geologist</u> 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 <u>Assessment or</u> Investigation Regarding Liquefaction Hazard

(LCP) Require site-specific <u>hazards assessment and/or</u> investigation by a <u>certified engineering</u> registered geologist and/or civil engineer of all development proposals of more than four residential units in areas designated as having a <u>moderate</u>, high or very high liquefaction potential, and require mitigations identified by reports to be incorporated into project designs in order to meet building codes. 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, in order to avoid or minimize exposure to hazards. Review, revise, and/or condition project and condition development permits as warranted, based on the recommendations of the site's Hazard Assessment or other technical reports.

6.1.6 Siting of New <u>Water Supply</u> Reservoirs <u>and Small Water Retention Facilities</u>

(LCP) Require a full engineering geologic investigation prior to the construction of new <u>water supply</u> reservoirs, and if an unmitigable hazard exists, <u>denyrelocation of the proposed</u> reservoir. <u>Require smaller water retention facilities to be sited and engineered in a manner that will avoid or mitigate potential hazards that could arise from failure of the facilities, especially to habitable structures and public and private access roads.</u>

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 <u>and/or building/grading permit</u> <u>review processes</u>.

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, as well as projected hazards due to climate change and sea level rise.

6.1.9 Recordation of <u>Notice of Geologic Hazards, Acceptance of Risk, Liability Release, and</u> <u>Indemnification</u>

(LCP) <u>As a condition of development approval and/or prior to the issuance of a building/grading</u> permit for development/development activities and new and substantially improved structures in geologic hazard areas, rRequire the owner of a parcel in an area of potential geologic hazards to record <u>on the property/title deed</u>, with the County Recorder, a Notice of <u>Geologic Hazards</u>, <u>Acceptance of Risk, Liability Release, and Indemnification in a form approved by the County</u>. <u>The Notice shall include information about the nature of the hazard(s) as determined by the</u> and the level of geologic and/or geotechnical investigation, provide that the current and all future owners and successors in interest accept the risks to people and property, and includes a release of liability of and waiver of claims against the County of Santa Cruz for any damages or injury in connection with the permitted development. conducted as a condition of development approval.

6.1.10 <u>Siting, Design and Density Recommendations-Review offor</u> Proposed Development <u>for</u> <u>Acceptable Risk Levels</u>

(LCP) Approve the final density and design of a development or building/grading proposal, and location of proposed development on a site, only as if it is consistent with the recommendations of the technical reports. Deny the location or design of the proposed development if it is found that the hazards on the site cannot be mitigated to within acceptable risk levels for the nature of the development, as established by industry standards and as evidenced by property owner willingness to record on title a Notice of Geologic Hazards, Acceptance of Risk, and Liability Release.

6.1.11 Setbacks from Faults

(LCP) Exclude from density calculations for land divisions, land within 50 feet of the edge of the area of 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 registered 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 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 and of applicable provisions of the County Code. (Amended by Res. 201-2008)

Programs

- a. Periodically update seismic design <u>and soil hazards design</u> criteria and the <u>Building and</u> Grading <u>ordinanceregulations</u>, with the advice of qualified professionals <u>and consistent with</u> <u>State law</u>, as information becomes available in order to <u>supportaid buildings and homeowners</u> <u>in constructing construction of</u> safe structures <u>in areas of seismic hazards</u>, liquefaction hazards <u>and other soil conditions subject to ground failure or cracking during seismic events</u>. (Responsibility: Planning Department)
- b. Continue to evaluate existing public facilities to determine whether they can maintain structural integrity during the design earthquake, and fund and carry out retrofits, retirements and/or replacements as may be needed to ensure public safety at public facilities during such earthquake events, with priority given to critical facilities. (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.<u>c.</u> Target the following structures to meet <u>California Building CodeUBC Zone 4</u> seismic safety standards <u>for existing buildings</u>:

(1) Buildings constructed prior to 1955; Critical facilities:

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.d. Support seismic retrofit projects, including through priority permit processing and through special financing programs such as housing rehabilitation loans for qualified low income homeowners from State and local funding programs as may be availableprograms for residential properties. (Responsibility: Planning Department, Santa Cruz County Housing Authority, Board of Supervisors)
- g.<u>e.</u> Comprehensively map the Geologic Hazard Combining Zone District to include areas having a high, moderate or uncertain surface rupture potential, as well as known areas subject to high liquefaction hazards, and make the Geologic Hazards map(s) and related technical information available to the public on the county website. 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, Information Services Department/GIS)
- h.<u>f.</u> 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, Information Services Department/GIS)
- i-g. Revise existing seismic and geologic hazard maps as new, reliable information becomes available. (Responsibility: Planning Department, Information Services Department/GIS)
- j-<u>h.</u> 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, <u>Human Services Department</u>, <u>Health Services Agency and Department of Public Works</u>)
- k-<u>i.</u> Develop public education programs to increase public awareness of seismic and geologic 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)

CLIMATE CHANGE: RESILIENCE AND ADAPTATION

Santa Cruz County approved a Climate Action Strategy CAS) in February 2013, and adopted an updated Local Hazard Mitigation Plan (LHMP) in June 2016. Materials in those documents provide substantial compliance with California Government Code requirements to address climate change, including but not limited to a vulnerability assessment, and adaptation and resilience goals, policies, objectives, and feasible strategies and implementation measures to avoid or minimize climate change impacts, especially for new land uses, essential public facilities, and public infrastructure.

The CAS Executive Summary summarizes the content of the document, including material that meets requirements for Safety Elements, as presented below.

Californians are already experiencing impacts from climate change (California Natural Resources Agency, 2009), and a wide variety of impacts are likely to be felt with increasing magnitude as the concentration of greenhouse gases (GHGs) in the atmosphere continues to rise (City of Santa Cruz, 2011). The first portion of the County's Climate Action Strategy (CAS) reports the results of the GHG emissions inventory for Santa Cruz County, proposes targets for GHG reduction, and outlines strategies and implementing actions to achieve the targets. The second portion focuses on vulnerability assessment and strategies for adapting to the types of impacts that are likely to occur in Santa Cruz County. The CAS incorporates input from the local community and non-governmental agencies that are working to mitigate and respond to climate change.

GHG emissions inventories were prepared for County government operations and for community activities for 2005 and updated for 2009. Total emissions for government operations in 2009 were approximately 34,000 metric tons of CO2 equivalent (CO2e), a decrease of 12 percent from 2005. T otaltotal emissions for community activities were approximately 1,030,000 metric tons in 2009, a decrease of more than 50 percent from 2005. The dramatic decrease in community emissions reflects the closure of the Davenport cement plant, which accounted for approximately 90 percent of the commercial/industrial emissions in 2005. The inventories indicate that 70 percent of the community emissions in 2009 were generated by the transportation sector. A separate, simplified inventory of GHG emissions from agricultural activity was prepared for 2011. Agricultural emissions other than electricity emissions were in the range of 17,000 metric tons of CO2e. This represents, at most, two percent of GHG emissions countywide (2009 data).

State legislation requires California to reduce GHG emissions to 1990 levels by 2020. Based on the 2005 community emissions inventory, 1990 emissions levels for Santa Cruz County were estimated. Santa Cruz County has already met the target for 2020 due to the closing of the Davenport cement plant. The State has also set a long-term reduction target for 2050, which is 80 percent below 1990 levels. The CAS incorporates the two state targets and sets an interim target for 2035. A "business as usual" estimate of future emissions is used to gauge the amount of effort required to meet the reduction targets.

GHG reduction strategies are proposed for the three sectors with the highest emissions: transportation, energy, and solid waste. The amount of emissions reductions that can be expected from each strategy is estimated. Calculations indicate that the emissions targets for 2035 and 2050 can be met, but that a sustained commitment to full implementation of the strategies will be required. The largest reduction will come from state and federal standards for fuel efficiency and vehicle emissions and from the California renewable energy portfolio standard (58 percent), followed by a cleaner energy supply from Community Choice Energy (CCE) if that type of regional energy authority is formed (22 percent), energy efficiency (9 percent), transportation and land use planning (5 percent), green business (3 percent), and electric vehicles (3 percent). The CAS finds that if a CCE is not feasible the gap may be closed with greater reductions from other strategies, including a method to provide incentives for local renewable power and energy conservation similar to what a CCE would provide. However, a feasibility study was subsequently completed which has determined that it is feasible, and a collection of local governments are pursuing formation. Priority for implementation of GHG reduction efforts will be a function of the estimated potential for emissions reduction, cost to implement, and co-benefits of efforts.

<u>A plan for monitoring the implementation of emissions reduction is included in the CAS, which</u> <u>includes identifying the group with responsibility for implementation, periodic reporting, and a</u> <u>recommendation for updating the GHG emissions inventories every five years.</u>

<u>A vulnerability assessment was prepared to identify the conditions that may occur in Santa Cruz</u> <u>County as a result of the various components of climate change (increasing temperature, rising sea level, and shifts in the precipitation regime) and the locations, infrastructure and economic sectors that are particularly vulnerable to negative impacts.</u>

The assessment identifies the coastal areas that are most susceptible to increased flooding, storm surge, beach and coastal bluff erosion from winter storms. Winter storm damage may become more frequent than in the past as a result of heightened sea levels persisting longer as sea level rises (Cayan et al., 2008; Cloern et al., 2011), and precipitation that is concentrated in fewer months each year (Flint, L.E., and Flint, A.L., 2012). The analysis is based on 16–66 inches (42–167 cm.) of sea level rise by 2100, as forecast by the National Academy of Sciences (National Research Council, 2012). Inundation, rising groundwater, and increased saltwater intrusion into groundwater will also affect low-lying areas. The systems that will be most affected are residential coastal property, wastewater treatment infrastructure, coastal roads and bridges, beaches, coastal and wetland ecosystems, and water supply from coastal wells. The vulnerability assessment also identifies potential effects of precipitation changes and increased temperature of between 3.6–7.2 degrees Fahrenheit (2–4 degrees Celsius) (Flint, L.E., and Flint, A.L., 2012) on water supply, wildfire, biodiversity, and public health. Particular attention is given to the significant decrease in redwood habitat that may occur, especially if the current trend of decreasing coastal fog continues (Flint, L.E., and Flint, A.L., 2012).

<u>Tourism and agriculture, two top revenue producing and job generating sectors of the local</u> <u>economy, are closely tied to the climate and are therefore vulnerable to climate change. Tourism relies on</u> <u>beaches, coastal attractions, redwoods, and vulnerable infrastructure for access to and around the coast.</u> <u>Agriculture will be affected by increases in temperature, changing pest patterns, changing fog dynamics,</u> <u>and increased potential for both flood and drought.</u>

<u>A risk analysis was performed to determine which impacts from climate change present the greatest</u> risk to people and to the natural and built environments. In the short to intermediate term (2010–2050) water shortage was identified as the largest risk. In the intermediate to long term (2050–2100) rising water table, coastal bluff erosion, and increased flooding and landslides join water shortage as greatest risks.

<u>Climate adaptation goals are established as a guide for evaluating adaptation strategies. Specific</u> <u>adaptation strategies include new actions as well as acknowledgement of existing plans and programs,</u> <u>which such as the adopted Local Hazard Mitigation Plan (LHMP), while not explicitly about climate</u> <u>change, address the salient issues. Some proposed strategies emphasize avoidance of hazards while others</u> <u>focus on future planning efforts and specific engineering solutions to protect existing development.</u> <u>However, all emphasize building connections among people and among organizations to accomplish the</u> <u>climate adaptation goals in a framework of partnership.</u> It is expected that the County's Climate Action Strategy will be modified periodically as scientific research progresses, new information becomes available and new ideas and priorities are brought forward as more people become involved in responding to climate change in Santa Cruz County. Such CAS updates will not be considered to be formal amendments to the General Plan, but as updates to implementation materials, as consistent with key goals and objectives of the CAS and General Plan.

The June 2016 update of the Local Hazard Mitigation Plan (LHMP) includes a great deal of the information, assessments and mitigation strategies that required to be included in a General Plan Safety Element. The first two parts of the LHMP address the planning process used and present a Community Profile, including key transportation routes and critical infrastructure locations. The third part identifies the hazards, presents risk and vulnerability assessments, estimates hazard loss estimates for existing and planned development, and outlines mitigation goals, strategies and actions, for the following types of hazards: earthquakes and liquefaction, wildfires, floods and coastal storms, drought, tsunami, coastal erosion, dam failure, landslide, expansive soils, and climate change. The LHMP contains an extensive number of maps further illustrating hazard types, including maps of levee flood gates, fault rupture zones, liquefaction areas, earthquake intensities, critical fire hazard areas, recent fires, flood zones, repetitive loss properties, Pajaro River flood risk, water agency service areas, tsunami inundation areas, coastal erosion areas, Newell Creek dam inundation area, slides and earthflows, landslide hazard areas, and expansive soils.

The fourth part of the LHMP presents the Mitigation Strategy, and the fifth part addresses the plan maintenance process. It is expected that the County's LHMP will be updated every five years or as required by law. Such LHMP updates will not be considered to be formal amendments to the General Plan, but as updates to implementation materials, as consistent with key goals and objectives of the LHMP and General Plan.

Objective 6.2.1 Climate Change: Resilience and Adaptation

(LCP) Implement the Climate Action Strategy approved in February 2013, as well as the Local Hazard Mitigation Plan approved in June 2016, in order to increase resilience and adapt to the effects of climate change. Update the CAS and LHMP as new science and approaches are available. Updates to the CAS and LHMP shall not require amendment of the General Plan and Local Coastal Program as long as the updates are in substantial conformance with the goals of this Safety Element and those documents, and further improve hazard information, resiliency and adaptation strategies.

Objective 6.2.2 Local Hazard Mitigation Plan and Climate Action Strategy

(LCP) Comply with Government Code 65302(g)(4) and incorporate by reference and implement the County's Local Hazard Mitigation Plan (LHMP) and updates approved by the Federal Emergency Management Agency (FEMA) and the Governor's Office of Emergency Services. The LHMP has been updated to address climate change adaptation consistent with the County's Climate Action Strategy (CAS) and updates. The LHMP identifies the risks that climate change poses to the County and the geographic areas at risk from climate change impacts. The LHMP creates a set of adaptation and resilience goals, policies, and objectives for the protection of the community. The LHMP creates a set of feasible implementation measures designed to minimize impacts of climate change, avoid at-risk areas, and utilize natural infrastructure where feasible to increase resiliency to climate change.

SLOPE STABILITY, LANDSLIDES AND OTHER ADVERSE SOIL CONDITIONS

LANDSLIDES. Landslides are the rapid downward movement of rock, earth, or artificial fill on a slope. Factors causing landsliding include the rock strength and orientation of elements on the slope, erosion, weathering, high rainfall, steepness of slopes, and human activities such as the removal of vegetation and inappropriate grading. Severe rainstorms in January 1982 caused multiple landslides throughout the Bay Area and especially in the Santa Cruz Mountains. One very large composite landslide along Love Creek, west of Loch Lomond Reservoir, killed ten people. This landslide was and continues to be an indicator of the potential severity of landslide activity and the need for observation and/or mitigation. Other landslides, including debris flows, destroyed homes killing several other people. In addition to damage to homes, widespread landslide damage occurred to roadways, driveways, and stream channels.

OTHER ADVERSE SOIL CONDITIONS. A variety of other adverse soil conditions result in a need for site-specific geotechnical/soils reports to ensure that appropriate specifications are incorporated into the design of proposed improvements. Expansive soils are generally clays or sedimentary rocks derived from clays, which experience volume changes as a result of moisture variation. The hazard that expansive soils create can be significant. Many of the expansive soils do not create large areas of destruction; however, they can disrupt supply lines (i.e. roads, power lines, railways, and bridges) and damage structures. The effects on structures can be dramatic if expansive soils supporting structures are allowed to become too wet or too dry. Lightly loaded one-story or two-story buildings, warehouses, residences, and pavements are especially vulnerable to damage because these structures are less able to suppress the differential heave of the swelling foundation soil than heavy, multistory structures. Patios, driveways and walkways may also crack and heave as the underlying expansive soils become wet and swell. Other adverse soil conditions can include but not be limited to areas of unconsolidated fill due to historic or improper grading, undermined slopes, roads or structures, and areas of low soil strength.

Objective 6.23 Slope Stability, Landslides and Other Adverse Soil Conditions

(LCP) To reduce <u>life</u> safety hazards and property damage caused by landslides, <u>debris flow</u>, <u>adverse</u> <u>soil conditions</u>, and other ground movements affecting land use activities in areas of unstable geologic formations, potentially unstable slopes and adverse soil conditions- and coastal bluff retreat.

Policies

6.23.1—Geologic Hazards <u>Assessments, Soils/Geotechnical Report or Geologic Report for</u> Development <u>Onon</u> and Near Slopes

(LCP) Require a geologic hazards assessment, soils/geotechnical report or geologic report of all for proposed development, including grading and building permits, that is potentially affected by slope instability hazards that exist on or near the site, regardless of the slope gradient on which the development itself is proposed takes place. Such assessment or reports shall may be prepared by County staff under supervision of the County Geologist, or by a registered certified engineering geologist or civil engineer, as required by the County and may conduct this review at the applicant's choice and expense. Any Geologic Hazards Assessment, Soils/ Geotechnical Report or Geologic Report must be accepted by the County Geologist in order to use its findings and/or incorporate its mitigations into a proposed development, grading or building project.

6.23.2 Engineering Geology Report or Soils/Geotechnical Report

(LCP) Require an engineering geology report by a <u>certified engineering registered</u> geologist and/or a soils/geotechnical engineering report <u>prepared by a qualified professional</u> when the hazard

assessment identifies potentially unsafe geologic conditions in an area of proposed development.

6.23.3 Conditions <u>and Design Specifications</u> for Development, <u>Building</u> and Grading Permits

(LCP) Condition development <u>permits and ensure design/mitigation specifications have been</u> <u>incorporated into building</u> and grading plans-<u>permits</u> based on the recommendations of the Hazard assessment and other technical reports.

6.23.4 Mitigation of Geologic Hazards and Density, Design and Location Considerations

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

6.23.5 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.

6.23.6 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.

6.23.7 Location of Septic Leachfields

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

6.23.98 Recordation of <u>Notice of Geologic Hazards</u>, <u>Acceptance of Risk</u>, <u>Liability Release</u>, and <u>Indemnification</u>

(LCP) <u>As a condition of development approval and/or prior to the issuance of a building/grading</u> permit for development/development activities and new and substantially improved structures in geologic and/or coastal hazard areas, rRequire the owner of a parcel in an area of potential geologic hazards to record <u>on property title/deed</u>, with the County Recorder, a Notice of <u>Geologic Hazards</u>. Acceptance of Risk, Liability Release, and Indemnification in a form approved by the County. The Notice shall include information about the nature of the hazard(s) as determined by the and the level of prior geologic and/or geotechnical investigation, provides that the current and all future owners and successors in interest accept the risks to people and property, and includes a release of liability of and waiver of claims against the County of Santa Cruz for damages or injury in connection with the approved development. 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 or mitigate landslide conditions which threaten structures or roads, including improper or unauthorized drainage affecting county

roads and/or drainage facilities through applicable Notice and Order and/or abatement processes. (Responsibility: Planning Department, Public Works Department)

b. Maintain and periodically update public information brochures <u>and information available</u> <u>on the county website</u> concerning landslide hazards and guidelines for hillside development, as new information becomes available. (Responsibility: Planning Department)

6.5 GRADING AND EROSION HAZARDS

Erosion is closely related to slope stability and this section of the Safety Element addresses the need for drainage and erosion control plans for certain grading and development projects. It also sets forth standards for the prevention of erosion and siltation on properties irrespective of whether permits are being sought for property improvements.

Thresholds for when discretionary grading permits, exception permits, winter grading permits (consistent with both the grading and erosion control regulations), and land clearing permits are required for development projects are also established in this section.

Land Clearing Permits are required for any land clearing of existing natural areas of one-quarter acre or more. The threshold for when this permit is required has been lowered in response to increasing erosion and damage to habitats that has resulted from increased intensity of certain special agricultural activities, including but not limited to cannabis cultivation.

Agricultural grading on less than twenty percent slopes, as well as vineyards and associated terracing (irregardless of slope), does not require a regular grading permit and is instead subject to agricultural grading regulations. However, defined "specialized agricultural activities" such as greenhouses, indoor growing, aquaculture and any cannabis cultivation activities involving more than 100 cubic yards is not considered agricultural grading and requires a regular grading permit, and grading on twenty percent slopes or more also requires a regular grading permit.

Objectives 6.35 Erosion

(LCP) To control erosion and siltation originating from existing conditions, <u>grading activities</u>, current land-use activities, from new developments, and new and existing cannabis activity and related development, to reduce damage to soil, water, and biotic resources.

Policies

6.35.1 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 apply for an Exception Permit to be excepted from the prohibition where siting on greater slopes would result in less land disturbance, or siting on lesser slopes is infeasible.

6.35.2 Grading Projects to Address Comply with Codes and Engineer's Recommendations, and Incorporate Mitigation Incorporate Mitigation Measures

(LCP) Grading permits involving less than 1,000 cubic yards of earth material on less than 20 percent slopes which are processed as ministerial building permits, must comply with the standards of applicable county codes and the recommendations of a soils or geotechnical report in order to be approved and issued. Discretionary grading permits above this threshold may be processed concurrently with a building permit, and are processed administratively. Discretionary grading permits for grading of 8,000 cubic yards or more, or for grading of 1,000 cubic yards or more if the grading area is visible to the public from a designated scenic public road or visible to the public within a designated scenic area, are subject to approval of the Planning Commission and conditions of approval may be imposed. Standards for exemptions from a requirement for a discretionary grading permit are established by the County Code Grading Regulations. Deny any grading project where a potentially significant danger to soil or water resources has been identified and adequate mitigation measures cannot be undertaken.

6.35.3 Abatement of Grading and Drainage Problems

(LCP) Require, as a condition of development approval <u>for new development on a site</u>, or <u>for grading</u> <u>subject to a requirement for a discretionary grading permit</u>, <u>that-abatement of</u> any grading or drainage condition on the property which gives rise to existing or potential erosion problems <u>be abated</u>.

6.35.4 Erosion Control <u>Measures and/or Erosion Control</u> Plan Approval Required for Development

(LCP) Require that all grading permits processed as ministerial building permits include erosion control measures within the grading plan that meet county and professional standards. Require approval of an eErosion eControl pPlan in conjunction with a Winter Grading Permit for all proposed winter grading or other development that is subject to the Erosion Control regulations such as a Land Clearing Permitdevelopment, as specified in the Erosion Control and Grading ordinances. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.

6.35.5 Installation of Erosion Control Measures

Require the installation of <u>the required</u> erosion control <u>measures</u> plan for winter grading activities subject to consistent with the Erosion Control ordinance, by <u>either</u> October 15, or the advent of significant rain, or project completion, whichever occurs first <u>and depending upon</u> the nature of the project and the time that grading will occur. Prior to October 15, require adequate erosion control <u>measures</u> to be <u>implemented during grading activities</u> provided to prevent erosion from early storms, <u>and that the area of grading be free of loose and erodible</u> soils upon completion of grading activities. For permitted discretionary grading and 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.

6.35.6 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 through issuance of a Winter Grading Permit in compliance with the Grading and Erosion Control Ordinances. If such activities take place, measures to control erosion must be in place at the end of each day's work.

6.35.7 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, including revegetation to be established from seeds of native plant species and grasses that are retained within the topsoil and nearby undisturbed native plant species and grasses; native vegetation should be used in replanting disturbed areas to enhance long-term stability.

6.35.8 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 to, at a minimum, not exceed pre-development levels in compliance with applicable standards, 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.

6.35.9 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 <u>unless a Slope</u> <u>Exception Permit has been approved by the County in accordance with the Grading Ordinance</u> <u>and Policy 6.5.1 of the Safety Element; and</u> 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 by the applicant's qualified soils professional and approved by County staff 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_with erosion control fabric.

6.35.10 Land Clearing Permit

(LCP) Require an administrative discretionary ILand eClearing pPermit and an erosion control plan for clearing one-quarter or more acres, except when clearing is for existing agricultural uses. Clearing grazing lands of existing native grasses or other existing vegetation, for the purpose of establishing more intensive agriculture such as row crops, wine grapes, greenhouses or cannabis cultivation, requires a Land Clearing Permit. Require that any erosion control and land clearing activities be consistent with all General Plan and LCP Land Use Plan policies and implementing regulations of the County Code.

6.35.11 Sensitive Habitat Considerations for Land Clearing Permits

(LCP) Require a Land Clearing pPermit for any amount of 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 and implementing regulations of the County Code.

6.35.12 Cannabis Industry: Avoid Excessive Grading

(LCP) In order to protect public health and safety and prevent negative environmental impacts from grading and land disturbance, avoid excessive grading and disturbance associated with cannabis activities. This includes grading for access roads and other site improvements such as pads, structures, terracing and other infrastructure, including grading which may be required to meet fire code or other standards. Carefully evaluate grading that would significantly alter topography, visual character of an area or coastal resources, and avoid or minimize such alteration. Consider or favor alternate locations that would require less disturbance. Deny licenses and land use permits where necessary to implement this policy.

6.35.13 Cannabis Industry: Site Restoration

(LCP) Ensure that sites used for cannabis activities are restored to pre-graded condition, as appropriate, when cannabis activities are relocated, activity has ceased, or a cannabis license is no longer valid.

6.5.14 Ensure Property Owners Comply with Regulations to Prevent Runoff, Erosion and Pollution

Ensure that all property owners, whether or not they are involved with pursuing or implementing development or grading/building permits, are aware of County Code Title 7 provisions prohibiting activities that generate water and other pollution, such as that produced by improper conditions that allow accelerated erosion to affect waterways and habitats.

6.5.15 <u>Regular Grading Permits required for Specialized Agricultural Activities and Grading</u> on Slopes of Twenty Percent or More

Agricultural grading on less than twenty percent slopes, as well as vineyards and associated terracing (regardless of slope), does not require a regular grading permit and is instead subject to agricultural grading regulations. However, defined "specialized agricultural activities" such as greenhouses, indoor growing, aquaculture and any cannabis cultivation activities involving more than 100 cubic yards is not considered agricultural grading and requires a regular grading permit, and grading on twenty percent slopes or more for any crop other than vineyards also requires a regular grading permit.

Programs

(LCP) a. Establish an active erosion control education program for the general public, builders, and staff, in cooperation with the Resource Conservation District and the Soil Conservation Service. (Responsibility: <u>Environmental Health, Public Works and Planning Department</u>)

b. Enforce the comprehensive Erosion Control <u>and Runoff and Pollution Control</u> ordinances requiring control of existing erosion problems as well as the installation of erosion, sediment, and runoff control measures in new developments. (Responsibility: <u>Environmental Health</u>, <u>Public Works and Planning Department</u>, <u>Planning Commission</u>, <u>Board of Supervisors</u>)

- (LCP) c. <u>Pursue grants or other cost-sharing programs with outside and/or private or non-profit</u> funding to assist property owners with control of existing problems that are too large to be effectively controlled by the owner. (Responsibility: Planning Department)
- (LCP) d. Encourage use of Resource Conservation District programs to control existing erosion problems. (Responsibility: Planning Department)

FLOOD HAZARDS

Flooding and coastal storms present similar risks and are usually related types of hazards in the County of Santa Cruz. Coastal storms can cause increases in tidal elevations (called storm surge), wind speed, coastal erosion, and debris flows, as well as flooding. During a flood, excess water from rainfall or storm surge accumulates and overflows onto the banks, beaches, and adjacent floodplains. Floodplains are lowlands adjacent to rivers, lakes and oceans that are subject to recurring floods. Several factors determine the severity of floods, including rainfall intensity and duration, creek and storm drain system capacity, and the infiltration rate of the ground.

A flood occurs when a waterway receives a discharge greater than its conveyance capacity. Floods may result from intense rainfall, localized drainage problems, tsunamis or failure of flood control or water supply structures such as levees, dams or reservoirs. Floodwaters can carry large objects downstream with a force strong enough to destroy stationary structures such as homes and bridges, and can break utility lines. Floodwaters also saturate materials and earth resulting in the instability, collapse and destruction of structures as well as the loss of human life.

Floods usually occur in relation to precipitation. Flood severity is determined by the quantity and rate at which water enters the waterway, increasing volume and velocity of water flow. The rate of surface runoff, the major component to flood severity, is influenced by the topography of the region as well as the extent to which ground soil allows for infiltration in addition to the percent of impervious surfaces. It is important to note that a stream can crest long after the precipitation has stopped.

As storms arrive onto land from the Pacific and rise over the mountains and ridges that border the eastern boundaries of the County, the air associated with those storms cools and that cooling results in large amounts of precipitation. The topography provides fairly steep and well-defined watershed areas to funnel the falling rain into runoff tributaries. Periods of very heavy rainfall are common throughout fall and winter months and the two rivers in the County, along with several creeks and streams, can rise to flood stage in a short period of time. Settlement and habitation in the County, from the historic Ohlone Indian camps through the founding of the Santa Cruz Mission in 1791, and subsequent logging communities throughout the 1800's, tended to acknowledge the floodplain areas of the rivers and streams, building on the higher ground. However, as the population grew, particularly in the middle 1900's, low lying areas near virtually every waterway were encroached upon for housing, business, or agricultural development.

Climatologists point out that the period between 1920 and 1970, the years of most significant growth in Santa Cruz County, was a "dry cycle" for most of central California. Only one or two instances of serious winter weather in the 1950's highlighted the consequence of development in low-lying areas. Over time, land that had previously been avoided was developed for both commercial and residential use in the floodplains of the San Lorenzo and Pajaro Rivers, Soquel and Aptos Creeks, and along the beaches. As a consequence, substantial portions of the City of Santa Cruz and the City of Watsonville have been flooded, houses and businesses in the San Lorenzo Valley have been damaged or destroyed by floodwaters, and there have been losses along Soquel Creek, Aptos Creek, and in beach areas on multiple occasions over the past half-century.

Future projections of climate change impacts indicate that flood hazards will increase in coastal areas due to sea level rise, and in inland areas due to hydrologic changes in watersheds that may include more frequent and more intense rain events and consequent increases in flood hazards. Policies are updateupdated to provide additional flood protection to plan for future increases in flood hazards.

The policies of the Flood Hazards section require new development to be located outside of the flood hazard area, wherever possible, and to incorporate floodproofing measures as required by FEMA and local flood regulations in areas subject to flood hazards.

Objective 6.46 Flood Hazards

(LCP) To <u>reasonably</u> protect new, <u>replacement</u>, <u>reconstructed</u>, <u>modified</u>, and existing structures from flood hazards, <u>including sea level rise and coastal wave run-up hazards</u>, in order to minimize economic damages <u>within the expected lifespans of such structures</u>; and <u>to address</u> threats to public health and safety, and to prevent adverse impacts on floodplains, and maintain their beneficial function for flood water storage and transport and for biotic resource protection.

Policies

6.46.1 Geologic/<u>Flood/Coastal</u> Hazards Assessments and Reports, and Use of Best Available Science Required in Flood Hazard Areas and on Coastal Bluff Locations

(LCP) Require an assessment of geologic, coastal, and flood hazards assessment of for all development, and building/grading proposals within the County's flood hazard areas in order to identify flood hazards and development constraints. Recognize scientific uncertainty by using within technical reports and project designs a reasonably foreseeable projection of sea level rise within the acceptable range established by the best available science and statewide guidance. Any Hazards Assessment or Investigation Report must be accepted by the County Geologist in order to use its findings and/or incorporate its mitigations into a proposed development project.

6.46.2 Development Proposals Protected from Flood Hazard

(LCP) Approve only those grading applications and development proposals that are adequately protected from flood <u>and coastal</u> hazards and which do not add to flooding damage <u>or</u> potential <u>within applicable regulatory or expected lifespans of structures</u>. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures. <u>Require all developments to be sited and designed to avoid or minimize flood hazards for the expected lifespans of principal structures associated with the <u>development.</u></u>

6.46.3 Development on or Adjacent to Coastal Bluffs and Beaches

(LCP) Allow development in areas immediately adjacent to coastal bluffs and beaches only if a geologist determines that wave action, storm swell and tsunami inundation are not a hazard to the proposed development or that such hazard can be adequately mitigated and conditioned to protect life/safety, and within the applicable regulatory or expected lifespans of structures. Such determination shall be made by the County Geologist, or a registered certified engineering geologist may conduct this review at applicant's choice and expense.

6.46.4 Locate <u>New</u> Public Facilities Outside Flood Hazard Areas

(LCP) Require new utilities, critical facilities and non-essential public structures to be located outside the 100-year flood and coastal high hazard areas, unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life or property within or adjacent to the flood hazard area.floodplain or coastal inundation areas.

6.46.5 New Parcels in <u>Flood Hazard Areas</u>100-Year Floodplains

- (LCP) Allow the creation of new parcels, including those created by minor land division or subdivision, in the flood hazard areas 100-year floodplains only under the following circumstances:
 - (a) A full hydrologic report and any other appropriate technical report(<u>s</u>) must demonstrate that each proposed parcel contains at least one building site, including <u>as applicable</u> a septic system and leach field site, which is not subject to flood hazard <u>within the expected lifespan</u> <u>of the development</u>, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.
 - (b) <u>The final recorded map shall indicate A declaration indicating</u> the limits and elevations of the <u>flood hazard area asone hundred year floodplain</u> certified by a registered professional engineer or surveyor must be recorded with the County Recorder.
 - (c) Adequate drainage to reduce exposure to flood hazards must be provided.
 - (d) Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood. (Revised by Res. 81-99)

6.46.6 Density Calculations

(LCP) In all areas exclude the portion of the property designated within the <u>flood hazard area-100-year floodplain</u> from density calculations. Require clustering of allowable units to minimize flood hazards, as warranted and feasible given the location of the development.

6.46.7 New Construction to be Outside Flood Hazard Areas

(LCP) Restrict new construction to the area outside the <u>flood hazard areas100 year floodplain and</u> area subject to coastal inundation, if a buildable portion of the parcel exists outside such areas.

6.46.8 Elevation of Residential Structures

(LCP) Require elevation of the habitable portions of residential structures above the <u>100-yearbase</u> flood <u>levelelevation</u> where constructed within a <u>flood hazard area</u>. Require floodproofing or elevation of non-residential structures. Require that foundations do not cause floodwater displacement except where necessary for floodproofing.

6.6.9 Require Freeboard

(LCP) Freeboard is a factor of safety measured in feet above a base flood elevation or height for purposes of floodplain management. Freeboard is required to compensate for the many unknown factors that could contribute to flood heights or elevations greater than the height or elevation calculated for a selected size flood and floodway conditions, such as wave action, bridges, climate change, sea level rise, and the hydrological effect of urbanization of the watershed. For all structures located on parcels that are partially or wholly in Coastal A and V Zones, freeboard above the wave run-up elevation shall be based on a reasonably foreseeable projection of sea level rise within the acceptable range established by the best available science and statewide guidance. For habitable structures located in flood hazard areas outside of Coastal A and V Zones, freeboard, above the base flood elevation shall be determined by the Planning Director.

6.4<u>6.910</u> Septic Systems,-<u>and Leach Fields, and Fill Placement</u>

(LCP) Septic systems and leach fields to serve previously undeveloped parcels shall not be located within the <u>flood hazard areafloodway or the 100 year floodplain</u>. The capacity of existing systems in the <u>flood hazard areafloodway or floodplain</u> shall not be increased. Septic systems shall be <u>located and designed to avoid impairment or contamination in accordance with County</u> <u>Sewage Disposal Regulations</u>. Allow the placement of fill within the 100 year floodplain in the minimum amount necessary, not to exceed 50 cubic yards. Fill shall only be allowed if it can be demonstrated that the fill will not have cumulative adverse impacts on or off site. No fill is allowed in the floodway. (Revised by Res. 81-99)

6.6.11 Fill Placement

(LCP) Allow grading within the 100-year floodplain only if there is no net increase in fill, or if it can be demonstrated through analysis by a qualified engineer's report that is reviewed and accepted by the County, and by FEMA if applicable, that the grading will not have cumulative adverse impacts on or off site. No fill is allowed in the floodway.

6.46.1012 Flood Control Structures

(LCP) Allow flood control structures only to protect existing development (including agricultural operations) where no other alternative is feasible and where such protection is necessary for public safety. The structures must <u>be designed or must incorporate mitigations/conditions of approval to ensure that they do</u> not adversely affect sand supply, increase erosion or flooding on adjacent properties, or restrict stream flows below minimum levels necessary for the maintenance of fish and wildlife habitats.

6.6.13 Required Recordation on Deed of Notice of Geologic/Coastal Hazard, Acceptance of Risk, Liability Release, and Indemnification Prior to Permit Approval

(LCP) Prior to issuance of a building or grading permit for substantial improvement on sites subject to flood hazards, require the applicant to record on title/deed to the property a Notice of Geologic/Coastal Hazard, Acceptance of Risk, and Liability Release. The Notice shall be in a form approved by the County of Santa Cruz, and shall include, but not be limited to, the following acknowledgements and agreements, as applicable to the specific project:

Coastal Hazards (if applicable). That the site is subject to coastal hazards including but not limited to episodic and long-term shoreline retreat and coastal erosion, high seas, ocean waves, storm surge, tsunami, tidal scour, coastal flooding, liquefaction and the interaction of same; **Assume and Accept Risks**. To assume and accept the risks to the Applicant and the properties that are the subject of a building or grading permit of injury and damage from such

geologic/flood/coastal hazards in connection with the permitted development;

Waive Liability. To unconditionally waive any claim of damage or liability against the County of Santa Cruz and its officers, agents, and employees, for injury or damage to the permitted development, occupants of the site, or the general public in connection with the permitted development as related to geologic/coastal hazards;

Indemnification. To indemnify and hold harmless the County and its officers, agents, and employees, with respect to the County's approval of the development against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement to the extent arising from any injury or damage in connection with the permitted development;

Property Owner Responsible. That any adverse effects to property caused by the permitted development shall be fully the responsibility of the property owner. That cost of abatement and/or future removal of structures shall be the responsibility of the property owner;

Flood Insurance. If the structure is built so that it does not comply with an effective BFE data as may be shown on future final Flood Insurance Rate Maps (FIRM), acknowledging that the structure may be subject to a higher flood insurance rating, likely resulting in higher-risk annual flood insurance premium if the property owner purchases flood insurance (voluntarily, or as required by mortgage lenders). If a program is created in the future that removes the subject location from being eligible for FEMA flood insurance, agree not to protest and to abide with the terms of such a program.

Formation of GHAD or CSA. The property owner and / or any future heirs or assigns, by accepting this permit, acknowledge that a Geologic Hazard Abatement District (GHAD) or County Service Area (CSA) may be formed in the future by the County or other private entity to address geologic/flood/coastal hazards, and assessments may be proposed for the abatement of geologic hazards.

Public Funds. That public funds may not be available in the future to repair or continue to provide services to the site (e.g., maintenance of roadways or utilities) and under such circumstances the County does not guarantee essential services to the site will continue to be provided, especially to sites that have or will soon become public trust lands as the mean high tide line migrates inland due to sea-level rise;

Occupancy. That the occupancy of structures where sewage disposal or water systems are rendered inoperable may be prohibited;

Public Trust Lands. That the structure may eventually be located on public trust lands; and **Removal or Relocation.** In accordance with County regulations and Orders of the Chief Building Official, County Geologist, or Civil Engineer, that all development on the site, including shoreline and coastal bluff armoring, may be required to be removed or relocated and the site restored at the owners expense if it becomes unsafe, it is no longer located on private property, or if essential services to the site can no longer feasibly be maintained consistent with Policies 6.4.32 through 6.4.35.

Programs

a. Continue the Floodplain Management Program in accordance with the Federal Flood Insurance Program. (Responsibility: Planning Department)

b. Revise County floodplain maps as updated <u>adopted FEMA Maps are published</u>. information becomes available. (Responsibility: Planning Department, FEMA)

c. Comprehensively map the Geologic Hazards Combining District in order to place all existing regulations into one concise and consistent ordinance and to notify future buyers of the policies as they pertain to affected parcels. (Responsibility: Planning Commission, Planning Department)

d. Maintain culverts and drainage facilities on County roads and seek to eliminate log-jams and other obstructions from stream courses. (Responsibility: Public Works, <u>Environmental</u> <u>HealthPlanning</u> Department).

e. Continue to provide information to property owners located in <u>flood hazard</u> <u>areasfloodplains</u> and coastal <u>high hazardinundation</u> areas to encourage participation in the Federal Flood Insurance Program. (Responsibility: Planning Department).

f. Maintain the Automated Local Evaluation in Real Time (ALERT) Systems along <u>the San</u> <u>Lorenzo River</u>, Soquel Creek, <u>Pajaro River</u>, and Corralitos Creek. Implement a floodplain warning system for the San Lorenzo River, Aptos Creek and Valencia Creek. The Pajaro River Basin continues to be monitored by the National Weather Service. (Responsibility: <u>Planning</u> <u>Public Works</u> Department, County Office of Emergency Services)

g. <u>Prepare Maintain</u> detailed tsunami evacuation plans for coastal areas subject to the tsunami hazard. (Responsibility: County Office of Emergency Services)

(LCP) h. <u>Consider Incorporateing</u> more detailed information on tsunami inundation levels into the existing flood hazard program when this information is available. Existing development regulations would then apply to areas subject to this hazard. (Responsibility: County Office of Emergency Services, <u>Planning</u>)

i. Prepare and adopt an emergency warning system and detailed evacuation plans for areas subject to inundation in the event of failure of the Newell Creek Dam. (Responsibility: County Office of Emergency Services)

j. Work with relevant state and federal agencies to <u>continue to</u> monitor potential rise in sea level due to <u>climate changethe greenhouse effect</u> and <u>refine regulations and</u> develop long term programs to address the impacts. (Responsibility: Planning Department, Board of Supervisors)

k. Continue to work with the Joint Powers Authority to relocate the Santa Cruz County Emergency Operations Center from the basement of the County Government Center, where it is vulnerable to flooding. (Responsibility: Board of Supervisors, Office of Emergency Services, County Administrative Office.
WILDLAND AND URBAN FIRE HAZARDS

Introduction

A wildland fire may be defined as any unwanted fire involving outdoor vegetation. This may be perceived as only occurring in forests, rangelands or agricultural fields, but it might also occur in vacant lots, highway medians, parks, golf courses and rural residential areas. The term Wildland Urban Interface (WUI) describes many of these areas. The nature of wildland fire has changed with incidents in the WUI. The potential for both life and property losses in the WUI is exponentially higher than non-populated wildlands. In addition, human influence has greatly increased the number and variety of potential sources of ignition. Wildland fires are influenced by three factors: fuel, weather and topography. Wildfire spread depends on the type of fuel involved (grass, brush and trees). Weather influences wildland fire behavior with factors such as wind, relative humidity, temperature, fuel moisture and possibly lightning. Several of these factors can modify the rate the fire will burn. Topography is the biggest influence on fire severity. While normal weather conditions in the Santa Cruz Mountains can be categorized as cold and damp with extensive marine influence (fog), several times each year conditions are created where fuel moisture levels have been measured below 5% with temperatures above 900, and north winds greater than 45 mph.

Large areas of the County have been mapped as Critical Wildfire Hazard Areas due to accumulations of wildfire prone vegetation, steep and dry slopes and the presence of structures vulnerable to wildland fires. These areas are generally situated in the steeper higher elevations of the county. Most of these areas are along the border of Santa Clara County or in the Coastal ridges between Highway 9 and Highway 1. While the map of Critical Fire Hazard Areas remains relevant for areas of increased wildfire risk, it should be noted that wildland fires may occur anywhere within the County.

The potential magnitude or severity of future fires could be predicted from experience gained from the recent fires of 2008/2009. In those fires, spotting exceeding 1 mile, torching of conifers, flame lengths exceeding 100', area ignition and sheeting were all observed. In 2008, over 75 structures were destroyed on 3 fires alone. Similar fuels (Manzanita/Knobcone, Eucalyptus, chaparral, and mixed conifer forestland), topography and weather conditions are expected to be encountered in future fires creating a repeat of extreme fire behavior exhibited in recent large local fires.

Santa Cruz County is ranked 9th among 413 western state counties for percentage of homes along the WUI and 14th in California for fire risk. During the preparation of the countywide Community Wildfire Protection Plan (CWPP), numerous assets at risk were identified. These include thousands of residences, several schools including a State University, several youth camps, and numerous commercial facilities. There are 5 local public water systems with extensive infrastructure situated within high hazard areas. Three state highways and 3 major power transmission Rights of Way cross through vulnerable areas. Due to topography and limited access, both the protection plus potential reconstruction of these assets will be hampered.

The impact of wildfire on a community is far-reaching. The most significant impacts would be loss of life, environmental damage and loss of property. Air quality is also a major issue, which can force the closure of schools and businesses as well as limit human activity. Damage to infrastructure such as culverts, roads and bridges can be difficult to locate and repair in a timely manner. During the rainy season, burned-over areas are subject to mudslides and debris torrents which can be exacerbated by infrastructure damage. Sedimentation due to winter rains can destroy fish habitats, which can have a catastrophic effect on the ecosystem.

A fire threat will always exist in the WUI. There will always be flammable vegetation, structures and human activities creating a situation where it is not "if" but "when" the next large fire occurs in the county.

This Wildland and Urban Fire Hazards section addresses natural fire hazards as well as fire hazards from human activity and increased hazard levels projected to occur as a result of climate change. In compliance with State law, this section establishes road standards and development requirements for fire prevention and response.

Fire History

Prior to about 1950 information on wildfire in Santa Cruz County was limited to verbal history and newspaper accounts. After the Division of Forestry began gathering data in the 1950's, significant wildfires in Santa Cruz and adjacent counties were documented in the early 1960's and again in the 1980's (Lexington fire). The devastating wildfires that occurred in Santa Cruz County in 2008 (Summit, Martin and Trabing fires) and 2009 (Lockheed and Loma fires) burned a combined area of nearly 14,000 acres and numerous homes and structures. What makes wildfire different today as compared to the early part of the the-last century is the number of people living in the rural area, or the Wildland Urban Interface (WUI). According to the United States Census, the population of Santa Cruz County has increased by nearly 200,000 people since the middle of the last century, from 66,534 in 1950 to 262,340 in 2010. Much of the increase occurred in urban areas, but rural areas have experienced significant population increases, as well. This has caused the fire agencies to change approaches to fire hazards from focusing primarily on the fire to dealing with increasing demands for protecting roads, structures, and people. Because there are not enough firefighters or fire apparatus to protect each and every home during a wildfire, the community and government must take greater responsibility for preventative measures to make homes, neighborhoods, and the community more defensible from wildfire. (Source: San Mateo - Santa Cruz Unit Strategic Fire Plan)

Fire Plans

The San Mateo - Santa Cruz Unit Strategic Fire Plan identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce losses within the Unit. There is a history of collaborative efforts between fire agencies and communities including Las Cumbres, Olive Springs and Bonny Doon. Efforts such as these have resulted in numerous fuel reduction projects and community education. More recently, the Unit has seen an unprecedented level of pre-fire "grass roots" organization, including the formation of the Soquel, South Skyline, and Bonny Doon Fire Safe Councils. Also, with the assistance of the Resource Conservation District (RCD) through a grant from the United States Fish and Wildlife Service, a Community Wildfire Protection Plan (CWPP) was developed with input from stakeholders throughout Santa Cruz County. In 2010, the Board of Supervisors for Santa Cruz County adopted the 2010 San Mateo County – Santa Cruz County CWPP. The Unit Strategic Fire Plan is meant to work in collaboration with the CWPP.

The CWPP attempts to identify fire hazards, as seen across the landscape, and provide strategies to mitigate wildfire risk and restore healthier, more resilient ecosystems while protecting life and property. A CWPP also serves as a tool for the accrual of grant funding to aid in the implementation of wildfire prevention projects. The CWPP is a guidance document that recommends both general and specific projects in priority fuel reduction areas, and provides recommendations to reduce the ignitability of structures. Local projects are subject to appropriate permitting and environmental review processes. The CWPP was developed collaboratively by CAL FIRE, Resource Conservation District of Santa Cruz and San Mateo Counties, the United State Fish and Wildlife Service, other agencies, and members of the community.

<u>The San Mateo – Santa Cruz Unit Strategic Fire Plan and the CWPP address areas with inadequate access</u> and evacuation routes and identify risk to life and property from wildland fire and provide information on firefighter safety, community evacuation and recommended actions by first responders. The plans also Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

State and Local Responsibility Areas

Wildland fire protection in California is the responsibility of the State, local government, or the federal government depending on location. The State Responsibility Area (SRA) is the area of the state where financial responsibility for the prevention and suppression of wildfires is primarily the responsibility of the state. Of course, the partnership of private property owners is essential for implementing fire prevention strategies. In general, SRA includes forest-covered lands, whether of commercial value or not, or brush or grass-covered lands. SRA does not include lands within city boundaries or in federal ownership. Fire protection in SRA is typically provided by CAL FIRE. However, in Santa Cruz County, autonomous fire protection districts provide fire protection in large parts of the SRA. Local responsibility areas (LRA) include incorporated cities and other urbanized areas, and cultivated agriculture lands. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, and by CAL FIRE under contract to local government.

CAL FIRE is the County Fire Department for the unincorporated areas of Santa Cruz County that are not included in an autonomous fire protection district. In addition, the County contracts with CAL FIRE to provide fire protection for Pajaro Dunes, and to provide administrative and staffing needs for the Pajaro Valley Fire Protection District.

Because the majority of wildland fires occur in the SRA, there is potential for many different agencies in the county to be affected. In many cases, fires occur in Mutual Threat Zones (MTZ's) or in areas near adjoining jurisdictions and also in the LRAs. It is through mutual relationships with local government agencies where initial attack resources become larger and more effective. The following Santa Cruz County local government agencies are typically available and involved in suppressing wildland fires:

Aptos/La Selva Fire Protection District Scotts Valley Fire Protection District Boulder Creek Fire Protection District Central Fire Protection District of Santa Cruz County Felton Fire Protection District Santa Cruz City Fire Department Watsonville Fire Department Zayante Fire Protection District Ben Lomond Fire Protection District Branciforte Fire Protection District Pajaro Valley Fire Protection District

A person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining SRAs are required by Public Resource Code (PRC) 4291 to maintain defensible space around structures on their property. Defensible space means the area adjacent to a structure or dwelling where wildfire prevention or protection practices are implemented to provide defense from an approaching wildfire or to minimize the spread of a structure fire to wildlands or surrounding areas. Responsibility for maintaining defensible space is limited to 100 feet from structure(s) or to the property line, whichever is closer. Defensible space inspections are completed by inspectors from CAL FIRE, engine companies, and fire protection districts (Central and Aptos/La Selva). Educational materials are distributed to residents during inspections, through direct mailing, and at public events including a brief pamphlet focusing on defensible space and a document called "Living With Fire in Santa Cruz County".

The Santa Cruz County Code requires new projects and construction to meet fire safety standards consistent with State law (PRC 4290). Chapter 7.92 of the County Code establishes requirements for fuel modification and emergency water supply, as well as minimum fire safe driveway and road standards. New structures built in Santa Cruz County must also comply with fire safety building regulations. These building codes

require the use of ignition-resistant building materials in higher risk areas and establish design standards to improve the ability of a building to survive a wildfire.

CAL FIRE has mapped areas of very high fire hazard within LRA and SRA. Mapping of the areas, referred to as Very High Fire Hazard Severity Zones (VHFHSZ), is based on relevant factors such as fuels, terrain, and weather. The Fire Code of Santa Cruz County (County Code Chapter 7.92) includes provisions to improve the ignition resistance of buildings, especially from firebrands. The updated fire hazard severity zones will be used by the Building Official to determine appropriate construction materials for new buildings in the Wildland-Urban Interface. In addition, pursuant to State law, the updated zones will also be used by property owners to comply with natural hazards disclosure requirements at time of the property sale, and with the 100 foot defensible space clearance requirements. The County's GIS mapping information system has been updated to incorporate the FHSZ maps for Santa Cruz County. These maps complement the existing General Plan Resources and Constraints maps designating Critical Fire Hazard Areas.

Objective 6.57 Fire Hazards

To protect the public from the hazards of fire through citizen awareness, prevention measures for mitigating the risks of fire, responsible fire protection planning, and built-in systems for fire detection and suppression.

Policies

6.7.1 Defensible Space

In the State Responsibility Area and Very High Fire Hazard Severity Zones within the Local Responsibility Area maintain defensible space around structures in compliance with State law, County Fire Code, and local fire district ordinances. The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. This does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary in the vicinity of the structure, with the most intense management being immediately around the structure. Consistent with fuels management objectives, steps should be taken to minimize erosion. For the purposes of this policy, "fuel" means any combustible material, including petroleum-based products and wildland fuels.

6.7.2 Defensible Space in Environmental Resource Areas

Fuel reduction activities that remove or dispose of vegetation are required to comply with all federal, state or local environmental protection laws, including, but not limited to, laws protecting threatened and endangered species, sensitive habitats, water quality, air quality, and cultural/archeological resources, and must obtain any and all required permits.

6.7.3 Exception in Sensitive Habitat for Defensible Space

Establishment and maintenance of defensible space in order to comply with state law may qualify for an exception to the Sensitive Habitat Protection Ordinance if the following findings can be made: 1) That adequate measures will be taken to ensure consistency with the purpose of Chapter 16.32 to minimize the disturbance of sensitive habitats; and 2) It can be

demonstrated by biotic assessment, biotic report, or other technical information that the exception is necessary to protect public health, safety, and welfare.

6.7.45.1 Access Standards

Require all new structures, including additions and Accessory Dwelling Units of more than 500 <u>new</u> square feet (not including Conversion ADUs), added to single-family dwellings on existing parcels of record, to provide and maintain an adequate <u>driveway or</u> road for fire protection in conformance with the <u>followingadopted</u> standards <u>of State law, County Fire Code</u>, and local fire district ordinances.

- (a) Access roads shall be a minimum of 18 feet wide for all access roads or driveways serving more than two habitable structures, and 12 feet for an access road or driveway serving two or fewer habitable structures. Where it is environmentally inadvisable to meet these criteria (due to excessive grading, tree removal or other environmental impacts), a 12 foot wide all-weather surface access road with 12 foot wide by 35 foot long turnouts located approximately every 500 feet may be provided with the approval of the Fire Chief. Exceptions: Title 19 of the California Administrative Code, requires that access roads from every state governed building to a public street shall be all-weather hard surface (suitable for use by fire apparatus) roadway not less than 20 feet in width. Such roadway shall be unobstructed and maintained only as access to the public street.
- (b) Obstruction of the road width, as required above, including the parking of vehicles, shall be prohibited, as required in the Uniform Fire Code.
- (c) The access road surface shall be "all weather", which means a minimum of six inches of compacted aggregate base rock, Class 2 or equivalent, certified by a licensed engineer to 95 percent compaction and shall be maintained. Where the grade of the access road exceeds 15 percent, the base rock shall be overlain by 2 inches of asphaltic concrete, Type B or equivalent, and shall be maintained.
- (d) The maximum grade of the access road shall not exceed 20 percent, with grades greater than 15 percent not permitted for distances of more than 200 feet at a time.
- (e) The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts.
- (f) Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet vertical clearance.
- (g) An access road or driveway shall not end farther than 150 feet from any portion of a structure.
- (h) A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length.
- (i) No roadway shall have an inside turning radius of less than 50 feet. Roadways with a radius curvature of 50 to 100 feet shall require an additional 4 feet of road width. Roadways with radius curvatures of 100 to 200 feet shall require an additional 2 feet of road width.
- (j) Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures.
- (k) Bridges shall be as wide as the road being serviced, meet a minimum load bearing capacity of 25 tons, and have guard rails. Guard rails shall not reduce the required minimum road width. Width requirements may be modified only with written approval from the Fire Chief. Bridge capacity shall be posted and shall be certified every five years by a licensed engineer. For bridges served by 12 foot access roads, approved turnouts shall be provided at each bridge approach.

- (1) All private access roads, driveways, turnarounds and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times.
- (m) To ensure maintenance of private access roads, driveways, turnarounds and bridges, the owner(s) of parcels where new development is proposed shall participate in an existing road maintenance group. For those without existing maintenance agreements, the formation of such an agreement shall be required.
- (n) All access road and bridge improvements required under this section shall be made prior to permit approval, or as a condition of permit approval.
- (o) Access for any new dwelling unit or other structure used for human occupancy, including a single-family dwelling on an existing parcel of record, shall be in the duly recorded form of a deeded access or an access recognized by court order.

Diagrammatic representations of access standards are available at the Santa Cruz County Planning Department and local fire agencies.

6.7.55.2 Exceptions to Access Road Standards

Exceptions to these standards and requirements that apply to all new structures (except Conversion Accessory Dwelling Units or ADUs 500 square feet or less), including additions or ADUs of more than 500 new square feet to single-family dwellings on existing parcels of record, may be granted at the discretion of the Ffire code official Chief for single-family dwellings on existing parcels of record as follows:

- (a) When the existing access road is acceptable to the Fire Department having jurisdiction.
- (b) In addition, any of the following mitigation methods may be required <u>prior to issuance of</u> <u>a building permit and/or as a condition of discretionary development approval</u>:
 - (1) Participation in an existing or formation of a new road maintenance group or association.
 - (2) Completion of certain road improvements such as fill pot holes, resurface access road, provide turnouts, cut back brush, etc. are made, as determined by the fire officials, and provided that the fire department determines that adequate fire protection can still be provided.
 - (3) Provision of approved fire protection systems as determined by the Ffire code officialChief.

(c) The level of road improvement required shall bear a reasonable relationship to the magnitude of development proposed.

6.7.65.3 Conditions <u>and Requirements</u> for <u>Project</u> Approval <u>of Discretionary Development</u> <u>Permits and/or Ministerial Building Permits</u>

Impose requirements on new development through the building permit review process, and/or cCondition approval of all discretionary development permits for new structures and additions, including for additions of larger than 500 square feet or more, and to new single-family dwellings on existing parcels of record, to meet and maintain at all times the following fire protection standards in conformance with adopted standards of State law, County Fire Code, and local fire district ordinances.

- (a) Address numbers shall be posted on the property so as to be clearly visible from the access road. Where visibility cannot be provided, a post or sign bearing the numbers shall be set adjacent to the driveway or access road to the property and shall have a contrasting background. Numbers shall be posted when construction begins.
- (b) Provide adequate water availability. This may be provided from an approved system within 500 feet of a structure, or by an individual water storage facility (water tank, swimming pool, etc.) on the property itself. An approved water supply capable of

supplying required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction in accordance with the Fire Code of Santa Cruz County. The fire department shall determine the adequacy and location of individual water storage to be provided. Built in fire protection features (i.e., sprinkler systems) may allow for some exemptions of other fire protection standards when incorporated into the project.

- (c) Maintain all around structures a clearance of not less than 30 feet or to the property line (whichever is a shorter distance) of all flammable vegetation or other combustible materials; or for a greater distance as may be prescribed by the fire department.
- (d) Provide and maintain a spark arrester constructed with heavy one half inch wire mesh screens on all chimneys.
- (e) Automatic smoke detection devices shall be installed and maintained in accordance with the California Building Code and local Fire Department regulations. Sprinkler and fire alarm systems, when installed, shall meet the requirements of the local Fire Department.
- (f) Provide adequate disposal of refuse. All development outside refuse collection boundaries shall be required to include a suitable plan for the disposal of flammable refuse. Refuse disposal shall be in accordance with state, County or local plans or ordinances. Where practical, refuse disposal should be by methods other than open burning.
- (g) Require fire retardant roofs on all projects, as specified in the County Fire Code and the Uniform Fire Code. Exterior walls constructed of fire resistant materials are recommended, but are not necessarily required.

6.7.75.4 Fire Protection Standards for Land Divisions Outside the Urban Services Line

Require all new minor land divisions and subdivisions outside the Urban Services Line to meet the following fire protection standards:

- (a) If a proposed building site is located on a dead-end access road and is more than one-half mile from the nearest intersection with a through road, then secondary access must be provided. (See section 6.8.85.5, Standards for Dead-End Roads.). If building site is located within a 5 minute response time from the fire department and within 500 feet of a county maintained road, then secondary access will not be required. Secondary access is defined as a 12 foot wide all-weather surface roadway with a recorded right of access and maintenance agreement. The secondary access may be provided with a gate or other barrier on the approval of the Fire Chieffire code official. If these conditions cannot be met, development may take place only at the lowest density allowed for the area by the General Plan and LCP Land Use Plan.
- (b) All primary and secondary roads shall meet the requirements of this section and shall be maintained through a County Service Area or a joint road maintenance agreement with all property owners of record.
- (c) Location within the response time of 20 minutes from the fire station which is responsible for serving the parcel. Response time is defined as the length of time between the dispatch of ground fire vehicles from the fire station to their arrival at the location of the proposed structure(s). In areas exceeding 20 minutes response time, development may take place only at the lowest density allowed by the General Plan and LCP Land Use Plan.
- (d) Locate the building site outside any designated Critical Fire Hazard Area and Very High <u>Fire Hazard Severity Zone (VHFHSZ)</u>. If building sites cannot be located outside a Critical Fire Hazard Area and VHFHSZ, the following criteria shall be met:
 - (1) If the building site is served by a through access road or by secondary access, development may be approved only at the lowest density allowed by the General Plan and LCP Land Use Plan.

(2) If the parcel is on a dead-end access road and cannot develop secondary access, development may consist of only one single-family residence on the existing parcel of record; all land divisions must be denied.

(e) The project can meet the vegetation modification requirements called for by the Fire Chieffire code official, based upon an on-site inspection, including appropriate erosion control facilities. The homeowner must maintain this vegetation modification in order to assure long-term protection. Land clearing of one-quarter acre or more, or other vegetation modification within a Sensitive Habitat Area, shall be in conformance with the Erosion Control Ordinance and/or Sensitive Habitats Ordinance of the Santa Cruz County Code, including obtaining a Land Clearing Permit and/or Biotic Permit if required, and state timberland conversion regulations if applicable.which exceeds one acre, whether planned to take place prior to or after development approval, must submit an erosion control plan for the review and approval of the County Watershed Management Section. Vegetation modification plans shall not be allowed which introduce non-native invasive plant species, and wherever possible should utilize native fire-resistant vegetation.

(f) The project can meet <u>and maintain</u> the standards established by the <u>Fire Chieffire code</u> <u>official</u> for water supply and/or water storage for fire-fighting purposes.

(g) Mitigable Critical Fire Hazard Areas. If the project lies in a Critical Fire Hazard Area and within the area bordered by the following access roads: From Day Valley Road to Freedom Blvd., to Hames Road, to Browns Valley Road to Hazel Dell Road, to Gaffey Road, down Highway 152 to Carlton Road, Carlton Road to Highway 129 and ending at Murphy Road,* and the project can meet the water storage standards, then the development may proceed at a density as determined by the Rural Density Matrix. Mitigation was based upon the following criteria:

- (1) extent of the critical fire hazard vegetation;
- (2) distance to adjacent fire hazard areas;
- (3) accessibility for fire-fighting equipment;
- (4) air moisture content;
- (5) historic record of wildland fires;
- (6) slope and terrain.

*This area has been mapped to denote areas where the fire hazard is of lesser concern, if mitigated by vegetation modification and water supply/storage supplementation. These maps are available at Santa Cruz County Planning Department, or at the California Department of Forestry and Fire Protection headquarters for review.

6.7.85.5 Standards for New Dead End Roads

Prohibit newly constructed dead-end roads without secondary access serving more than one parcel in new minor land divisions or subdivisions which exceed the following distances from an adequate through road unless approved by the applicable fire protection agency, the Department of Public Works, and by the Planning Commission; in no case shall a new dead-end road exceed $\frac{1}{2}$ mile in length.

Urban & Suburban General Plan and LCP Land Use Plan designation	500'
Rural General Plan and LCP Land Use Plan designation	1000'
Mountain General Plan and LCP Land Use Plan designation	1500'

The standard for new subdivisions of 5 or more lots shall not exceed 500' from a through road unless <u>acceptable to and</u> recommended by the applicable fire protection agencies and the Department of Public Works, and approved by the Planning Commission.

6.7.95.6 Maintenance for Private Roads

Require the creation or expansion of County Service Areas (to provide road maintenance), road maintenance agreements or associations (deemed adequate to provide appropriate road maintenance) for all new private roads, and for land divisions in rural areas served by private roads.

6.7.105.7 Certification of Adequate Fire Protection Prior to Permit Approval

(LCP) Require all land divisions, multi-unit residential complexes, commercial and industrial complexes, public facilities and critical utilities to obtain certification from the appropriate fire protection agency that adequate fire protection is available, prior to permit approval.

6.7.115.8 Public Facilities Within Critical Fire Hazard Areas

(LCP) Discourage location of public facilities and critical utilities in Critical Fire Hazard Areas<u>and</u> <u>Very High Fire Hazard Severity Zones</u>. When unavoidable, special precautions shall be taken to ensure the safety and uninterrupted operation of these facilities.

6.7.125.9 Consistency With Adopted Codes Required for New Development

(LCP) Require all new development to be consistent with the <u>Uniform California</u> Fire Code, California Building Code, and other adopted County and local fire agency ordinances.

6.7.135.10 Land Divisions Access Requirements

- (LCP) (a) Require all private roads used for either primary or secondary access to be maintained through road maintenance agreements and/or associations or through a County Service Area.
 - (b) Prohibit land divisions where any new building site is located more than ¹/₂ mile from a through road unless secondary access is provided.
 - (c) In the North Coast and Bonny Doon planning areas, prohibit new land divisions where any new building site is located more than ¹/₂ mile from a publicly maintained road even where secondary access is provided.

6.7.145.11 Fire Protection Standards for Land Divisions Inside the Urban Services Line

Require all new land divisions within the Urban Services Line to be consistent with the California Fire Code, California Building Code, and other adopted County and local fire agency ordinances.

6.7.15 Local Ordinances

Adopt and have certified by the Board of Forestry and Fire Protection local ordinances which meet or exceed the minimum statewide standards in the SRA Fire Safe Regulations.

Programs

a. Encourage fire protection agencies to enter into first alarm response and initiate contractual agreements in order to assure that the fire unit nearest the fire will respond on first alarm to a fire emergency. (Responsibility: County Fire Marshal, Board of Supervisors, local fire protection agencies)

b. Newly constructed or approved public and private roads and streets must be identified by a name or number through a consistent countywide system, which provides for sequenced or patterned numbers and/or non-duplicating naming within the County. All signs shall be mounted and oriented in a uniform manner. This <u>sectionprogram</u> does not require any entity to rename or renumber existing roads or streets, <u>unless a threshold established by the County</u>

<u>Code has been exceeded</u>. Nor shall a <u>A</u> roadway providing access only to a single commercial or industrial occupancy <u>shall not</u> require naming or numbering. (Responsibility: <u>Office of Emergency Services, Planning Department, County Fire Marshal</u>)

c. Define levels of fire protection services using criteria relating to distance from fire stations, density of development and magnitude of fire risk. (Responsibility: Board of Supervisors, local fire protection agencies)

d. Develop <u>firefuel</u> break standards for new development to separate communities or clusters of structures from native vegetation. (Responsibility: County Fire Marshal, Board of Supervisors, State Department of Forestry, and local fire protection agencies)

e. Develop an overall <u>firefuel</u> break plan in Critical Fire Hazard Areas and implement the plan in conjunction with <u>CAL FIRE</u>the Department of Forestry and fire protection agencies. (Responsibility: <u>California Department of Forestry and Fire Protection CAL FIRE</u>, <u>County Fire Marshal</u>, local fire protection agencies, Office of Emergency Services)

f. Provide, to the maximum extent feasible, two emergency access routes for all communities, with at least one developed to County standards. (Responsibility: Board of Supervisors, Planning Department, Public Works)

g. Upgrade water distribution systems where deficient to ensure adequate peak load water supply requirements for fire protection within the service areas of recognized water purveyors. Priority shall be given to areas within the Urban Services Line. (Responsibility: Water Purveyors, County Fire Department, local fire protection agencies, County Office of Emergency Services)

h. Give priority to areas within the Urban Services Line when planning expansion of fire protection facilities and equipment. (Responsibility: fire protection agencies, Board of Supervisors)

i. <u>Encourage all fire protection agencies to participate in the development and</u> <u>implementation of Maintain</u> a joint communications center. (Responsibility: Board of Supervisors, Communications Director, County Fire Department, California Department of Forestry and Fire Protection, local fire protection agencies, County Office of Emergency Services)

j. Update a Periodically review the <u>"Santa Cruz County Master Fire Plan" and the "Santa Cruz County Community Wildfire Protection Plan"</u>, and update the plans as necessary. Fire Protection Improvement Program and Long Range Plan for Santa Cruz County." (Responsibility: Board of Supervisors, <u>CAL FIRE</u>, Resource Conservation District, County Fire Marshal, local fire protection agencies, County Office of Emergency Services)

k. Encourage-the State Department of Forestry <u>CAL FIRE</u> to provide land and air fire-fighting facilities and equipment adequate to meet estimated peak fire demands. (Responsibility: Board of Supervisors, County Fire Marshal)

1. Encourage fire protection agencies to establish educational fire prevention programs in order to have the public recognize <u>theirits</u> responsibility in preventing fires. (Responsibility: California Department of Forestry and Fire Protection, County Fire Marshal, local fire protection agencies, County Office of Emergency Services)

m. Review and update on a periodic basis the countywide Disaster Contingency Emergency Management Plan. Include the appropriate County agencies in all phases of disaster contingency planning. (Responsibility: Board of Supervisors, Office of Emergency Services)

(LCP) n. Update the Critical Fire Hazard Map and fire hazard severity zone maps as new sitespecific information becomes available which more precisely defines these areas. (Responsibility: Planning Department, County Fire Department, <u>CAL FIRECalifornia</u> Department of Forestry and Fire Protection, local fire protection agencies)

o. Identify high fire risk areas fire hazard severity zones within the Urban Services Line and rural areas with topography, hazardous fuels, structures, density similar to those found in the Oakland Hills fire of 1991. (Responsibility: Planning Department, County Fire Marshal, local fire protection agencies, Board of Supervisors)

(LCP) p. In cooperation with fire protection agencies, develop coordinated action programs to reduce the hazard to existing development in critical fire hazard areas <u>and fire hazard severity</u> <u>zones</u> such as the following:

(1) Assessment districts to finance road improvements and secondary access; water storage, distribution and hydrant facilities; purchase of pumper trucks and/or vegetation clearance and firefuel break construction.

(2) Fire hazard inspection and code enforcement.

(3) Public education programs on fire prevention.

(Responsibility: Planning Department, County Fire Marshal, local fire protection agencies, Board of Supervisors)

a.q. Amend and update the Santa Cruz County General Plan Fire Safety Element Wildland and Urban Fire Hazards section as needed, to reflect fire code amendments. (Responsibility: Board of Supervisors, County Fire Marshal, local fire protection agencies, Planning Department)

r. Encourage fire protection agencies to maintain ongoing emergency service trainings

AIR QUALITY

This new section of the Safety Element shifts and amends policies from the Conservation and Open Space Element of the county's 1994 General Plan. This section also overlaps with many policies and programs found in the Circulation Element. Location of the Air Quality section within the Public Safety Element reflects importance of air quality and greenhouse gas emissions as related to climate change, as well as public health and safety impacts on the population caused by air pollution.

Atmospheric pollution is determined by the amount of pollutant emitted and the atmosphere's ability to transport and dilute it. In Santa Cruz County, coastal mountains exert strong influence on atmospheric circulation, creating a breezy coastal environment with generally good ambient air quality. However, in the San Lorenzo Valley and certain small inland valley areas, air quality can be poor at times due to wood smoke generated by fireplaces used for heating and other purposes. Also, localized sources can cause odors or create dust or other air quality problems. Fuels and solvents used for vehicles, space and water heating, industrial processes, and commercial uses; and incineration processes, fires, and pesticides are typical pollutant sources. Autos are the largest source of pollutants.

Air Quality Management Plans (AQMPs) are developed for regions throughout the state to meet the air quality requirements and standards for specific pollutants, including ozone, nitrogen oxide and dioxide, sulfur dioxide, carbon monoxide, and suspended particles, as outlined in the federal and State Clean Air Acts. The North Central Coast Air Basin (Monterey, Santa Cruz, and San Benito counties) has been designated as a moderate, transitional non-attainment area because it exceeds air quality standards for ozone and inhaled particulate matter. The region's AQMP prescribes methods for attaining ozone and particulate matter standards and for maintaining air quality in the region.

Attainment of air quality standards is achieved through measures to control emissions from stationary sources (factories, commercial activities, etc.) and mobile sources (cars and trucks). The County of Santa Cruz offers low-cost permits for change-outs of woodstoves and fireplaces from wood-burning to gas. Transportation control measures (TCMs) and land use programs also contribute to improving air quality. In addition to attaining air quality standards for ozone and particulate matter, the Monterey Bay Unified Air Pollution Control District, the County, and regional and local agencies are concerned with reducing stratospheric ozone depletion and regulating the emission of chlorofluorocarbons (CFCs), carbon dioxide, and other "greenhouse gases" (GHGs).

GOAL: Take actions consistent with the region's air quality management plan, and focus special attention on assisting with efforts to reduce wood smoke pollution in San Lorenzo Valley

Objective 6.8-1

To improve the air quality of Santa Cruz County by meeting or exceeding state and federal ambient air quality standards, protect County residents from the health hazards of air pollution, protect agriculture from air pollution induced crop losses and prevent degradation of the scenic character of the area.

Objective 6.8-2

Address localized air quality issues, including indoor air quality.

Objective 6.8-3

Implement incentive programs to assist homeowners with replacement of wood-burning fireplaces and woodstoves with gas-fired appliances.

Policies

6.8.1 <u>New Development</u>

Require future development projects to implement applicable Monterey Bay Unified Air Pollution Control District (MBUAPCD) control measures and/ or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines." Cf. M3.3.4.

6.8.2 <u>Non-Attainment Pollutants</u>

<u>Prohibit any net increase in emissions of non-attainment pollutants or their precursors above the thresholds established by the MBUAPCD from new or modified stationary sources.</u>

6.8.3 <u>Air Quality Mitigations</u>

<u>Require land use projects generating high levels of air pollutants (i.e., manufacturing facilities, hazardous waste handling operations) to incorporate air quality mitigations in their design.</u>

6.8.4(a) Offshore Oil Development

Prohibit development, construction, or installation of any onshore facility necessary for or intended to support offshore oil or gas exploration and development unless a General Plan and Local Coastal Program amendment is approved by the voters of the County which allows such development. (See policies in sections 5.3 and 5.4.) *Revised by Res.* 142-2014

6.8.4(b) Onshore Oil and Gas Development

Prohibit development, construction, installation, or use of any facility necessary for or intended to support oil or gas exploration or development from any surface location within the unincorporated area of the County of Santa Cruz, whether the subsurface portion(s) of such facility is within or outside the unincorporated area of the County of Santa Cruz, and prohibit development, construction, installation or use of any facility necessary for or intended to support oil or gas exploration or development from surface locations outside the unincorporated area of the County of Santa Cruz, and prohibit development, construction, installation or use of any facility necessary for or intended to support oil or gas exploration or development from surface locations outside the unincorporated area of the County of Santa Cruz which may begin, pass through or terminate below the surface of land located within the unincorporated area of the County of Santa Cruz. This prohibition applies to facilities directly involved in oil and gas exploration, production, and refinement such as wells, pipelines and pumps. *Revised by Res.* 142-2014

6.8.5 Sensitive Land Uses

Locate air pollution-sensitive land uses away from major sources of air pollution or require mitigation measures to protect residential and sensitive land uses from freeways, arterials, point source polluters, and hazardous material locations.

6.8.6 Plan for Transit Use

Encourage commercial development and higher density residential development to be located in designated centers or other areas that can be easily served by transit.

6.8.7 Alternatives to the Automobile

Emphasize transit, bicycles and pedestrian modes of transportation rather than automobiles, as well as telecommuting and alternative work schedules.

6.8.8 Encouraging Landscaping

Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.

5.18.9 Greenhouse Gas Reduction

Support and implement local actions and County, State and federal plans and legislation promoting the reduced emission of carbon dioxide and other greenhouse gases, and actions to achieve reduction goals and standards.

6.8.10 Elimination of Ozone Depleting Chemicals

Support and implement local actions to achieve the most rapid possible international, national, state, and local elimination of the emission of ozone-depleting chemicals.

Programs

<u>a.</u> <u>Implement the Urban Forestry Master Plan to increase the urban tree canopy.</u> (Responsibility: Board of Supervisors, County Departments)

b. Support air quality monitoring, air pollution control strategies, and enforcement by the Monterey Bay Unified Air Pollution Control District. (Responsibility: Board of Supervisors)

c. Control aerial spraying of pesticides and fertilizers, to the degree possible, to prevent contamination of areas adjacent to sprayed areas. (Responsibility: Agricultural Commissioner)

d. Ensure that agricultural burning practices are in accordance with state and regional laws and permit open burning of debris only in instances where other disposal methods are not feasible. (Responsibility: State Department of Forestry, Regional Air Quality Control District, Agricultural Commissioner)

e. Encourage public education programs promoting reduced emissions from transportationgenerated pollutants and area-wide sources, and sources and encourage lesser polluting transportation alternatives through the construction of bikeways and the provision of public transit. (Responsibility: Board of Supervisors, Santa Cruz Metropolitan Transit District, Transportation Commission)

<u>f.</u> Ensure that forestry and agricultural wastes are chipped rather than burned where feasible and permissible considering disease control and other land use compatibility factors. (Responsibility: State Department of Forestry, Regional Air Quality Control District, Agricultural Commissioner)

g. <u>Closely monitor industrial processes and require them to utilize the best available</u> procedures to protect air quality. (Responsibility: Planning Commission, Regional Air Quality <u>Control District</u>)

<u>h.</u> <u>Update and implement a Trip Reduction Ordinance.</u> (Responsibility: Planning Department, Planning Commission, Board of Supervisors)</u>

i. <u>Replace County-owned and encourage replacement of privately-owned fire extinguishers</u> with models that do not use ozone depleting compounds. (Responsibility: General Services, Board of Supervisors)

j. Encourage and support tree planting programs by governmental agencies, private business, individuals and non-profit organizations with a goal of planting at least one tree in Santa Cruz

County each year for every person born in the County during such year. (Responsibility: County Administrative Office, Board of Supervisors)

<u>k.</u> Investigate methods for developing a carbon dioxide budget for the County that limits carbon dioxide emissions.

<u>1.</u> <u>Implement chlorofluorocarbon (CFC) recycling and elimination regulations.</u>

<u>n.</u> <u>Strive to eliminate the use of polystyrene foam (PSF) packaging products throughout the county.</u>

o. Permit major indirect sources of air pollution only if they provide transportation measures to reduce their impacts to a less-than-significant level, consistent with applicable MBUAPCD recommended mitigation and control measures as set forth in the District's "CEQA Guidelines." Cf. LU1.2.

p. Implement and enforce a Smoking Pollution Control Ordinance.

HAZARDOUS AND TOXIC MATERIALS

For more than a decade, Santa Cruz County government has played a leadership role in helping to minimize toxic hazards to the citizens and residents of Santa Cruz County. In 1984, the Board of Supervisors adopted as a statement of basic policy that it should be a statewide goal completely to eliminate the toxic contamination of any portion of the State's environment, including the land, water, and air resources of the State.

In June 1990, by adopting Measure C, the people of Santa Cruz County made a specific finding that "the introduction of toxic chemicals into all parts of the environment, in increasing quantities, has led to the pollution of the ocean, and of fresh water supplies, and to the presence of toxic chemicals in the tissues of virtually every living thing, placing the future of life on this planet in jeopardy." Measure C requires Santa Cruz County government to attempt to eliminate the use of toxic materials within Santa Cruz County where possible, and requires the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use is not feasible.

This section of the General Plan and LCP Land Use Plan states the basic objectives of Santa Cruz County with respect to hazardous and toxic materials, and also includes provisions relating to hazardous waste management. The provisions relating to hazardous waste management are a summary of the facilities siting provisions of the Santa Cruz County Hazardous Waste Management Plan (CHWMP), required by State law. Additional background information and more detailed policies, programs, and technical data are included in the County's Hazardous Waste Management Plan.

Objective 6.96 Hazardous and Toxic Materials

To eliminate, to the greatest degree possible, the use of hazardous and toxic materials, and where it is not feasible completely to eliminate the use of such materials, then to <u>maximize</u> minimize the reduction in the use of such materials, so as to ensure that such materials will not contaminate any portion of the County's environment, including the land, water, and air resources of the County.

Policies

6.9.16.1 Hazardous Materials Ordinance

Maintain the County's Hazardous Materials ordinance, placing on users of hazardous and toxic materials the obligation to eliminate or minimize the use of such materials whenever possible, and in all cases to minimize the release, emission, or discharge of hazardous materials to the environment, and properly to handle all hazardous materials and to disclose their whereabouts. Further, maintain the County's ordinance relating to ozone-depleting compounds. Ensure that any amendment of existing ordinance provisions is based on a finding that the amendments will provide protection to the environment and the community against toxic hazards that is equal to or stronger than the existing provisions.

6.9.26.2 County Use of Toxic/Hazardous Materials

Eliminate wherever possible, and minimize where elimination is not feasible, the use of hazardous and toxic materials in the operations and programs of County government.

6.9.36.3 Maintenance of Standards for Use and Control

Ensure that Santa Cruz County maintains standards for the use and control of hazardous materials which are at least equal in their protection for the environment and the community to

measures imposed by other local governments within Santa Cruz County, and in adjoining counties.

Programs

a. Require an annual report by County departments on departmental efforts to eliminate and reduce the use of toxic materials in County operations. (Responsibility: each County department, County Administrative Office, Board of Supervisors)

ba. Enact an ordinance regulating the storage, transportation, and use of toxic gases, with standards at least as protective as those found in comparable ordinances adopted by local governments within Santa Clara County. (Responsibility: Environmental Health, Planning Department, County Office of Emergency Services, Board of Supervisors)

eb. Implement, where funding can be made available, programs to provide assistance to businesses, farmers, and homeowners, to assist them in eliminating and reducing the use of toxic materials. (Responsibility: Environmental Health, Planning Department, Agricultural Commissioner, County Administrative Office)

dc. Continue County programs facilitating the safe disposal of household hazardous wastes. (Responsibility: Public Works)

HAZARDOUS WASTE MANAGEMENT

The Hazardous Waste Management section is a summary of the facilities siting provisions of the Santa Cruz County Hazardous Waste Management Plan (CHWMP), required by state law. Additional background information and more detailed policies, programs and technical data are included in the CHWMP. The intent of this section is to restate the substantive provision, relating to hazardous waste management facilities siting of the CHWMP. If any portion of this section appears to conflict with the County Hazardous Waste Management Plan, the County Hazardous Waste Management Plan shall prevail.

Objective 6.107 Hazardous Waste Management

To ensure that hazardous waste management facilities will be safely sited to protect public health and the environment, and to ensure the general management of hazardous waste through the year 2000 occurs in accordance with the implementation policies specified in the Santa Cruz County Hazardous Waste Management Plan, and any applicable state and federal regulations.

ALL FACILITIES WHICH COLLECT, HANDLE, TRANSPORT, TREAT, STORE OR DISPOSE OF HAZARDOUS WASTE

Policies

6.107.1 Managing the County's Fair Share of Hazardous Waste

Any proposed facility shall be consistent with the fair share principle, and with any interjurisdictional agreements on hazardous waste management entered into by Santa Cruz County.

6.107.2 Sizing Facilities

Facilities shall be designed and sized primarily to meet the hazardous waste management needs of this County, or to meet any broader future commitments made as part of an interjurisdictional agreement, or upon a determination of the local body that the project meets local planning criteria and serves public needs.

6.107.3 Location of Facilities

Require any proposed hazardous waste management facility to be located only in those general areas identified in the Hazardous Waste Management Plan.

6.107.4 Conformance to Federal, State and Local Siting Standards

Require all hazardous waste land disposal facilities to conform to the siting standards contained in state statues as well as conform to the General Plan and LCP Land Use Plan and Zoning ordinances of the County of Santa Cruz.

6.107.5 Floodplains and Sensitive Habitats

Prohibit any facility to be located within a floodplain or area which could adversely impact any sensitive habitat.

6.107.6 Depth to Groundwater

Require a minimum 20-foot distance between any hazardous waste facility and the highest anticipated elevation of the underlying groundwater. Proposed sites must be <u>elevated evaluated</u> for <u>consistency with</u> this criteria by a registered geologist before permitting.

6.107.7 Mineral Resources Areas

Allow facilities to be sited only where they will not preclude extraction of minerals necessary to sustain the economy of the state.

6.107.8 Non-Attainment Air Areas (Federal Clean Air Act)

Allow facilities to be sited within federally designated Non-Attainment Air Areas only under the following conditions:

- (a) A risk assessment must be completed and shall consider physical and chemical characteristics of the specific types of wastes that will be handled and design features of the facility. The assessment must show that emissions will not significantly contribute to non-attainment of standards;
- (b) The emissions generated must be mitigated; and
- (c) The emissions generated from such facilities shall not be greater than those associated with the transportation of hazardous waste outside of the non-attainment area.

6.107.9 Prime Agricultural Land

Demonstrate an overriding public service need before approving the siting of hazardous waste management facilities in commercial agricultural lands.

6.107.10 Distance From Residences

- (a) Require a Risk Assessment for the siting of a hazardous waste management facility and a 500 foot minimum buffer zone from the nearest urban and suburban density residentially zoned areas. The risk assessment shall consider the physical and chemical characteristics of the specific type of waste(s) that will be handled and any design feature necessary for the facility.
- (b) Require any facility handling ignitable, volatile or reactive wastes to be sited a minimum of 2000 feet from the nearest residence unless the developer can show that the public is sufficiently safeguarded in the event of an accident.

6.107.11 Distance from Immobile Populations

- (a) Require a Risk Assessment for the siting of a hazardous waste management facility and a 500 foot minimum buffer zone from an immobile population, which includes places where large numbers of people may gather and also includes schools, hospitals, convalescent homes, prisons, facilities for the mentally ill, <u>or similar placesete</u>. The risk assessment shall consider the physical and chemical characteristics of the specific type of waste(s) that will be handled and any design feature necessary for the facility.
- (b) Require any facility handling ignitable, volatile or reactive wastes proposed to be sited within one mile of an immobile population, to prepare, at the developer's expense, a study detailing the maximum credible accident from a facility's operation.

6.107.12 Emergency Response/Safe Transportation Routes

Locate facilities of any type so as to minimize distances to major transportation services. Locate all facilities in areas where the fire departments are trained to respond to hazardous materials accidents. Road networks leading to major transportation routes should not pass through residential neighborhoods, should minimize residential frontages in other areas, and shall be demonstrated to be safe with regard to road design and construction, weight allowances, accident rates, excess traffic, etc.

6.107.13 **Public Services**

Limit all facility types to sites where public water and sewer and emergency facilities are available, except for existing landfill sites.

TRANSFER STATIONS FOR HOUSEHOLD AND SMALL QUANTITY BUSINESS GENERATORS

Existing and projected hazardous waste generation rates identified in the Santa Cruz County Hazardous Waste Management Plan indicate a need only for local collection and temporary storage (transfer) facilities to receive hazardous waste from household and small quantity (business) generators. Any and all such facilities sited in the unincorporated area of Santa Cruz County shall be subject to the following siting policies.

Policies

6.107.14 Require Environmental Review

Require proposed facilities to <u>comply with the California Environmental Quality Act prior to</u> <u>approval of any permit or commitment of funding for construction of the facility.follow the</u> <u>Environmental Review procedures of the County</u>. At a minimum, projects shall be reviewed for their susceptibility to natural hazards, including seismic and slope stability; and reviewed for their impacts to natural resources including groundwater and Water Supply Watersheds. Consider approval of such facilities only when a risk assessment is performed which indicates that the risks can be made acceptable through proper engineering and appropriate conditions are included as part of the design and construction of the facility.

6.107.15 Permeable Stratas and Soils

Require all above-ground facilities to have engineered structural design features, common to other types of industrial facilities, including spill containment and monitoring devices.

6.107.16 PSD Area (Prevention of Significant Deterioration Areas)

Permit these facilities to be sited in PSD Areas, as defined in the Hazardous Waste Management Plan, only if they are necessary to handle potentially hazardous wastes generated by visitors or residents in recreational or cultural facility areas which are in the PSD zone. PSD areas meet the ambient air standards of the Clean Air Act, and thus should be prevented from significant deterioration.

6.107.17 Proximity to Waste Generators

Locate household hazardous waste collection facilities close to residential and/or commercial zoned areas to encourage their use.

6.107.18 Recreational, Historic, Cultural and Scenic Areas

Allow household hazardous waste management facilities to be located in areas of recreational, historic, cultural or scenic resources only to the extent that they are necessary to handle hazardous wastes generated by visitors, workers or residents in these areas.

TREATMENT /STORAGE DISPOSAL FACILITIES FOR INDUSTRIAL GENERATORS

Existing and projected hazardous waste generation rates identified in the Santa Cruz County Hazardous Waste Management Plan do not indicate a need for local treatment, storage or disposal facilities for industrial generators within Santa Cruz County. The existing and projected needs for treatment, storage and disposal of hazardous wastes can continue to be met by out-of-County facilities. Therefore no industrial treatment, storage or disposal facility will be allowed within Santa Cruz County, <u>unless</u>. If at some future time a need can be demonstrated as determined by the Board of Supervisors, <u>Upon such determination</u>, then the following siting policies shall apply.

Policies

6.107.19 Seismic Hazards

Prohibit facilities of any type to be built in zones of potential surface rupture faulting, areas of high liquefaction potential, and areas most susceptible to landslides (slopes greater than 15%).

6.107.20 Slope Stability

Prohibit facilities of any type to be built in zones of slope instability. These areas include slopes greater than 30% and areas subject to liquefaction and subsidence due to natural and man-made causes.

6.107.21 Groundwater Resources

Prohibit facilities of any type to be built in areas which are known or suspected to be a sole source aquifer or principal aquifer recharge area for a region.

6.107.22 Water Supply Watersheds

Prohibit facilities of any type to be built in areas which are known or suspected to be a Water Supply Watershed area.

6.107.23 Permeable Stratums and Soils

Exclude these facilities unless they are immediately underlain by geologic materials with a permeability of not more than 1×10 to the seventh power cm/second, and thick enough to prevent vertical movement of fluid to groundwater.

6.107.24 Prevention of Significant Deterioration (PSD) Areas

Consider and, if appropriate, conditionally approve, facilities in PSD areas, unless an analysis shows that air emissions cannot be adequately mitigated. These are areas which meet the ambient air standards of the Clean Air Act, and thus should be prevented from significant deterioration.

6.107.25 Coastal Zone

(LCP) Prohibit hazardous waste treatment/storage/disposal facilities of any type to be built in the areas of the Coastal Zone.

6.107.26 Recreational, Cultural or Scenic Areas

Prohibit industrial hazardous waste management facilities in areas of historic preservation and other cultural or scenic areas, as defined by the Santa Cruz County General Plan and LCP Land Use Plan.

6.107.27 Proximity to Waste Generators

Locate industrial hazardous waste collection facilities close to Large Quantity Generator (LOG) sources to minimize the risk of transportation.

Programs

a. Update the County Hazardous Waste Management Plan a minimum of every three years for compliance with State and federal regulations. (Responsibility: Environmental Health, Planning Department, Board of Supervisors)

b. Identify the types of treatment, storage and disposal facilities needed in Santa Cruz County, identify general areas where such facilities can be located, and, where appropriate, develop

agreements with other counties to handle hazardous wastes produced in Santa Cruz County. (Responsibility: Environmental Health, Planning Department, Public Works, Board of Supervisors)

ELECTRIC AND MAGNETIC FIELD EXPOSURE HAZARDS

A number of recent studies have examined the potential for risk to human health that may exist due to long term exposure to electric or magnetic fields found adjacent to electric powerlines. Some of these studies have found a potential for risk to human health. Siting of sensitive land uses (such as schools) and housing next to powerlines may, therefore, have an environmental health impact on users of the sensitive land uses and the residents of such housing.

ELECTRIC AND MAGNETIC FIELDS

In Santa Cruz County electric power is transferred from power generating stations to substations by means of 115,000-volt transmission lines. Substations are used to "step down" the electricity's voltage to facilitate the transfer from transmission to distribution lines. Distribution lines bring electricity from substations into neighborhoods. In Santa Cruz County, distribution lines operate at voltages from 4,000 to 21,000 volts. A magnetic field measured in units of milligauss, and an electric field, measured in volts per meter, found in the vicinity of these powerlines, and commonly called together the electromagnetic field, are a consequence of the delivery of the electric power. These fields fall off rapidly in strength with increased distance from the powerlines.

The strength of a magnetic field at a given site depends on several factors such as how many conductors are carrying the electric current, their spacing, and height above the ground. The magnetic field will also be proportional to the value of electric current being carried, which varies with electric power demand by time of day, day of week, season of the year, and changes over the years due to growth. Furthermore, the magnetic field also varies with height, so that the magnetic field in a second story bedroom could be substantially larger than the magnetic field found three feet off the ground in a first story living room. This is a consequence of getting closer to the current carrying conductors with increase in structure height or even change in ground height. The value of the magnetic field is essentially independent of the powerline voltage.

In contrast to the magnetic field, the electric field from powerline does not depend on the current being carried, but it dependent on the voltage of the line. The higher the line voltage the higher will be the electric field magnitude around the line. The value of the electric field will also be drastically modified by objects in the field. For example, the presence of housing, trees, shrubs, and people will markedly change the electric field value at a given location.

Measurements of the existing electric and magnetic fields across a given site, and at a given time, are easily made and may be available at no cost from local utilities. Estimates of the fields expected can also be obtained from existing computer programs, but would be based on assuming ideal conditions, such as parallel lines with no sag and level ground.

A typical 115,000-volt transmission powerline would have a magnetic field of 25 to 40 milligauss directly under the powerline at a height of three feet. The magnetic field would decrease with distance from the powerline and would drop off to a level of 1.5 milligauss at a distance of about 150 feet from the powerline, at the same three foot height. The same 115,000-volt transmission powerline might have an electric field of 1,000 volts per meter directly under the powerline and the electric field would drop to 50 volts per meter at a distance of somewhere between 100 and 200 feet from the powerline. Any objects in the vicinity of the powerline would drastically change these electric field values.

Numerous studies have suggested a potential for adverse health effects due to long term exposure to electric and magnetic fields, such as found near powerlines. The siting of housing, or other habitable structures,

such as schools, near powerlines will increase the electric and magnetic field exposure to future residents above the background levels and may thus increase the risk of disease.

LIMITING ELECTRIC AND MAGNETIC FIELD EXPOSURE

Due to the potential for adverse health effects a practice of "prudent avoidance" is recommended. Prudent avoidance means limiting exposures that can be avoided with relatively small investments of money or effort and generally includes increasing the distance and decreasing the time of exposure between people and sources of electric and magnetic fields.

There are no national standards or regulations specifically for powerline magnetic fields. Some local attempts at regulation have, however, been made to date. California has not established any limitations for siting homes near powerlines, although some guidelines are currently being used for school sites near transmission powerlines. The School Facilities Planning Division requires that no new schools be sited 100 feet from the edge of the right-of-way of 100,000-to-110,000-volt lines; 150 feet from 220,000-to-230,000- volt lines; and 250 feet from 345,000-volt lines.

There are generally three approaches to mitigating adverse impacts from electric and magnetic fields. The first typically involves site planning techniques to set habitable structures back from sources of electric and magnetic fields and thereby avoid hazardous doses. The second is to use engineering solutions, such as reconfiguring the powerlines, to mitigate electric and magnetic fields. The third, more difficult (and costly) approach involves placing powerlines underground and removing constraints to site development by significantly diminishing the magnetic field strength or completely eliminating the electric field, thus reducing the potential health hazard.

1. Site Planning

With a transmission or distribution powerline crossing a subdivision site, the subdivision could be designed to set habitable buildings back from the powerlines, in a manner consistent with the current state of scientific knowledge.

2. Undergrounding the Powerline

It is possible substantially to reduce the electric and magnetic fields by undergrounding the powerlines in a metallic pipe. The electric field would be <u>esentiallyessentially</u> eliminated by the shielding of the metallic pipe and the magnetic field could be considerably reduced because the conductors are placed closer together causing the magnetic fields from the individual conductors to partially cancel each other.

3. Reconfiguring the Powerlines

The number of conductors in a transmission or distribution powerline can be increased and their current fed (phased) in ways to achieve significant cancellation of the electric and magnetic fields near the ground. The techniques to considerably lower the fringing electric and magnetic fields around powerlines are known at this time. In addition there is considerable research effort underway in this area.

Objective 6.811Electric and Magnetic Energy

To protect the public from potential health hazards associated with electric and magnetic fields based on the then current state of scientific knowledge through appropriate limitations on the use and development of land near electric transmission and distribution powerlines and substations which could create health hazards.

Objective 6.811b New Electrical Facilities

The planning, siting, and construction of future electrical facilities should minimize electric and magnetic fields near sensitive areas (for example schools, hospitals, playgrounds), residential uses, existing areas of high electric and magnetic exposure, and areas of future development.

Policies

6.811.1 Prudent Avoidance

In regard to exposure of electric and magnetic fields, the policy of the County of Santa Cruz is one of "prudent avoidance." Prudent avoidance assumes that exposure to electric and magnetic fields may present a health risk. The policies in this section shall apply to residential land divisions or other new discretionary development and other sensitive land uses, not including development of one single-family dwelling on an existing lot of record.

6.811.2 Measuring Ambient Magnetic Fields

Require the measurement of the ambient magnetic fields for all residential land divisions or other new discretionary development (not including development of one single-family dwelling on an existing lot of record) where such property is within 150 feet of 21 kv or greater transmission or distribution powerlines of the electric power delivery system. The measurements should delineate the area on the site where the magnetic field is above the level at which potential health effects may exist, based on the then current state of scientific knowledge.

6.811.3 Development Mitigation Measures

Utilize the following techniques to minimize exposure to potentially hazardous electric and magnetic fields from electric powerlines.

- (a) Site Planning Locate and/or cluster habitable building envelopes away from the potentially hazardous electric and magnetic fields consistent with the current state of scientific knowledge.
- (b) Underground the Powerline Reduce the electric and magnetic fields by undergrounding powerlines in a metallic pipe or other appropriate insulator.
- (c) Reconfigure the Powerline Reconfigure lines and conductors in transmission or distribution lines to achieve significant cancellation of the electric and magnetic fields near the ground.

6.811.4 New Transmission and Distribution Facilities

The siting of new transmission and distribution powerlines and substations shall minimize electric and magnetic fields near existing sensitive areas, residential uses, existing areas of high electric and magnetic field exposure, and areas of future development. Public exposure to electric and magnetic fields shall not be increased where practical alternatives exist.

Programs

a. Work with PG&E and other relevant private and public organizations to maintain EMF informational handouts and reference lists for public education. (Responsibility: <u>Public WorksPlanning</u> Department, <u>Environmental HealthBoard of Supervisors</u>)

b. Identify those areas where a potential hazard from exposure to electric and magnetic fields exist by mapping the location of the transmission lines, distribution lines, and substations in the County. (Responsibility: <u>Public Works Department, Environmental Health, Information</u> <u>Service-GIS Planning Department</u>)

ENVIRONMENTAL JUSTICE

In 2016, the State of California also adopted requirements for General Plans to address environmental justice for disadvantaged communities. Disadvantaged communities are defined as low-income areas (at or below 80% of area median household income) that are disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure or environmental degradation. While the unincorporated area of Santa Cruz County contains a small agricultural area near Watsonville that meets the technical definition of disadvantaged community, certain sub-areas of unincorporated Santa Cruz County can at times be of similar status as a disadvantaged community, depending upon how the geographic limits are defined and upon economic circumstances of the area population as the economy and housing market changes. This Safety Element therefore incorporates environmental justice requirements and generally addresses these unique or compounded health risks for these certain sub-areas that may at times qualify as disadvantaged communities, including policies regarding promotion of civil engagement in public decision making, and prioritization of improvements and programs that address the needs of disadvantaged communities.

In Santa Cruz, the community areas and environmental hazards that may at times qualify as disadvantaged communities affected by pollution or hazards include:

- 1. Areas of San Lorenzo Valley affected by woodsmoke from heavy use of fireplaces and woodstoves in homes;
- 2. Areas in San Lorenzo Valley that are affected by the lack of sewer infrastructure and existence of older and possibly failing septic systems;
- 3. Areas in Davenport that are subject to high water and sewer treatment rates due to the nature of infrastructure and small number of users;
- <u>4. Areas in Soquel and Live Oak that are subject to moratoriums due to inadequate and/or undersized</u> stormwater and sanitation infrastructure; and
- 5. Areas within the Soquel Creek Water District that are served by a groundwater basin that is in overdraft and households subject to high costs to connect to and be served by the system.
- <u>6.</u> Area within the Freedom area of the County affected by high costs to maintain and upgrade sewer <u>infrastructure</u>.

Objective 6.12.1 Environmental Justice

Address unique or compounded health risks for areas that may be considered disadvantaged communities affected by pollution or hazards, through developing plans to address the pollution or hazards, and providing funding as feasible through the Capital Improvement Plan and County Budget processes and through seeking funding from federal, state, regional or local grant programs.

Policies

- 6.12.1 <u>Civil Engagement</u> Promote civil engagement within disadvantaged communities in public decision making.
- 6.12.2 Woodburning Fireplaces and Stove

In recognition of the broad public health benefits that result from decreased burning of wood and wood pellets to heat homes, reduce or waive permit fees for change-outs of woodburning fireplaces and stoves to gas-fired appliances.

6.12.3 Cement Plan Re-Use

Support a re-use of the cement plant site in Davenport that will modernize and improve water and sewage treatment, and will lower costs to community residents and businesses.

6.12.4 Septic Systems

Support modern septic treatment approaches in the San Lorenzo Valley in order to phase out underperforming septic systems and improve water quality and the environment.

6.12.5 Groundwater Management

Support efforts of the Soquel Creek Water District to identify a water source that will prevent further overdraft of the aquifer and lead to recharge and recovery of the aquifer.

6.12.6 Drainage and Sanitation Facilities

Update Stormwater Drainage and Sanitation Facilities Master Plans in order to ensure availability of infrastructure to serve planned development in the Soquel and Live Oak areas.

6.12.7 Local Income Surveys

<u>Perform local income surveys to determine if an area is considered a disadvantaged community</u> in order to qualify for grant opportunities from state and federal sources.

6.12.8 Disadvantaged Communities

Prioritize improvements and programs that address the needs of disadvantaged communities.

NOISE

Objective 6.9a Noise Environment

To promote land uses which are compatible with each other and with the existing and future noise environment. Prevent new noise sources from increasing the existing noise levels above acceptable standards and eliminate or reduce noise from existing objectionable noise sources.

Objective 6.9b Noise Element

To educate and assist the residents of Santa Cruz County in the meaning and use of this noise element. **Policies**

6.9.1 Land Use Compatibility Guidelines

Require new development to conform with the Land Use Compatibility Guidelines (Figure 6-1). All new residential and noise sensitive land developments should conform to a noise exposure standard of 60dB Ldn (day/night average noise level) for outdoor noise and 45 dB Ldn for indoor noise. New development of land which cannot be made to conform to this standard shall not be permitted. Assure a compatible noise environment for various land uses through site planning, building orientation and design, interior layout, and physical barriers, landscaping, and buffer areas where appropriate.

Figure 6-1

Land Use Compatibility For Community Noise Environments

EXTERIOR NOISE EXPOSURE						
	Ldn or CNEL (Both are weighted in					
	Decibels by when noise occurs day or night)					
LAND USE CATEGORY	55	60	65	70	75	80
Residential, Hotels, and Motels						
Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches						
Office Buildings, Business Commercial, and Professional						
Auditoriums, Concert Halls, Amphitheaters						
Industrial, Manufacturing, Utilities, and Agriculture						
NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. CONDITIONALLY ACCEPTABLE Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design. UNACCEPTABLE New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. Notes: L dn = Day/Night Average Sound L avel						
Ldn = Day/Night Average Sound Level						
CNEL = Community Noise Equivalent I	<u>_evel</u>					

Require acoustical studies for all new residential developments with a future Ldn noise exposure greater than 60dB. The studies shall satisfy the requirements set forth in Title 24, Part 2 of the California

Administrative Code, Noise Insulation Standards. Require acoustical studies for all new projects which may affect the existing noise level and may not conform to the Land Use Compatibility Guidelines in Figure 6-1.

6.9.3 Noise Sensitive Land Uses

Require new development of residential and other noise sensitive land uses, where existing stationary noise sources such as a quarry exceeding the standards of Figure 6-2, to incorporate effective mitigation measures to reduce noise exposure to or below the levels of Figure 6-2.

6.9.4 Commercial and Industrial Development

For all new commercial and industrial developments which would increase noise levels above the maximum allowable standards of the Land Use Compatibility Guidelines in Figure 6-1, or Figure 6-2, the best available control technologies will be used to minimize noise levels. In no case shall the noise levels exceed the standards of Figure 6-2.

Figure 6-2 Maximum Allowable Noise Exposure Stationary Noise Sources (1)		
	Daytime (5) (7PM to 10PM)	Nighttime (2,5) (10PM to 7AM)
Hourly Leq average hourly noise level, dB (3)	50	4 5
Maximum level, dB (3)	70	65
Maximum Level dB Impulsive Noise (4)	65	60

dB = decibel

(1) As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.

(2) Applies only where the receiving land use operates or is occupied during nighttime hours.

(3) Sound level measurements shall be made with "slow" meter response.

(4) Sound level measurements shall be made with "fast" meter response.

(5) Sound level measurements shall be raised to the ambient noise levels where the

ambient levels exceed the allowable levels. Allowable levels shall be reduced 5dB if the

ambient hourly Leq is at least 10 dB lower than the allowable level.

6.9.5 Residential Development

Require that future residential development adjacent to the railroad tracks meet both outdoor and indoor maximum noise level standards stated in the General Plan and LCP Land Use Plan.

6.9.6 Vibrations from Rail

Evaluate vibrations from rail activities for future development within 200 feet of the railroad tracks as part of environmental review.

6.9.7 Construction Noise

Require mitigation of construction noise as a condition of future project approvals.

Programs

a. Review the Ground Transportation Noise Contours when the Circulation Element is updated and the Airport Noise Contours when the Airport Master Plans are updated and amend when necessary. (Responsibility: Planning Department, Planning Commission)

b. Work together with cities, transit authorities, school districts, rest homes, hospitals, and commercial and industrial uses to mitigate existing noise problems. (Responsibility: Planning Department, Environmental Health)

c. Obtain and make available an educational brochure to inform the public of the general hazards of everyday noise, including the various sources inside and outside of the home, consumer advice regarding products, hearing protection techniques, etc. (Responsibility: Planning Department, Office of Consumer Affairs)

d. Consider establishing a Noise Abatement section in the Environmental Health Services, the Planning Department or the Sheriff's Department to facilitate enforcement of County noise control policies as well as noise-related "nuisance" and "disturbing the peace" ordinances. (Responsibility: Board of Supervisors)

e. Enforce the Santa Cruz County Off-road Vehicle ordinance either through use of personnel or physical barriers. (Responsibility: Board of Supervisors, Sheriff's Department)

f. Consider amending chapter 8.3 of Volume I of the Santa Cruz County Code to limit the allowed hours of construction activities near residential areas. (Responsibility: Board of Supervisors)

Objective 6.10 Ground Transportation

To maintain or lower existing noise levels generated by the ground transportation system. **Policies**

6.10.1 Environmental Review

Require environmental review of all proposed transportation projects which may increase the average day/night noise levels including any increased or new uses of the Southern Pacific Railroad right-of-way. **6.10.2 Evaluation and Mitigation**

Require the evaluation of mitigation measures for any project that would cause significant degradation of the noise environment by:

(a) Causing the Ldn in existing residential areas to increase by 5 dB or more and remain below 60 dB;

(b) Causing the Ldn in existing residential areas to increase by 3 dB or more and, thereby, exceed an Ldn of 60 dB;

(c) Causing the Ldn in existing residential areas to increase by 3 dB or more if the Ldn currently exceeds 60 dB.

6.10.3 County Road Surfacing and Maintenance

Utilize the latest noise-reducing techniques for County road surfacing and maintenance.

6.10.4 Sirens and Horns

Limit the use of sirens and horns to the minimum necessary.

Programs

a. Attempt to reduce the number of vehicles on the road by vigorously promoting the 30 percent transit, 10 percent bicycles, and 2.0 persons per vehicle occupancy goals which are the 1995 goals of the Regional Transportation Plan. (Responsibility: Board of Supervisors, Transportation Commission, Planning Department)

b. Work with and encourage the California Highway Patrol's existing noise abatement program and enforce existing California State Noise Emission Standards. Establish a Noise Abatement section in the County Sheriff's Department (including purchase of necessary equipment), in order to keep the level of enforcement of State muffler laws within the County's control. (Responsibility: California Highway Patrol, County Sheriff's Department)

c. Support State legislation for noise abatement design measures in all State Highway projects within the County. (Responsibility: Board of Supervisors, Transportation Commission)

d. Analyze changes in street patterns with regard to attendant noise impacts and route and/or divert traffic in order to minimize noise impact upon sensitive land uses such as residences, hospitals, nursing homes, schools and parks. Trucks and automotive through traffic should utilize only designated truck and through routes. Neighborhoods should be protected from through traffic diversion techniques. (Responsibility: Planning Department, Public Works, Board of Supervisors)

e. Maintain and retrofit County vehicles to lower noise emission levels. Consider noise emission levels in the purchase of new vehicles. (Responsibility: General Services)

Objective 6.11 Air Transportation

To balance the need for aviation service in the County with the right to develop lands around the airports. **Policies**

6.11.1 Airport Expansion

Require a development permit and environmental review for any new air strip or airport or any proposed expansion of air strips or airports over which the County has jurisdiction, including any increase in the number of flights which may increase the noise level of surrounding areas.

6.11.2 Restricting Residential Development

Limit single-family residential development to no more than one dwelling on an existing lot of record where the existing or future aircraft noise exceeds 65 Ldn.

6.11.3 Mitigation for Interior Noise

Require all discretionary residential development proposed within the 60 Ldn aircraft noise contour to mitigate interior noise 45 Ldn or less, and to limit the maximum A-weighted noise level of single aircraft overflights to 50 dBA or less.

6.11.4 Coordination with City of Watsonville

Encourage the City of Watsonville to review noise contour data for Watsonville Airport biannually and forward any new data to the County for its use.

Chapter 6

PUBLIC SAFETY <u>ELEMENT</u> AND NOISE

- SEISMIC HAZARDS: EARTHQUAKES, TSUNAMI, LIQUEFACTION
- CLIMATE CHANGE: RESILIENCE AND ADAPTATION
- SLOPE STABILITY, LANDSLIDES AND OTHER ADVERSE SOIL CONDITIONS
- COASTAL BLUFFS AND BEACHES
- **GRADING AND** EROSION
- FLOOD HAZARDS
- WILDLAND AND URBAN FIRE HAZARDS
- <u>AIR QUALITY</u>
- HAZARDOUS AND TOXIC MATERIALS
- HAZARDOUS WASTE MANAGEMENT
- ELECTRIC AND MAGNETIC ENERGY, AND NEW ELECTRIC FACILITIES
- ENVIRONMENTAL JUSTICE
- NOISE

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Language identified with (LCP) is not restricted to the Coastal Zone; language which includes the (LCP) initials is part of the Local Coastal Program and applies countywide unless specifically stated that the policy, etc., is limited to the coastal zone.

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AUTHORITY, REQUIREMENTS 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; <u>liquefaction</u>; 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.

Safety Elements revised after January 2009 must reference or incorporate: FEMA flood maps, information about flood hazards available from the Army Corp of Engineers, dam failure maps from the Department of Water Resources, maps of levee protection zones, identification of areas subject to inundation in the event of failure of levees or floodwalls, historical data on flooding including areas vulnerable to flooding after wildfires and areas of repetitive loss due to floods, and identify existing and planned development in flood hazard zones. Goals, policies, objectives and feasible implementation measures related to protecting the community from unreasonable risks of flooding are required to be established, with an emphasis on avoiding risks to new development, maintaining the structural and operational integrity of essential public facilities during flooding, locating new essential public facilities outside of flood hazard zone, and establishing cooperative working relationships among public agencies with responsibility for flood protection.

Safety Elements revised after January 2014 must address the risk of fire for land classified as state responsibility areas, and land classified as very high fire hazard severity zones. The Element must reference or incorporate: fire hazard severity zone maps available from the State Department of Forestry and Fire Protection, historical data about wildfire hazard areas from the US Geological Survey and local records, identification of the general location of existing and planned uses of land within very high fire hazard severity zones and in state responsibility areas, and identification of local, state and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services. As with flood hazards, goals, policies, objectives and feasible implementation measures for protecting the community from unreasonable risks of fire are required to be established, for the same factors identified in the preceding paragraph.

Safety Elements revised after January 2017 must address climate change and resiliency strategies, and must include a vulnerability assessment that identifies the risks that climate changes poses to the local jurisdiction and geographic areas at risk, and include information from other agencies to assist with developing the vulnerability assessment. A set of adaptation and resilience goals, policies, objectives, and feasible strategies and implementation measures to avoid or minimize climate change impacts must be included, especially for new land uses, essential public facilities, and public infrastructure. "Natural infrastructure" that may feasibly be used in adaptation projects to increase resiliency, such as existing or restored natural features and ecosystem processes, are to be identified. Floodplain and wetlands restoration or preservation, combining levees with restored natural systems to reduce flood risk, and urban tree planting to mitigate high heat days and reduce greenhouse gas effects are examples.

Adopted Local Hazard Mitigation Plans and adopted floodplain management ordinances that have been approved by FEMA can be attached or referenced in the General Plan to comply with certain Safety Element requirements. California Government Code Section 65302(g)(4)(D)(ii) allows local governments to

summarize and incorporate by reference a climate adaptation plan or document to meet Safety Element requirements if the material substantially complies or is substantially equivalent. Santa Cruz County approved a Climate Action Strategy in February 2013 and adopted an updated Local Hazard Mitigation Plan in June 2016, and these documents substantially comply with the State's new climate change requirements for Safety Elements. These documents are hereby incorporated by reference into the General Plan. A summary showing how the requirements are met is provided within the Climate Change: Resilience and Adaptationsection.

In Santa Cruz County, the impacts of climate change and sea level rise are projected to accelerate hazards to coastal bluffs and beaches, and therefore this Safety Element establishes new and modified goals, policies, objectives and implementation measures for property located on coastal bluffs and for beaches and lagoons. Approaches differ for urbanized properties located within the Urban and Rural Services Lines, and the remaining rural and open space areas along the coast. Within the urban areas where development intensity is higher and existing coastal armoring is common, more extensive project analysis is required to address increased risks due to climate change, sea level rise, wave attack, and coastal flooding. In the more rural areas, however, parcels are larger, development intensity is lower, and the increased risks related to sea level rise can be adequately addressed with a lessor level of project analysis compared to projects in the urban area.

In 2016, the State of California also adopted requirements for General Plans to address environmental justice for disadvantaged communities. Disadvantaged communities are defined as low-income areas (at or below 80% of area median household income) that are disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure or environmental degradation. While the unincorporated area of Santa Cruz County does not contain communities that meet the technical definition, certain sub-area of unincorporated Santa Cruz County can at times be of similar status as a disadvantaged community, depending upon how the geographic limits are defined and upon economic circumstances of the area population as the economy and housing market changes. This Safety Element therefore incorporates environmental justice requirements and generally addresses these unique or compounded health risks for these certain sub-areas that may at times qualify as disadvantaged communities, including policies regarding promotion of civil engagement in public decision making, and prioritization of improvements and programs that address the needs of disadvantaged communities.

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:

- (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 OF GREATEST SHORT-TERM RISKS TO 2050, AND INTERMEDIATE- TO LONG-TERM RISKS TO 2100

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.

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 erosionand 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 be 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).

The Climate Action Strategy (CAS) Vulnerability Assessment concluded that over the next 30+ years to 2050, it is expected that the highest risks to the County of Santa Cruz will come from:

- <u>Potential water shortages due to the combination of increasing temperatures, changes in precipitation patterns increasing climatic water deficit, increased saltwater intrusion, decreased groundwater recharge, and higher demand. This has a very high probability of occurrence and also significant (high) consequences.</u>
- Rising water table beneath the Rio Del Mar Esplanade is already an issue. As sea level continues to rise, the present problems will be exacerbated. The consequence of a continuing water table rise on commercial and residential structures and infrastructure, including the wastewater pump station is high, and the likelihood of this taking place in the immediate future is high.

- Potential increase in future coastal storm frequency and/or intensity will increase cliff retreat rates as well as cause potential damage to oceanfront property or public infrastructure. The coastlines of northern California, Oregon and Washington have experienced increasingly intense winter storms and greater wave heights over the last 25 years, both of which may be leading to more severe winter erosion (Allan and Komar, 2000). The consequence of coastal bluff erosion is high due to the extent of high-value public and private improvements (infrastructure, structures, etc.)
- Flooding in Santa Cruz County has occurred in each of the primary drainages and will continue to occur in the future given certain sets of meteorological conditions. Previous occurrences are well documented for all primary drainages with the exception of Aptos Creek, which is not gauged. In addition, low-lying areas such as Rio Del Mar Esplanade/Flats will experience more frequent flooding and inundation from sea level rise and increased wave heights. As a result, the consequence would be high in terms of structural and economic loss, with the probability of such an event occurring also being high.
- Groundwater extraction rates from the Pajaro River Valley groundwater basin have exceeded sustainable pumping rates for decades, causing groundwater levels to drop significantly, resulting in areas of saltwater intrusion and rendering some coastal groundwater wells unsuitable for use. With the rise in sea level in the coming decades, saltwater intrusion will be exacerbated. The probability of saltwater intrusion is high due to the current groundwater overdraft situation in the Pajaro Valley, and the consequence of this occurring is high due to the economic effects of fallowing large expanses of farmland to reduce groundwater pumping. However, efforts are being developed to reduce groundwater pumping and to stop saltwater intrusion. The success of these efforts will be challenged by the additional effects of climate change.
- Many of the wells located within the boundaries of the Soquel Creek Water District are also threatened with saltwater intrusion. A reduction in groundwater pumping will likely be necessary to meet the protective and target water levels necessary to avoid saltwater intrusion into the wells.
- <u>Heat waves in Santa Cruz County are likely to become more frequent in the future due to climate change; however, due to the marine climate, temperature increases would be moderate. As a result, the consequence would be low while the probability of such an event occurring is high.</u>
- Climate change is expected to result in additional risk of increased fire frequency, size, and severity beyond the historic range of natural wildfire variability due to increasing length of the fire season, drier fuels, and decreasing forest health. These changes are being driven by alterations in temperature and precipitation regimes (generally, warmer and drier). As a result, the consequence would be high while the probability of such an event occurring is low.

The Local Hazard Mitigation Plan concluded that over the intermediate to long term (2050 to 2100), in addition to water shortages and a rise in the water table, it is expected that other climate change related events would increase to high and very high levels of risk within the County:

- Potential water shortages, as described for the period 2010-2050, shift from a high probability of occurrence to a very high probability of occurrence as climate change progresses.
- Even though many of the areas of highest vulnerability have already been armored with riprap or seawalls, coastal cliff erosion continues to take place. The value of property and infrastructure in this area is very high, and in the long-term, with a rising sea level and increased winter wave attack, this risk is expected to increase to a very high level.
- Rise in the water table beneath the Rio Del Mar Esplanade as described for the period 2010-2050 shifts from a high probability of occurrence to a very high probability of occurrence as sea level rise progresses.

- Shoreline inundation would affect a number of developed areas along the County shoreline, particularly at the maximum projected sea level values for 2050-2100. The potential for flooding of the Rio Del Mar Esplanade and Beach Drive, for example, has a very high probability of occurring with a high consequence if it were to happen. If winter precipitation increases in the longer-term future, although it is not clear from the models that have been run to date that this will occur, the probability will increase, raising the risk of flooding.
- Flooding, as described for the period 2010-2050, shifts from a high probability of occurrence to a very high probability of occurrence as climate change progresses.
- Salt water intrusion of groundwater as described for the period 2010-2050 would continue as sea level rise progresses. The probability of saltwater intrusion increases to very high, and the consequence is very high due to the economic effects of fallowing large expanses of farmland to reduce groundwater pumping. Efforts are underway to reduce groundwater pumping to stop saltwater intrusion; however, the success of these efforts will be challenged by the additional effects of climate change.
- Heat waves as described for the period 2010-2050 shift from a high probability of occurrence to a very high probability of occurrence as climate change progresses.
- <u>Climate change is expected to continue to contribute to increased wildfires as described for the period</u> 2010-2050 with the probability of occurrence shifting from low to moderate as climate change progresses.

SAFETY ELEMENT GOALS REGARDING HAZARDS AND CLIMATE CHANGE

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.

The goals, objectives, policies and implementation measures of this Public Safety Element are derived from the necessity to protect the community from natural hazards, as well as from hazards produced from the built environment. Primary goals of the Safety Element include:

SE-1: To protect human life, private property and the environment.

<u>SE-2:</u> 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.

Santa Cruz strives to be a disaster-resistant county that can avoid, mitigate, survive, recover from, and thrive after a disaster while maintaining its unique character and way of life. County government should be able to provide critical services in the immediate aftermath of a devastating event of any kind. The people, buildings and infrastructure of Santa Cruz should be resilient to disasters. A key County objective stated in the Local Hazard Mitigation Plan (LHMP) is to have basic government services and commercial functions resume quickly after a damaging earthquake or other significant event. The LHMP has four primary goals for reducing disaster risk in Santa Cruz, which are incorporated into this Safety Element:

SE-3: Avoid or reduce the potential for loss of life, injury and economic damage to Santa Cruz residents from earthquakes, wildfires, floods, drought, tsunami, coastal erosion, landslide and dam failure.

SE-4: Increase the ability of the County government to serve the community during and after hazard events.

<u>SE-5:</u> Protect Santa Cruz's unique character, scenic beauty and values from being compromised by hazard events.

SE-6: Encourage mitigation activities to increase the disaster resilience of institutions, private companies and systems essential to a functioning Santa Cruz.

The projected increases in levels of fire, flood, erosion and coastal bluff hazards due to climate change require adjustments in preparation and responses, including modified approaches to regulating properties on coastal bluffs and beaches, new flood and fire hazard reduction policies, and ensuring functionality of essential public facilities and infrastructure. Table 7.1 of the County's Climate Action Strategy presents a comprehensive series of strategies designed to respond to the following CAS climate adaptation goals, which are incorporated into this Safety Element as follows:

SE-7: Protect the unique character, scenic beauty and culture in the natural and built environment from being compromised by climate change impacts.

SE-8: Support initiatives, legislation, and actions to respond to climate change.

SE-9: Encourage and support actions that reduce risks and vulnerabilities now, while recognizing the importance of identifying, making decisions about, and preparing for impacts and risks that may develop in the future.

<u>SE-10:</u> Support the reduction of risks from other environmental hazards, noting the strong interrelationships and benefits between reducing risk from climate change, non-climate change-related disasters, and most other environmental hazards.

SE-11: Build resilience into all programs, policies and infrastructure.

<u>SE-12:</u> Encourage climate change resilience planning and actions in private companies, institutions, and systems essential to a functioning County of Santa Cruz.

SE-13: Encourage community involvement and public-private partnerships to respond to potential climate impacts, particularly for those most vulnerable.

SE-14: Ensure that the County of Santa Cruz remains a safe, healthy and attractive place with a high quality of life for its residents, businesses and visitors.

This Safety Element incorporates these goals of the LHMP and CAS in order to recognize climate change projections and to support adaptation approaches that improve the resilience of essential facilities, public infrastructure, coastal natural resources, and human communities to the impacts of climate change and sea level rise; and to ensure informed acceptance of risk and liability releases by private property owners who elect to develop or make improvements in areas subject to hazards.

Additional goals (beyond the above goals contained in the LHMP and CAS) related to climate change, regarding geologic, flooding and wave run-up hazards along the shoreline and coastal bluffs, include the following:

SE-15: Seek funding for and encourage public, special district and private activities to prepare more specific plans for how various portions of the shoreline/coastal bluff that are located within the urban/ruralservices lines should transition in the future, to a feasible outcome that could exist in the near- to mid-termwith a design that improves impacts on coastal resources while continuing to protect important coastal infrastructure, existing development and other visitor-serving built and natural environments.

SE-16: Ensure that public investments along the shoreline consider projections for sea level rise, and prioritize and design projects to avoid and minimize risks to the improvements, considering the desired expected life for such public improvements.

SE-17: Seek to internalize private costs of repair, replacement and/or abatement of structures on shorelines and coastal bluffs to private property owners, while also recognizing that in some locations public agencies, special districts and private property owners should work together to achieve mutually beneficial conditions in the near- to mid-term, while recognizing that the long-term may mean that improvements must be relocated or removed.

This Safety Element is divided into sections based on the particular hazards that exist in Santa Cruz County and related topics. Information and discussion about each of these hazards or topics is presented at the start

of each section, followed by the relevant objectives, policies and implementation measures for the hazard or topic. The hazards and topics are presented in the following order:

- 1. Seismic and Soil Hazards: Earthquakes, Tsunami, Liquefaction
- 2. Climate Change: Resilience and Adaptation
- 3. Slope Stability, Landslides and Other Adverse Soil Conditions
- 4. Coastal Bluffs and Beaches
- 5. Grading and Erosion
- 6. Flood Hazards
- 7. Wildland and Urban Fire Hazards
- 8. Air Quality
- 9. Hazardous and Toxic Materials
- 10. Hazardous Waste Management
- 11. Electric and Magnetic Energy, and New Electrical Facilities
- 12. Environmental Justice

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 on the Richter Scale. The epicenter of the Loma Prieta earthquake was about 10 miles eastnortheast 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 un-reinforced 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 voterapproved 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 ongoing process.

SEISMIC HAZARDS: EARTHQUAKES, TSUNAMI, LIQUEFACTION

EARTHOUAKES. An earthquake is a sudden release of energy in the earth's crust. Caused by movement along fault lines, earthquakes vary in size and severity. The focus of an earthquake is found at the first point of movement along the fault line, and the epicenter is the corresponding point above the focus at the earth's surface. Damage from earthquakes varies with the local geologic conditions, the quality of construction, the energy released by the earthquake, the distance from the earthquake's focus, and the type of faulting that generates the earthquake. Ground motion is the primary cause of damage and injury during earthquakes and can result in surface rupture, liquefaction, landslides, lateral spreading, differential settlement, tsunamis, building failure and broken utility lines, leading to fire and other collateral damage. Typically, areas underlain by thick, water-saturated, unconsolidated material will experience greater shaking motion than areas underlain by firm bedrock, but in some cases relief may intensify shaking along ridge tops. Fires and structural failure are the most hazardous results of ground shaking. Most earthquake-induced fires start because of ruptured power lines and gas or electrically powered stoves and equipment, while structural failure is generally the result of age and type of building construction. Fault rupture and earthquake related Ground Cracking could occur in several locations within the County of Santa Cruz. Several fault zones cross Santa Cruz County, and movement along these faults can cause fault-related surface deformation (e.g., surface fault rupture) where the fault reaches the surface of the ground. Both the County of Santa Cruz and the State of California have identified zones where the San Andreas and other active faults have and can cause fault-related surface deformation. Within these zones it is likely that movement along these faults will damage structures, roads, utilities, and other fixed facilities. In addition to these zones, other ground cracking was observed during the Loma Prieta earthquake and the San Francisco earthquake of 1906. Many of these ground cracks can be attributed to movement or consolidation of large and moderatesized landslides while other ground cracks were most likely related to ridge spreading. Although much of the ground cracking was found near the fault zones and in the Summit area of the county, other ground cracking was found on ridge tops throughout the County of Santa Cruz.

In geologic time, Santa Cruz County was very recently the epicenter of a very significant earthquake. At 5:04 PM on October 17, 1989, a magnitude 7.1 event 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 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. In Santa Cruz County, 674 dwellings, 32 mobile homes and 310 businesses were destroyed in the earthquake. Replacement of un-reinforced masonry chimneys made up the majority of subsequent 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. Due to the County's susceptibility to earthquakes and other natural hazards, disaster response planning is an on-going process.

TSUNAMI. A tsunami is a series of waves generated by an impulsive disturbance in a large body of water such as an ocean or large lake. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. Sudden vertical movement of the ocean or lake floor by a fault, landslide or similar movement displaces the overlying water, creating a wave that travels outward from the source. The waves can travel across oceans and maintain enough energy to damage distant shorelines. The most recent tsunami in Santa Cruz County occurred as a result of the magnitude 9.0 earthquake in Japan on March 11, 2011. In Japan nearly 16,000 deaths occurred as a result of the earthquake and tsunami, which generated a wave of water up to 113 feet in height travelling inland up to six miles, and which also caused meltdown of a nuclear energy plant. This 2011 tsunami hit the Santa Cruz Harbor with waves estimated to

be several feet, combined with swift and chaotic currents causing approximately \$20 million in damage. Santa Cruz County is at risk from both local and distant source tsunamis.

LIQUEFACTION. Liquefaction is the transformation of loose, water-saturated granular materials (such as sand or silt) from a solid to a liquid state. Liquefaction commonly, but not always, leads to ground failure such as subsidence. Liquefaction potential varies significantly and site-specific analysis is needed to accurately determine liquefaction potential in earthquake prone areas.

Objective 6.1-1 Seismic Hazards: Earthquakes

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

Objective 6.1-2Seismic Hazards: Tsunami

(LCP) To reduce the potential for loss of life, injury, and property damage resulting from tsunamis by: providing signage and warning systems in tsunami hazard areas to increase public awareness of hazard and actions to take in event of tsunami, publicizing evacuation routes, and designing structures as feasible to withstand tsunamis or to minimize damage that may occur due to tsunamis.

Objective 6.1-3Seismic Hazards: Liquefaction and Subsidence

(LCP) To reduce the potential for loss of life, injury, and property damage resulting from location of improvements in areas that contain soils subject to liquefaction and subsidence by: avoiding location of critical and essential facilities in areas subject to these conditions, and adopting building codes that, for areas where development is allowable, requires site-specific analysis and adequate mitigations to be incorporated into project designs.

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/or a more complete geologic investigationreport where required by the County. Such An assessment shallmay be prepared by County staff under supervision of the County Geologist, or a certified engineering registered geologistmay conduct this review at the applicant's choice and expense. Any Geologic Hazards Assessment or Geologic Investigation Report must be accepted by the County Geologist in order to use its findings and/or incorporate its mitigations into a proposed development project.

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 <u>certified engineering registered</u> 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 <u>Assessment or</u> Investigation Regarding Liquefaction Hazard

(LCP) Require site-specific <u>hazards assessment and/or</u> investigation by a <u>certified engineering registered</u> geologist and/or civil engineer of all development proposals of more than four residential units in areas designated as having a <u>moderate</u>, high or very high liquefaction potential, and require mitigations identified by reports to be incorporated into project designs in order to meet <u>building codes</u>. Proposals of four units and under and non-residential projectsshall be reviewed for liquefaction hazard through environmental review and/or geologic hazards assessment, and when a significant potential hazard exists a site-specific investigationshall 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, in order to avoid or minimize exposure to hazards. Review, revise, and/or condition project and condition development permits as warranted, based on the recommendations of the site's Hazard Assessment or other technical reports.

6.1.6 Siting of New <u>Water Supply</u> Reservoirs <u>and Small Water Retention Facilities</u>

(LCP) Require a full engineering geologic investigation prior to the construction of new <u>water supply</u> reservoirs, and if an unmitigable hazard exists, <u>denyrelocation of the proposed</u> reservoir. <u>Require smaller water retention facilities to be sited and engineered in a manner that will avoid</u> or mitigate potential hazards that could arise from failure of the facilities, especially to habitable structures and public and private access roads.

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 <u>and/or building/grading permit</u> <u>review processes</u>.

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, as well as projected hazards due to climate change and sea level rise.

6.1.9 Recordation of <u>Notice of Geologic Hazards</u>, <u>Acceptance of Risk</u>, <u>Liability Release</u>, and <u>Indemnification</u>

(LCP) <u>As a condition of development approval and/or prior to the issuance of a building/grading permit</u> for development/development activities and new and substantially improved structures in geologic hazard areas, rRequire the owner of a parcel in an area of potential geologic hazardsto record <u>on the property/tile deed</u>, with the County Recorder, a Notice of <u>Geologic Hazards</u>, <u>Acceptance of Risk, Liability Release, and Indemnification in a form approved by the County</u>. <u>The Notice shall include information about the nature of the hazard(s) as determined by the and the level of geologic and/or geotechnical investigation, provide that the current and all future owners and successors in interest accept the risks to people and property, and includes arelease of liability of and waiver of claims against the County of Santa Cruz for any damages or injury in connection with the permitted development. <u>conducted as a condition of development</u> approval.</u>

6.1.10 <u>Siting, Design and Density Recommendations Review offer</u> Proposed Development <u>for</u> <u>Acceptable Risk Levels</u>

(LCP) Approve the final density and design of a development or building/grading proposal, and location of proposed development on a site, only as if it is consistent with the recommendations of the technical reports. Deny the location or design of the proposed development if it is found that the hazards on the site cannot be mitigated to within acceptable risk levels for the nature of the development, as established by industry standards and as evidenced by property owner willingness to record on title a Notice of Geologic Hazards, Acceptance of Risk, and Liability Release.

6.1.11 Setbacks from Faults

(LCP) Exclude from density calculations for land divisions, land within 50 feet of the edge of the areaof 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 registered 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 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 RuralServices 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 conditionsof technical reports and of applicable provisions of the County Code. (Amended by Res. 201– 2008)

Programs

- a. Periodically update seismic design <u>and soil hazards design</u> criteria and the <u>Building and</u> Grading <u>ordinanceregulations</u>, with the advice of qualified professionals <u>and consistent with</u> <u>State law</u>, as information becomes available in order to <u>supportaid buildings and homeowners</u> <u>in constructing construction of</u> safe structures <u>in areas of seismic hazards</u>, liquefaction hazards <u>and other soil conditions subject to ground failure or cracking during seismic events</u>. (Responsibility: Planning Department)
- b. Continue to evaluate existing public facilities to determine whether they can maintain structural integrity during the design earthquake, and fund and carry out retrofits, retirements and/or replacements as may be needed to ensure public safety at public facilities during such earthquake events, with priority given to critical facilities. (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.<u>c.</u> Target the following structures to meet <u>California Building CodeUBC Zone 4</u> seismic safety standards <u>for existing buildings</u>:

(1) Buildings constructed prior to 1955;

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.d. Support seismic retrofit projects, including through priority permit processing and through special financing programs such as housing rehabilitation loans for qualified low income homeowners from State and local funding programs as may be availableprograms for residential properties. (Responsibility: Planning Department, Santa Cruz County Housing Authority, Board of Supervisors)
- g.e. Comprehensively map the Geologic Hazard Combining Zone District to include areas having a high, moderate or uncertain surface rupture potential, as well as known areas subject to high liquefaction hazards, and make the Geologic Hazards map(s) and related technical information available to the public on the county website. 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, Information Services Department/GIS)
- h.<u>f.</u> 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, Information Services Department/GIS)
- i-g. Revise existing seismic and geologic hazard maps as new, reliable information becomes available. (Responsibility: Planning Department, Information Services Department/GIS)
- j-<u>h.</u> 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, <u>Human Services Department</u>, <u>Health Services Agency and Department of Public Works</u>)</u>
- k-<u>i.</u> Develop public education programs to increase public awareness of seismic and geologic 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)

CLIMATE CHANGE: RESILIENCE AND ADAPTATION

Santa Cruz County approved a Climate Action Strategy CAS) in February 2013, and adopted an updated Local Hazard Mitigation Plan (LHMP) in June 2016. Materials in those documents provide substantial compliance with California Government Code requirements to address climate change, including but not limited to a vulnerability assessment, and adaptation and resilience goals, policies, objectives, and feasible strategies and implementation measures to avoid or minimize climate change impacts, especially for new land uses, essential public facilities, and public infrastructure.

The CAS Executive Summary summarizes the content of the document, including material that meets requirements for Safety Elements, as presented below.

Californians are already experiencing impacts from climate change (California Natural Resources Agency, 2009), and a wide variety of impacts are likely to be felt with increasing magnitude as the concentration of greenhouse gases (GHGs) in the atmosphere continues to rise (City of Santa Cruz, 2011). The first portion of the County's Climate Action Strategy (CAS) reports the results of the GHG emissions inventory for Santa Cruz County, proposes targets for GHG reduction, and outlines strategies and implementing actions to achieve the targets. The second portion focuses on vulnerability assessment and strategies for adapting to the types of impacts that are likely to occur in Santa Cruz County. The CAS incorporates input from the local community and non-governmental agencies that are working to mitigate and respond to climate change.

GHG emissions inventories were prepared for County government operations and for community activities for 2005 and updated for 2009. Total emissions for government operations in 2009 were approximately 34,000 metric tons of CO2 equivalent (CO2e), a decrease of 12 percent from 2005. T otaltotal emissions for community activities were approximately 1,030,000 metric tons in 2009, a decrease of more than 50 percent from 2005. The dramatic decrease in community emissions reflects the closure of the Davenport cement plant, which accounted for approximately 90 percent of the commercial/industrial emissions in 2005. The inventories indicate that 70 percent of the community emissions in 2009 were generated by the transportation sector. A separate, simplified inventory of GHG emissions from agricultural activity was prepared for 2011. Agricultural emissions other than electricity emissions were in the range of 17,000 metric tons of CO2e. This represents, at most, two percent of GHG emissions countywide (2009 data).

<u>State legislation requires California to reduce GHG emissions to 1990 levels by 2020. Based on</u> the 2005 community emissions inventory, 1990 emissions levels for Santa Cruz County were estimated. Santa Cruz County has already met the target for 2020 due to the closing of the Davenport cement plant. The State has also set a long-term reduction target for 2050, which is 80 percent below 1990 levels. The CAS incorporates the two state targets and sets an interim target for 2035. A "business as usual" estimate of future emissions is used to gauge the amount of effort required to meet the reduction targets.

GHG reduction strategies are proposed for the three sectors with the highest emissions: transportation, energy, and solid waste. The amount of emissions reductions that can be expected from each strategy is estimated. Calculations indicate that the emissions targets for 2035 and 2050 can be met, but that a sustained commitment to full implementation of the strategies will be required. The largest reduction will come from state and federal standards for fuel efficiency and vehicle emissions and from the California renewable energy portfolio standard (58 percent), followed by a cleaner energy supply from Community Choice Energy (CCE) if that type of regional energy authority is formed (22 percent), energy efficiency (9 percent), transportation and land use planning (5 percent), green business (3 percent), and

electric vehicles (3 percent). The CAS finds that if a CCE is not feasible the gap may be closed with greater reductions from other strategies, including a method to provide incentives for local renewable power and energy conservation similar to what a CCE would provide. However, a feasibility study was subsequently completed which has determined that it is feasible, and a collection of local governments are pursuing formation. Priority for implementation of GHG reduction efforts will be a function of the estimated potential for emissions reduction, cost to implement, and co-benefits of efforts.

<u>A plan for monitoring the implementation of emissions reduction is included in the CAS, which</u> <u>includes identifying the group with responsibility for implementation, periodic reporting, and a</u> <u>recommendation for updating the GHG emissions inventories every five years.</u>

<u>A vulnerability assessment was prepared to identify the conditions that may occur in Santa Cruz</u> <u>County as a result of the various components of climate change (increasing temperature, rising sea level, and shifts in the precipitation regime) and the locations, infrastructure and economic sectors that are particularly vulnerable to negative impacts.</u>

The assessment identifies the coastal areas that are most susceptible to increased flooding, storm surge, beach and coastal bluff erosion from winter storms. Winter storm damage may become more frequent than in the past as a result of heightened sea levels persisting longer as sea level rises (Cayan et al., 2008; Cloern et al., 2011), and precipitation that is concentrated in fewer months each year (Flint, L.E., and Flint, A.L., 2012). The analysis is based on 16–66 inches (42–167 cm.) of sea level rise by 2100, as forecast by the National Academy of Sciences (National Research Council, 2012). Inundation, rising groundwater, and increased saltwater intrusion into groundwater will also affect low-lying areas. The systems that will be most affected are residential coastal property, wastewater treatment infrastructure, coastal roads and bridges, beaches, coastal and wetland ecosystems, and water supply from coastal wells. The vulnerability assessment also identifies potential effects of precipitation changes and increased temperature of between 3.6–7.2 degrees Fahrenheit (2–4 degrees Celsius) (Flint, L.E., and Flint, A.L., 2012) on water supply, wildfire, biodiversity, and public health. Particular attention is given to the significant decrease in redwood habitat that may occur, especially if the current trend of decreasing coastalfog continues (Flint, L.E., and Flint, A.L., 2012).

Tourism and agriculture, two top revenue producing and job generating sectors of the local economy, are closely tied to the climate and are therefore vulnerable to climate change. Tourism relies on beaches, coastal attractions, redwoods, and vulnerable infrastructure for access to and around the coast. Agriculture will be affected by increases in temperature, changing pest patterns, changing fog dynamics, and increased potential for both flood and drought.

<u>A risk analysis was performed to determine which impacts from climate change present the greatest</u> risk to people and to the natural and built environments. In the short to intermediate term (2010–2050) water shortage was identified as the largest risk. In the intermediate to long term (2050–2100) rising water table, coastal bluff erosion, and increased flooding and landslides join water shortage as greatest risks.

<u>Climate adaptation goals are established as a guide for evaluating adaptation strategies. Specific</u> <u>adaptation strategies include new actions as well as acknowledgement of existing plans and programs,</u> <u>which such as the adopted Local Hazard Mitigation Plan (LHMP), while not explicitly about climate</u> <u>change, address the salient issues. Some proposed strategies emphasize avoidance of hazards while others</u> <u>focus on future planning efforts and specific engineering solutions to protect existing development.</u> <u>However, all emphasize building connections among people and among organizations to accomplish the</u> <u>climate adaptation goals in a framework of partnership.</u>

It is expected that the County's Climate Action Strategy will be modified periodically as scientific research progresses, new information becomes available and new ideas and priorities are brought forward as more people become involved in responding to climate change in Santa Cruz County. Such CAS updates will not be considered to be formal amendments to the General Plan, but as updates to implementation materials, as consistent with key goals and objectives of the CAS and General Plan.

The June 2016 update of the Local Hazard Mitigation Plan (LHMP) includes a great deal of the information, assessments and mitigation strategies that required to be included in a General Plan Safety Element. The first two parts of the LHMP address the planning process used and present a Community Profile, including key transportation routes and critical infrastructure locations. The third part identifies the hazards, presents risk and vulnerability assessments, estimates hazard loss estimates for existing and planned development, and outlines mitigation goals, strategies and actions, for the following types of hazards: earthquakes and liquefaction, wildfires, floods and coastal storms, drought, tsunami, coastal erosion, dam failure, landslide, expansive soils, and climate change. The LHMP contains an extensive number of maps further illustrating hazard types, including maps of levee flood gates, fault rupture zones, liquefaction areas, earthquake intensities, critical fire hazard areas, recent fires, flood zones, repetitive loss properties, Pajaro River flood risk, water agency service areas, tsunami inundation areas, coastal erosion areas, Newell Creek dam inundation area, slides and earthflows, landslide hazard areas, and expansive soils.

The fourth part of the LHMP presents the Mitigation Strategy, and the fifth part addresses the plan maintenance process. It is expected that the County's LHMP will be updated every five years or as required by law. Such LHMP updates will not be considered to be formal amendments to the General Plan, but as updates to implementation materials, as consistent with key goals and objectives of the LHMP and General Plan.

Objective 6.2.1 Climate Change: Resilience and Adaptation

(LCP) Implement the Climate Action Strategy approved in February 2013, as well as the Local Hazard Mitigation Plan approved in June 2016, in order to increase resilience and adapt to the effects of climate change. Update the CAS and LHMP as new science and approaches are available. Updates to the CAS and LHMP shall not require amendment of the General Plan and Local Coastal Program as long as the updates are in substantial conformance with the goals of this Safety Element and those documents, and further improve hazard information, resiliency and adaptation strategies.

Objective 6.2.2 Local Hazard Mitigation Plan and Climate Action Strategy

(LCP) Comply with Government Code 65302(g)(4) and incorporate by reference and implement the County's Local Hazard Mitigation Plan (LHMP) and updates approved by the Federal Emergency Management Agency (FEMA) and the Governor's Office of Emergency Services. The LHMP has been updated to address climate change adaptation consistent with the County's Climate Action Strategy (CAS) and updates. The LHMP identifies the risks that climate change poses to the County and the geographic areas at risk from climate change impacts. The LHMP creates a set of adaptation and resilience goals, policies, and objectives for the protection of the community. The LHMP creates a set of feasible implementation measures designed to minimize impacts of climate change, avoid at-risk areas, and utilize natural infrastructure where feasible to increase resiliency to climate change.

SLOPE STABILITY, LANDSLIDES AND OTHER ADVERSE SOIL CONDITIONS

LANDSLIDES. Landslides are the rapid downward movement of rock, earth, or artificial fill on a slope. Factors causing landsliding include the rock strength and orientation of elements on the slope, erosion, weathering, high rainfall, steepness of slopes, and human activities such as the removal of vegetation and inappropriate grading. Severe rainstorms in January 1982 caused multiple landslides throughout the Bay Area and especially in the Santa Cruz Mountains. One very large composite landslide along Love Creek, west of Loch Lomond Reservoir, killed ten people. This landslide was and continues to be an indicator of the potential severity of landslide activity and the need for observation and/or mitigation. Other landslides, including debris flows, destroyed homes killing several other people. In addition to damage to homes, widespread landslide damage occurred to roadways, driveways, and stream channels.

OTHER ADVERSE SOIL CONDITIONS. A variety of other adverse soil conditions result in a need for site-specific geotechnical/soils reports to ensure that appropriate specifications are incorporated into the design of proposed improvements. Expansive soils are generally clays or sedimentary rocks derived from clays, which experience volume changes as a result of moisture variation. The hazard that expansive soils create can be significant. Many of the expansive soils do not create large areas of destruction; however, they can disrupt supply lines (i.e. roads, power lines, railways, and bridges) and damage structures. The effects on structures can be dramatic if expansive soils supporting structures are allowed to become too wet or too dry. Lightly loaded one-story or two-story buildings, warehouses, residences, and pavements are especially vulnerable to damage because these structures are less able to suppress the differential heave of the swelling foundation soil than heavy, multistory structures. Patios, driveways and walkways may also crack and heave as the underlying expansive soils become wet and swell. Other adverse soil conditions can include but not be limited to areas of unconsolidated fill due to historic or improper grading, undermined slopes, roads or structures, and areas of low soil strength.

Objective 6.23 Slope Stability, Landslides and Other Adverse Soil Conditions

(LCP) To reduce <u>life</u> safety hazards and property damage caused by landslides, <u>debris flow</u>, <u>adverse soil</u> <u>conditions</u>, and other ground movements affecting land use activities in areas of unstable geologic formations, potentially unstable slopes and adverse soil conditions-and coastal bluff retreat.

Policies

6.23.1—Geologic Hazards <u>Assessments, Soils/Geotechnical Report or Geologic Report for</u> Development <u>Onon</u> and Near Slopes

(LCP) Require a geologic hazards assessment, soils/geotechnical report or geologic report of all for proposed development, including grading and building permits, that is potentially affected by slope instability hazards that exist on or near the site, regardless of the slope gradient on which the development itself is proposed takes place. Such assessment or reports shall may be prepared by County staff under supervision of the County Geologist, or by a registered certified engineering geologist or civil engineer, as required by the County and may conduct this review at the applicant's choice and expense. Any Geologic Hazards Assessment, Soils/ Geotechnical Report or Geologic Report must be accepted by the County Geologist in order to use its findings and/or incorporate its mitigations into a proposed development, grading or building project.

6.23.2 Engineering Geology Report <u>or Soils/Geotechnical Report</u>

(LCP) Require an engineering geology report by a <u>certified engineering registered</u> geologist and/or a soils/<u>geotechnical</u> engineering report <u>prepared by a qualified professional</u> when the hazard

assessment identifies potentially unsafe geologic conditions in an area of proposed development.

6.23.3 Conditions and Design Specifications for Development, Building and Grading Permits

(LCP) Condition development <u>permits and ensure design/mitigation specifications have been</u> <u>incorporated into building</u> and grading plans-<u>permits</u> based on the recommendations of the Hazard assessment and other technical reports.

6.23.4 Mitigation of Geologic Hazards and Density, <u>Design and Location</u> Considerations (LCP)

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

6.23.5 Slope Considerations for Land Division Calculations

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

6.23.6 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 plansthat direct runoff and drainage away from unstable slopes.

6.23.7 Location of Septic Leachfields

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

6.23.98 Recordation of <u>Notice of Geologic Hazards</u>, <u>Acceptance of Risk</u>, <u>Liability Release</u>, and <u>Indemnification</u>

(LCP) <u>As a condition of development approval and/or prior to the issuance of a building/grading permit</u> for development/development activities and new and substantially improved structures in geologic and/or coastal hazard areas, rRequire the owner of a parcel in an area of potential geologic hazards to record <u>on property title/deed</u>, with the County Recorder, a Notice of <u>Geologic Hazards</u>, Acceptance of Risk, Liability Release, and Indemnification in a form approved by the County. The Notice shall include information about the nature of the hazard(s) as determined by the and the level of prior geologic and/or geotechnical investigation, provides that the current and all future owners and successors in interest accept the risks to people and property, and includes a release of liability of and waiver of claims against the County of Santa Cruz for damages or injury in connection with the approved development. 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 <u>or mitigate</u> landslide conditions which threaten structures or roads, including improper or unauthorized drainage affecting county

roads and/or drainage facilities through applicable Notice and Order and/or abatement processes. (Responsibility: Planning Department, Public Works Department)

b. Maintain and periodically update public information brochures <u>and information available</u> <u>on the county website</u> concerning landslide hazards and guidelines for hillside development, as new information becomes available. (Responsibility: Planning Department)

6.5 GRADING AND EROSION HAZARDS

Erosion is closely related to slope stability and this section of the Safety Element addresses the need for drainage and erosion control plans for certain grading and development projects. It also sets forth standards for the prevention of erosion and siltation on properties irrespective of whether permits are being sought for property improvements.

Thresholds for when discretionary grading permits, exception permits, winter grading permits (consistent with both the grading and erosion control regulations), and land clearing permits are required for development projects are also established in this section.

Land Clearing Permits are required for any land clearing of existing natural areas of one-quarter acre or more. The threshold for when this permit is required has been lowered in response to increasing erosion and damage to habitats that has resulted from increased intensity of certain special agricultural activities, including but not limited to cannabis cultivation.

Agricultural grading on less than twenty percent slopes, as well as vineyards and associated terracing (irregardless of slope), does not require a regular grading permit and is instead subject to agricultural grading regulations. However, defined "specialized agricultural activities" such as greenhouses, indoor growing, aquaculture and any cannabis cultivation activities involving more than 100 cubic yards is not considered agricultural grading and requires a regular grading permit, and grading on twenty percent slopes or more also requires a regular grading permit.

All grading in the coastal zone, unless otherwise exempt or excluded, requires a coastal development permit. Such grading shall be the minimum amount necessary, shall minimize the alteration of natural landforms and protect views to and along the ocean and scenic coastal areas, shall not degrade water quality, and shall otherwise protect coastal resources.

Objectives 6.35 Erosion

(LCP) To control erosion and siltation originating from existing conditions, <u>grading activities</u>, currentlanduse activities, from new developments, and new and existing cannabis activity and related development, to reduce damage to soil, water, and biotic resources.

Policies

6.35.1 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 apply for an Exception Permit to be excepted from the prohibition where siting on greater slopes would result in less land disturbance, or siting on lesser slopes is infeasible.

6.35.2 Grading Projects to Address Comply with Codes and Engineer's Recommendations, and Incorporate Mitigation Incorporate Mitigation Measures

(LCP) Grading permits involving less than 1,000 cubic yards of earth material on less than 20 percent slopes which are processed as ministerial building permits, must comply with the standards of applicable county codes and the recommendations of a soils or geotechnical report in order to be approved and issued. Discretionary grading permits above this threshold may be processed concurrently with a building permit, and are processed administratively. Discretionary grading permits for grading of 8,000 cubic yards or more, or for grading of 1,000 cubic yards or more if the grading area is visible to the public from a designated scenic public road or visible to the

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public within a designated scenic area, are subject to approval of the Planning Commission and conditions of approval may be imposed. Standards for exemptions from a requirement for a discretionary grading permit are established by the County Code Grading Regulations. Deny any grading project where a potentially significant danger to soil or water resources has been identified and adequate mitigation measures cannot be undertaken.

6.35.3 Abatement of Grading and Drainage Problems

(LCP) Require, as a condition of development approval <u>for new development on a site</u>, or <u>for grading</u> <u>subject to a requirement for a discretionary grading permit</u>, <u>that-abatement of</u> any grading or drainage condition on the property which gives rise to existing or potential erosion problems <u>be abated</u>.

6.35.4 Erosion Control <u>Measures and/or Erosion Control</u> Plan Approval Required for Development

(LCP) Require that all grading permits processed as ministerial building permits include erosion control measures within the grading plan that meet county and professional standards. Require approval of an eErosion eControl pPlan in conjunction with a Winter Grading Permit for all proposed winter grading or other development that is subject to the Erosion Control regulationssuch as a Land Clearing Permit development, as specified in the Erosion Control and Grading ordinances. Vegetation removal shall be minimized and limited to that amount indicated on the approved development plans, but shall be consistent with fire safety requirements.

6.35.5 Installation of Erosion Control Measures

Require the installation of <u>the required</u> erosion control <u>measures</u> plan for winter grading <u>activities subject to consistent with</u> the Erosion Control ordinance, by <u>either</u> October 15, or the advent of significant rain, or project completion, whichever occurs first <u>and depending upon</u> the nature of the project and the time that grading will occur. Prior to October 15, require adequate erosion control <u>measures</u> to be <u>implemented during grading activities</u> provided to prevent erosion from early storms, and that the area of grading be free of loose and erodible soils upon completion of grading activities. For permitted discretionary grading and 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.

6.35.6 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 through issuance of a Winter Grading Permit in compliance with the Grading and Erosion Control Ordinances. If such activities take place, measures to control erosion must be in place at the end of each day's work.

6.35.7 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, including revegetation to be established from seeds of native plant species and grasses that are retained within the topsoil and nearby undisturbed native plant species and grasses; native vegetation should be used in replanting disturbed areas to enhance long-term stability.

6.35.8 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 to, at a minimum, not exceed pre-development levels in compliance with applicable standards,

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.

6.35.9 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<u>unless a Slope</u> Exception Permit has been approved by the County in accordance with the Grading Ordinance and Policy 6.5.1 of the Safety Element; and 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 <u>by the</u> <u>applicant's qualified soils professional and approved by County staff</u> 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_with erosion control fabric.

6.35.10 Land Clearing Permit

(LCP) Require an administrative discretionary lLand eClearing pPermit and an erosion control plan for clearing one-quarter or more acres, except when clearing is for existing agricultural uses. Clearing grazing lands of existing native grasses or other existing vegetation, for the purpose of establishing more intensive agriculture such as row crops, wine grapes, greenhouses or cannabis cultivation, requires a Land Clearing Permit. Require that any erosion control and land clearing activities be consistent with all General Plan and LCP Land Use Plan policies and implementing regulations of the County Code.

6.35.11 Sensitive Habitat Considerations for Land Clearing Permits

(LCP) Require a Land Clearing pPermit for any amount of 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 and implementing regulations of the County Code.

6.35.12 Cannabis Industry: Avoid Excessive Grading

(LCP) In order to protect public health and safety and prevent negative environmental impacts from grading and land disturbance, avoid excessive grading and disturbance associated with cannabis activities. This includes grading for access roads and other site improvements such aspads, structures, terracing and other infrastructure, including grading which may be required tomeet fire code or other standards. Carefully evaluate grading that would significantly alter topography, visual character of an area or coastal resources, and avoid or minimize such alteration. Consider or favor alternate locations that would require less disturbance. Deny licenses and land use permits where necessary to implement this policy.

6.35.13 Cannabis Industry: Site Restoration

(LCP) Ensure that sites used for cannabis activities are restored to pre-graded condition, as appropriate, when cannabis activities are relocated, activity has ceased, or a cannabis license isno longer valid.

6.5.14 Ensure Property Owners Comply with Regulations to Prevent Runoff, Erosion and Pollution

Ensure that all property owners, whether or not they are involved with pursuing or implementing development or grading/building permits, are aware of County Code Title 7 provisions prohibiting activities that generate water and other pollution, such as that produced by improper conditions that allow accelerated erosion to affect waterways and habitats.

6.5.15 <u>Regular Grading Permits required for Specialized Agricultural Activities and Grading</u> on Slopes of Twenty Percent or More

Agricultural grading on less than twenty percent slopes, as well as vineyards and associated terracing (regardless of slope), does not require a regular grading permit and is instead subject to agricultural grading regulations. However, defined "specialized agricultural activities" such as greenhouses, indoor growing, aquaculture and any cannabis cultivation activities involving more than 100 cubic yards is not considered agricultural grading and requires a regular grading permit, and grading on twenty percent slopes or more for any crop other than vineyards also requires a regular grading permit.

6.5.16 Grading and Erosion Control Review Standards in the Coastal Zone (LCP) Unless otherwise exempted or excluded, and in addition to all other requi

Unless otherwise exempted or excluded, and in addition to all other required permits and authorizations, all grading in the Coastal Zone requires a Coastal Development Permit. Such grading shall be the minimum amount necessary, shall minimize the alteration of natural landforms and protect views to and along the ocean and scenic coastal areas, shall not degrade water quality, and shall otherwise protect coastal resources, including in conformance with the requirements specified below. In addition to any other applicable standards set forth in this section, all grading in the Coastal Zone shall adhere to the following:

- (a) <u>Deny any grading where a potential significant danger to soil or water resources has been</u> identified and adequate mitigation measures cannot be undertaken.
- (b) <u>Require, as a condition of development approval, abatement of any grading or drainage</u> <u>condition on the property which gives rise to existing or potential erosion problems.</u>
- (c) <u>Require approval of an Erosion Control Plan for all development as specified in the Erosion</u> <u>Control and Grading ordinances. Vegetation removal shall be minimized and limited to that</u> <u>amount indicated on the approved development plans.</u>
- (d) <u>All development, including access roads and driveways, shall not cross slopes greater than</u> <u>30 percent. A single-family dwelling and associated development on an existing lot of record</u> <u>may be excepted from the prohibition where siting on greater slopes would result in less</u> <u>land disturbance (e.g., doing so would avoid ESHA or other sensitive habitats) and siting on</u> <u>lesser slopes is infeasible (i.e., there are no other buildable spots on lesser than 30% slope).</u>
- (e) <u>Through runoff and erosion control measures</u>, <u>runoff shall not exceed pre-development</u> <u>levels</u>.
- (f) <u>Deny any grading that is not in conformance with the LCP's provisions governing</u> <u>development within coastal streams, wetlands, and environmentally sensitive habitats and</u> <u>their corresponding buffers.</u>

Programs

(LCP) a. Establish an active erosion control education program for the general public, builders, and staff, in cooperation with the Resource Conservation District and the Soil Conservation Service. (Responsibility: <u>Environmental Health, Public Works and Planning Department</u>)

b. Enforce the comprehensive Erosion Control <u>and Runoff and Pollution Control</u> ordinance<u>s</u> requiring control of existing erosion problems as well as the installation of erosion, sediment,

and runoff control measures in new developments. (Responsibility: <u>Environmental Health</u>, <u>Public Works and Planning Department</u>, <u>Planning Commission</u>, <u>Board of Supervisors</u>)

- (LCP) c. <u>Pursue grants or other cost-sharing programs with outside and/or private or non-profit</u> funding to assist property owners with control of existing problems that are too large to be effectively controlled by the owner. (Responsibility: Planning Department)
- (LCP) d. Encourage use of Resource Conservation District programs to control existing erosion problems. (Responsibility: Planning Department)

FLOOD HAZARDS

This section addresses flood risks associated with streams, rivers, lakes, and other waterways and their associated floodplains. Coastal-related flood hazards (i.e., those risks associated with ocean-related forces along beaches and bluffs along the ocean/land interface) are addressed in Section 6.4. Flooding and coastal storms present similar risks and are usually related types of hazards in the County ofSanta Cruz. Coastal storms can cause increases in tidal elevations (called storm surge), wind speed, coastalerosion, and debris flows, as well as flooding. During a flood, excess water from rainfall or storm surge accumulates and overflows onto the banks, beaches, and adjacent floodplains. Floodplains are lowlands adjacent to rivers, lakes and oceans that are subject to recurring floods. Several factors determine the severity of floods, including rainfall intensity and duration, creek and storm drain system capacity, and theinfiltration rate of the ground.

A flood occurs when a waterway receives a discharge greater than its conveyance capacity. Floods may result from intense rainfall, localized drainage problems, tsunamis or failure of flood control or water supply structures such as levees, dams or reservoirs. Floodwaters can carry large objects downstream with a force strong enough to destroy stationary structures such as homes and bridges, and can break utility lines. Floodwaters also saturate materials and earth resulting in the instability, collapse and destruction of structures as well as the loss of human life.

Floods usually occur in relation to precipitation. Flood severity is determined by the quantity and rate at which water enters the waterway, increasing volume and velocity of water flow. The rate of surface runoff, the major component to flood severity, is influenced by the topography of the region as well as the extent to which ground soil allows for infiltration in addition to the percent of impervious surfaces. It is important to note that a stream can crest long after the precipitation has stopped.

As storms arrive onto land from the Pacific and rise over the mountains and ridges that border the eastern boundaries of the County, the air associated with those storms cools and that cooling results in large amounts of precipitation. The topography provides fairly steep and well-defined watershed areas to funnel the falling rain into runoff tributaries. Periods of very heavy rainfall are common throughout fall and winter months and the two rivers in the County, along with several creeks and streams, can rise to flood stage in a short period of time. Settlement and habitation in the County, from the historic Ohlone Indian camps through the founding of the Santa Cruz Mission in 1791, and subsequent logging communities throughout the 1800's, tended to acknowledge the floodplain areas of the rivers and streams, building on the higher ground. However, as the population grew, particularly in the middle 1900's, low lying areas near virtually every waterway were encroached upon for housing, business, or agricultural development.

Climatologists point out that the period between 1920 and 1970, the years of most significant growth in Santa Cruz County, was a "dry cycle" for most of central California. Only one or two instances of serious winter weather in the 1950's highlighted the consequence of development in low-lying areas. Over time, land that had previously been avoided was developed for both commercial and residential use in the floodplains of the San Lorenzo and Pajaro Rivers, Soquel and Aptos Creeks, and along the beaches. As a consequence, substantial portions of the City of Santa Cruz and the City of Watsonville have been flooded, houses and businesses in the San Lorenzo Valley have been damaged or destroyed by floodwaters, and there have been losses along Soquel Creek, Aptos Creek, and in beach areas on multiple occasions over the past half-century.

Future projections of climate change impacts indicate that flood hazards will increase in coastal areas due to sea level rise, and in inland areas due to hydrologic changes in watersheds that may include more frequent and more intense rain events and consequent increases in flood hazards. Policies are update updated to

The policies of the Flood Hazards section require new development to be located outside of the flood hazard area, wherever possible, and to incorporate floodproofing measures as required by FEMA and local flood regulations in areas subject to flood hazards._

Objective 6.46 Flood Hazards

(LCP) To <u>reasonably</u> protect new, <u>replacement</u>, <u>reconstructed</u>, <u>modified</u>, and existing structures fromflood hazards, <u>including sea level rise and coastal wave run-up hazards</u>, in order to minimize economic damages <u>within the expected lifespans of such structures</u>; and <u>to address</u> threats to public health and safety, and to prevent adverse impacts on floodplains, and maintain their beneficial function for flood water storage and transport and for biotic resource protection.

Policies

6.46.1 Geologic/<u>Flood/Coastal</u> Hazards Assessment<u>s and Reports, and Use of Best Available</u> Science Required in Flood Hazard Areas <u>and on Coastal Bluff Locations</u>

(LCP) Require an assessment of geologic, <u>coastal</u>, and flood hazards <u>assessment of for</u> all development, and <u>building/grading</u> proposals within the County's flood hazard areas in order to identify flood hazards and development constraints. <u>Recognize scientific uncertainty by using within</u> technical reports and project designs a reasonably foresceable projection of sea level rise within the acceptable range established by the best available science and statewide guidance. Any Hazards Assessment or Investigation Report must be accepted by the County Geologist in order to use its findings and/or incorporate its mitigations into a proposed development project.

6.46.2 Development Proposals Protected from Flood Hazard

(LCP) Approve only those grading applications and development proposals that are adequately protected from flood <u>and coastal</u> hazards and which do not add to flooding damage <u>or</u> potential<u>within</u> <u>applicable regulatory or expected lifespans of structures</u>. This may include the requirement for foundation design which minimizes displacement of flood waters, as well as other mitigation measures. Require all developments to be sited and designed to avoid or minimize flood hazards for the expected lifespans of principal structures associated with the development.

6.46.3 Development on or Adjacent to Coastal Bluffs and Beaches

(LCP) Allow development in areas immediately adjacent to coastal bluffs and beaches only if a geologist determines that wave action, storm swell and tsunami inundation are not a hazard to the proposed development or that such hazard can be adequately mitigated_and_conditioned to protect life/safety, and within the applicable regulatory or expected lifespans of structures. Such determination shall be made by the County Geologist, or a registered certified engineering geologist may conduct this review at applicant's choice and expense.

6.46.4 Locate <u>New</u> Public Facilities Outside Flood Hazard Areas

(LCP) Require new utilities, critical facilities and non-essential public structures to be located outside the 100-year flood and coastal high hazard areas, unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life or property within or adjacent to the flood hazard area. floodplain or coastal inundation areas.

6.46.5 New Parcels in <u>Flood Hazard Areas</u>100-Year Floodplains

- (LCP) Allow the creation of new parcels, including those created by minor land division or subdivision, in <u>the flood hazard areas100-year floodplains</u> only under the following circumstances:
 - (a) A full hydrologic report and any other appropriate technical report(<u>s</u>) must demonstrate that each proposed parcel contains at least one building site, including <u>as applicable</u> a septic system and leach field site, which is not subject to flood hazard <u>within the expected lifespan</u> <u>of the development</u>, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.
 - (b) <u>The final recorded map shall indicate A declaration indicating</u> the limits and elevations of the <u>flood hazard area asone hundred year floodplain</u> certified by a registered professional engineer or surveyor must be recorded with the County Recorder.
 - (c) Adequate drainage to reduce exposure to flood hazards must be provided.
 - (d) Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood. (Revised by Res. 81-99)

6.46.6 Density Calculations

(LCP) In all areas exclude the portion of the property designated within the <u>flood hazard area-100-year</u> floodplain-from density calculations. Require clustering of allowable units to minimize flood hazards, as warranted and feasible given the location of the development.

6.46.7 New Construction to be Outside Flood Hazard Areas

(LCP) Restrict new construction to the area outside the <u>flood hazard areas100-year floodplain and area</u> subject to coastal inundation, if a buildable portion of the parcel exists outside such areas.

6.46.8 Elevation of Residential Structures

(LCP) Require elevation of the habitable portions of residential structures above the <u>100-yearbase</u> flood <u>levelelevation</u> where constructed within a <u>flood hazard area</u>. Require floodproofing or elevation of non-residential structures. Require that foundations do not cause floodwater displacement except where necessary for floodproofing.

6.6.9 Require Freeboard

(LCP) Freeboard is a factor of safety measured in feet above a base flood elevation or height for purposes of floodplain management. Freeboard is required to compensate for the manyunknown factors that could contribute to flood heights or elevations greater than the height orelevation calculated for a selected size flood and floodway conditions, such as wave action, bridges, climate change, sea level rise, and the hydrological effect of urbanization of the watershed. For all structures located on parcels that are partially or wholly in Coastal A and VZones, freeboard above the wave run-up elevation shall be based on a reasonably foreseeable projection of sea level rise within the acceptable range established by the best available scienceand statewide guidance. For habitable structures located in flood hazard areas outside of Coastal A and V Zones, freeboard, above the base flood elevation shall be determined by the Planning Director.

6.4<u>6.910</u> Septic Systems, <u>and Leach Fields</u>, and Fill Placement

(LCP) Septic systems and leach fields to serve previously undeveloped parcels shall not be located within the <u>flood hazard areafloodway or the 100 year floodplain</u>. The capacity of existing systems in the <u>flood hazard areafloodway or floodplain</u> shall not be increased. Septic systemsshall be <u>located and designed to avoid impairment or contamination in accordance with CountySewage</u> <u>Disposal Regulations</u>. Allow the placement of fill within the 100-year floodplainin the minimum amount necessary, not to exceed 50 cubic yards. Fill shall only be

allowed if it can be demonstrated that the fill will not have cumulative adverse impacts on or off site. No fill is allowed in the floodway. (Revised by Res. 81-99)

6.6.11 Fill Placement

(LCP) Allow grading within the 100-year floodplain only if there is no net increase in fill, or if it can be demonstrated through analysis by a qualified engineer's report that is reviewed and accepted by the County, and by FEMA if applicable, that the grading will not have cumulative adverse impacts on or off site. No fill is allowed in the floodway. All development, including fill placement and grading, must be in conformance with the LCP's provisions governing development within coastal streams, wetlands, and their corresponding buffers.

6.4<u>6</u>.1012 Flood Control Structures

(LCP) Allow flood control structures only to protect existing development (including agricultural operations) where no other alternative is feasible and where such protection is necessary for public safety. The structures must <u>be designed or must incorporate mitigations/conditions of approval to ensure that they do</u> not adversely affect sand supply, increase erosion or flooding on adjacent properties, or restrict stream flows below minimum levels necessary for the maintenance of fish and wildlife habitats.

6.6.13 Required Recordation on Deed of Notice of Geologic/Coastal Hazard, Acceptance of Risk, Liability Release, and Indemnification Prior to Permit Approval

(LCP) Prior to issuance of a building or grading permit for substantial improvement on sites subject to flood hazards, require the applicant to record on title/deed to the property a Notice of Geologic/Coastal Hazard, Acceptance of Risk, and Liability Release. The Notice shall be in a form approved by the County of Santa Cruz, and shall include, but not be limited to, the following acknowledgements and agreements, as applicable to the specific project:

Coastal Hazards (if applicable). That the site is subject to coastal hazards including but not limited to episodic and long-term shoreline retreat and coastal crossion, high seas, ocean waves, storm surge, tsunami, tidal scour, coastal flooding, liquefaction and the interaction of same; Assume and Accept Risks. To assume and accept the risks to the Applicant and the properties that are the subject of a building or grading permit of injury and damage from such

geologic/flood/coastal hazards in connection with the permitted development; Waive Liability. To unconditionally waive any claim of damage or liability against the County of Santa Cruz and its officers, agents, and employees, for injury or damage to the permitted

development, occupants of the site, or the general public in connection with the permitted development as related to geologic/coastal hazards;

Indemnification. To indemnify and hold harmless the County and its officers, agents, and employees, with respect to the County's approval of the development against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement to the extent arising from any injury or damage in connection with the permitted development;

Property Owner Responsible. That any adverse effects to property caused by the permitted development shall be fully the responsibility of the property owner. That cost of abatement and/or future removal of structures shall be the responsibility of the property owner;

Flood Insurance. If the structure is built so that it does not comply with an effective BFE data as may be shown on future final Flood Insurance Rate Maps (FIRM), acknowledging that the structure may be subject to a higher flood insurance rating, likely resulting in higher-risk annual flood insurance premium if the property owner purchases flood insurance (voluntarily, or as required by mortgage lenders). If a program is created in the future that removes the subject location from being eligible for FEMA flood insurance, agree not to protest and to abide with

Chapter 6: Public Safety Element the terms of such a program.

Formation of GHAD or CSA. The property owner and / or any future heirs or assigns, by accepting this permit, acknowledge that a Geologic Hazard Abatement District (GHAD) or County Service Area (CSA) may be formed in the future by the County or other private entity to address geologic/flood/coastal hazards, and assessments may be proposed for the abatement of geologic hazards.

Public Funds. That public funds may not be available in the future to repair or continue to provide services to the site (e.g., maintenance of roadways or utilities) and under such circumstances the County does not guarantee essential services to the site will continue to be provided, especially to sites that have or will soon become public trust lands as the mean high tide line migrates inland due to sea-level rise;

Occupancy. That the occupancy of structures where sewage disposal or water systems are rendered inoperable may be prohibited;

Public Trust Lands. That the structure may eventually be located on public trust lands; and **Removal or Relocation.** In accordance with County regulations and Orders of the Chief Building Official, County Geologist, or Civil Engineer, that all development on the site, including shoreline and coastal bluff armoring, may be required to be removed or relocated and the site restored at the owners expense if it becomes unsafe, it is no longer located on private property, or if essential services to the site can no longer feasibly be maintained consistent with Policies 6.4.32 through 6.4.35.

Programs

a. Continue the Floodplain Management Program in accordance with the Federal Flood Insurance Program. (Responsibility: Planning Department)

b. Revise County floodplain maps as updated <u>adopted FEMA Maps are published</u>. information becomes available. (Responsibility: Planning Department, FEMA)

c. Comprehensively map the Geologic Hazards Combining District in order to place all existing regulations into one concise and consistent ordinance and to notify future buyers of the policies as they pertain to affected parcels. (Responsibility: Planning Commission, Planning Department)

d. Maintain culverts and drainage facilities on County roads and seek to eliminate log-jams and other obstructions from stream courses. (Responsibility: Public Works, <u>Environmental</u> <u>HealthPlanning</u> Department).

e. Continue to provide information to property owners located in <u>flood hazard</u> <u>areasfloodplains and coastal high hazard</u> inundation areas to encourage participation in the Federal Flood Insurance Program. (Responsibility: Planning Department).

f. Maintain the Automated Local Evaluation in Real Time (ALERT) Systems along <u>the San</u> <u>Lorenzo River</u>, Soquel Creek, <u>Pajaro River</u>, and Corralitos Creek. Implement a floodplain warning system for the San Lorenzo River, Aptos Creek and Valencia Creek. The Pajaro River Basin continues to be monitored by the National Weather Service. (Responsibility: <u>Planning</u> <u>Public Works</u> Department, County Office of Emergency Services)

g. <u>Prepare Maintain</u> detailed tsunami evacuation plans for coastal areas subject to the tsunami hazard. (Responsibility: County Office of Emergency Services)

(LCP) h. <u>Consider Incorporateing</u> more detailed information on tsunami inundation levels into the existing flood hazard program when this information is available. Existing development regulations would then apply to areas subject to this hazard. (Responsibility: County Office ofEmergency Services, <u>Planning</u>)

i. Prepare and adopt an emergency warning system and detailed evacuation plans for areas subject to inundation in the event of failure of the Newell Creek Dam. (Responsibility: County Office of Emergency Services)

j. Work with relevant state and federal agencies to <u>continue to</u> monitor potential rise in sea level due to <u>climate changethe greenhouse effect</u> and <u>refine regulations and</u> develop long term programs to address the impacts. (Responsibility: Planning Department, Board of Supervisors)

k. Continue to work with the Joint Powers Authority to relocate the Santa Cruz County Emergency Operations Center from the basement of the County Government Center, where it is vulnerable to flooding. (Responsibility: Board of Supervisors, Office of Emergency Services, County Administrative Office.

WILDLAND AND URBAN FIRE HAZARDS

Introduction

A wildland fire may be defined as any unwanted fire involving outdoor vegetation. This may be perceived as only occurring in forests, rangelands or agricultural fields, but it might also occur in vacant lots, highway medians, parks, golf courses and rural residential areas. The term Wildland Urban Interface (WUI) describes many of these areas. The nature of wildland fire has changed with incidents in the WUI. The potential for both life and property losses in the WUI is exponentially higher than non-populated wildlands. In addition, human influence has greatly increased the number and variety of potential sources of ignition. Wildland fires are influenced by three factors: fuel, weather and topography. Wildfire spread depends on the type of fuel involved (grass, brush and trees). Weather influences wildland fire behavior with factors such as wind, relative humidity, temperature, fuel moisture and possibly lightning. Several of these factors can modify the rate the fire will burn. Topography is the biggest influence on fire severity. While normal weather conditions in the Santa Cruz Mountains can be categorized as cold and damp with extensive marine influence (fog), several times each year conditions are created where fuel moisture levels have been measured below 5% with temperatures above 900, and north winds greater than 45 mph.

Large areas of the County have been mapped as Critical Wildfire Hazard Areas due to accumulations of wildfire prone vegetation, steep and dry slopes and the presence of structures vulnerable to wildland fires. These areas are generally situated in the steeper higher elevations of the county. Most of these areas are along the border of Santa Clara County or in the Coastal ridges between Highway 9 and Highway 1. While the map of Critical Fire Hazard Areas remains relevant for areas of increased wildfire risk, it should be noted that wildland fires may occur anywhere within the County.

The potential magnitude or severity of future fires could be predicted from experience gained from the recent fires of 2008/2009. In those fires, spotting exceeding 1 mile, torching of conifers, flame lengths exceeding 100', area ignition and sheeting were all observed. In 2008, over 75 structures were destroyed on 3 fires alone. Similar fuels (Manzanita/Knobcone, Eucalyptus, chaparral, and mixed conifer forestland), topography and weather conditions are expected to be encountered in future fires creating a repeat of extreme fire behavior exhibited in recent large local fires.

Santa Cruz County is ranked 9th among 413 western state counties for percentage of homes along the WUI and 14th in California for fire risk. During the preparation of the countywide Community Wildfire Protection Plan (CWPP), numerous assets at risk were identified. These include thousands of residences, several schools including a State University, several youth camps, and numerous commercial facilities. There are 5 local public water systems with extensive infrastructure situated within high hazard areas. Three state highways and 3 major power transmission Rights of Way cross through vulnerable areas. Dueto topography and limited access, both the protection plus potential reconstruction of these assets will be hampered.

The impact of wildfire on a community is far-reaching. The most significant impacts would be loss of life, environmental damage and loss of property. Air quality is also a major issue, which can force the closure of schools and businesses as well as limit human activity. Damage to infrastructure such as culverts, roads and bridges can be difficult to locate and repair in a timely manner. During the rainy season, burned-over areas are subject to mudslides and debris torrents which can be exacerbated by infrastructure damage. Sedimentation due to winter rains can destroy fish habitats, which can have a catastrophic effect on the ecosystem.

A fire threat will always exist in the WUI. There will always be flammable vegetation, structures and human activities creating a situation where it is not "if" but "when" the next large fire occurs in the county.
This Wildland and Urban Fire Hazards section addresses natural fire hazards as well as fire hazards from human activity and increased hazard levels projected to occur as a result of climate change. In compliance with State law, this section establishes road standards and development requirements for fire prevention and response.

Fire History

Prior to about 1950 information on wildfire in Santa Cruz County was limited to verbal history and newspaper accounts. After the Division of Forestry began gathering data in the 1950's, significant wildfires in Santa Cruz and adjacent counties were documented in the early 1960's and again in the 1980's (Lexington fire). The devastating wildfires that occurred in Santa Cruz County in 2008 (Summit, Martin and Trabing fires) and 2009 (Lockheed and Loma fires) burned a combined area of nearly 14,000 acres andnumerous homes and structures. What makes wildfire different today as compared to the early part of the the-last century is the number of people living in the rural area, or the Wildland Urban Interface (WUI). According to the United States Census, the population of Santa Cruz County has increased by nearly 200,000 people since the middle of the last century, from 66,534 in 1950 to 262,340 in 2010. Much of theincrease occurred in urban areas, but rural areas have experienced significant population increases, as well. This has caused the fire agencies to change approaches to fire hazards from focusing primarily on the fire to dealing with increasing demands for protecting roads, structures, and people. Because there are not enough firefighters or fire apparatus to protect each and every home during a wildfire, the community andgovernment must take greater responsibility for preventative measures to make homes, neighborhoods, andthe community more defensible from wildfire. (Source: San Mateo - Santa Cruz Unit Strategic Fire Plan)

Fire Plans

The San Mateo - Santa Cruz Unit Strategic Fire Plan identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce losses within the Unit. There is a history of collaborative efforts between fire agencies and communities including Las Cumbres, Olive Springs and Bonny Doon. Efforts such as these have resulted in numerous fuel reduction projects and community education. More recently, the Unit has seen an unprecedented level of pre-fire "grass roots" organization, including the formation of the Soquel, South Skyline, and Bonny Doon Fire Safe Councils. Also, with the assistance of the Resource Conservation District (RCD) through a grant from the United States Fish and Wildlife Service, a Community Wildfire Protection Plan (CWPP) was developed with input from stakeholders throughout Santa Cruz County. In 2010, the Board of Supervisors for Santa Cruz County adopted the 2010 San Mateo County – Santa Cruz County CWPP. The Unit Strategic Fire Plan is meant to work in collaboration with the CWPP.

The CWPP attempts to identify fire hazards, as seen across the landscape, and provide strategies to mitigate wildfire risk and restore healthier, more resilient ecosystems while protecting life and property. A CWPP also serves as a tool for the accrual of grant funding to aid in the implementation of wildfire prevention projects. The CWPP is a guidance document that recommends both general and specific projects in priority fuel reduction areas, and provides recommendations to reduce the ignitability of structures. Local projects are subject to appropriate permitting and environmental review processes. The CWPP was developed collaboratively by CAL FIRE, Resource Conservation District of Santa Cruz and San Mateo Counties, the United State Fish and Wildlife Service, other agencies, and members of the community.

The San Mateo – Santa Cruz Unit Strategic Fire Plan and the CWPP address areas with inadequate access and evacuation routes and identify risk to life and property from wildland fire and provide information on firefighter safety, community evacuation and recommended actions by first responders. The plans also Address post-fire responsibilities for natural resource recovery, including watershed protection reforestation, and ecosystem restoration.

State and Local Responsibility Areas

Wildland fire protection in California is the responsibility of the State, local government, or the federal government depending on location. The State Responsibility Area (SRA) is the area of the state where financial responsibility for the prevention and suppression of wildfires is primarily the responsibility of the state. Of course, the partnership of private property owners is essential for implementing fire prevention strategies. In general, SRA includes forest-covered lands, whether of commercial value or not, or brush or grass-covered lands. SRA does not include lands within city boundaries or in federal ownership. Fire protection in SRA is typically provided by CAL FIRE. However, in Santa Cruz County, autonomous fire protection districts provide fire protection in large parts of the SRA. Local responsibility areas (LRA) include incorporated cities and other urbanized areas, and cultivated agriculture lands. Local responsibility area fire protection is typically provided by city fire departments, fire protection districts, and by CAL FIRE under contract to local government.

CAL FIRE is the County Fire Department for the unincorporated areas of Santa Cruz County that are not included in an autonomous fire protection district. In addition, the County contracts with CAL FIRE to provide fire protection for Pajaro Dunes, and to provide administrative and staffing needs for the Pajaro Valley Fire Protection District.

Because the majority of wildland fires occur in the SRA, there is potential for many different agencies in the county to be affected. In many cases, fires occur in Mutual Threat Zones (MTZ's) or in areas near adjoining jurisdictions and also in the LRAs. It is through mutual relationships with local government agencies where initial attack resources become larger and more effective. The following Santa Cruz County local government agencies are typically available and involved in suppressing wildland fires:

Aptos/La Selva Fire Protection District Scotts Valley Fire Protection District Boulder Creek Fire Protection District Central Fire Protection District of Santa Cruz County Felton Fire Protection District Santa Cruz City Fire Department Watsonville Fire Department Zayante Fire Protection District Ben Lomond Fire Protection District Branciforte Fire Protection District Pajaro Valley Fire Protection District

A person who owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining SRAs are required by Public Resource Code (PRC) 4291 to maintain defensible space around structures on their property. Defensible space means the area adjacent to a structure or dwelling where wildfire prevention or protection practices are implemented to provide defense from an approaching wildfire or to minimize the spread of a structure fire to wildlands or surrounding areas. Responsibility for maintaining defensible space is limited to 100 feet from structure(s) or to the property line, whichever is closer. Defensible space inspections are completed by inspectors from CAL FIRE, engine companies, and fire protection districts (Central and Aptos/La Selva). Educational materials are distributed to residents during inspections, through direct mailing, and at public events including a brief pamphlet focusing on defensible space and a document called "Living With Fire in Santa Cruz County".

The Santa Cruz County Code requires new projects and construction to meet fire safety standards consistent with State law (PRC 4290). Chapter 7.92 of the County Code establishes requirements for fuel modification and emergency water supply, as well as minimum fire safe driveway and road standards. New structures built in Santa Cruz County must also comply with fire safety building regulations. These building codes

require the use of ignition-resistant building materials in higher risk areas and establish design standards to improve the ability of a building to survive a wildfire.

CAL FIRE has mapped areas of very high fire hazard within LRA and SRA. Mapping of the areas, referred to as Very High Fire Hazard Severity Zones (VHFHSZ), is based on relevant factors such as fuels, terrain, and weather. The Fire Code of Santa Cruz County (County Code Chapter 7.92) includes provisions to improve the ignition resistance of buildings, especially from firebrands. The updated fire hazard severity zones will be used by the Building Official to determine appropriate construction materials for new buildings in the Wildland-Urban Interface. In addition, pursuant to State law, the updated zones will also be used by property owners to comply with natural hazards disclosure requirements at time of the property sale, and with the 100 foot defensible space clearance requirements. The County's GIS mapping information system has been updated to incorporate the FHSZ maps for Santa Cruz County. These maps complement the existing General Plan Resources and Constraints maps designating Critical Fire Hazard Areas.

Objective 6.57 Fire Hazards

To protect the public from the hazards of fire through citizen awareness, prevention measures for mitigating the risks of fire, responsible fire protection planning, and built-in systems for fire detection and suppression.

Policies

6.7.1 Defensible Space

In the State Responsibility Area and Very High Fire Hazard Severity Zones within the Local Responsibility Area maintain defensible space around structures in compliance with State law, County Fire Code, and local fire district ordinances. The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards, location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure. This does not apply to single specimens of trees or other vegetation that are well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a structure or from a structure to other nearby vegetation. The intensity of fuels management may vary in the vicinity of the structure, with the most intense management being immediately around the structure. Consistent with fuels management objectives, steps should be taken to minimize erosion. For the purposes of this policy, "fuel" means any combustible material, including petroleum-based products and wildland fuels.

6.7.2 Defensible Space in Environmental Resource Areas

(LCP) Fuel reduction activities that <u>alter</u>, remove, or dispose of vegetation are required to comply with all federal, state or local environmental protection laws, including, but not limited to, laws protecting threatened and endangered species, sensitive habitats, water quality, air quality, and cultural/archeological resources, and must obtain any and all required permits. New development shall meet all applicable fire safety standards and shall be sited and designed to avoid all ESHA, ESHA buffers, and coastal resource impacts, including with respect to any required fire clearance provisions, in conformance with all applicable LCP ESHA provisions. All such requirements shall be applied as conditions of approval applicable for the life of the development.

6.7.3 Exception in Sensitive Habitat for Defensible Space

(LCP) Establishment and maintenance of defensible space in order to comply with state law may

qualify for an exception to the Sensitive Habitat Protection Ordinance if the following findings can be made: 1) That adequate measures will be taken to ensure consistency with the purposeof Chapter 16.32 to minimize the disturbance of sensitive habitats; and 2) It can be demonstrated by biotic assessment, biotic report, or other technical information that the exception is necessary to protect public health, safety, and welfare. For existing development within the coastal zone, development associated with fire clearance shall only be allowed in ESHA and/or ESHA buffers if: 1) it does not conflict with terms and conditions of applicable CDPs and/or other authorizations (e.g., any required Incidental Take Permit, Stream Alteration Agreement, etc.)that affect the area in question; 2) there are no feasible alternatives for achieving compliance with required fire safety standards without affecting ESHA/ESHA buffers; 3) all ESHA/ESHA buffers are avoided to the maximum feasible extent, allowable measures only take place outside of ESHA if feasible, and, where not feasible, they take place with the minimum possible impact to ESHA; and 4) all ESHA/ESHA buffer impacts are appropriately and commensurately mitigated.

6.7.45.1 Access Standards

Require all new structures, including additions and Accessory Dwelling Units of more than 500 <u>new</u> square feet (not including Conversion ADUs), added to single-family dwellings on existing parcels of record, to provide and maintain an adequate <u>driveway or</u> road for fire protection in conformance with the <u>followingadopted</u> standards <u>of State law, County Fire Code</u>, and local fire district ordinances.

- (a) Access roads shall be a minimum of 18 feet wide for all access roads or driveways serving more than two habitable structures, and 12 feet for an access road or driveway serving two or fewer habitable structures. Where it is environmentally inadvisable to meet these criteria (due to excessive grading, tree removal or other environmental impacts), a 12 foot wide all weather surface access road with 12 foot wide by 35 foot long turnouts located approximately every 500 feet may be provided with the approval of the Fire Chief. Exceptions: Title 19 of the California Administrative Code, requires that access roads from every state governed building to a public street shall be all-weather hard-surface (suitable for use by fire apparatus) roadway not less than 20 feet in width. Such roadway shall be unobstructed and maintained only as access to the public street.
- (b) Obstruction of the road width, as required above, including the parking of vehicles, shall be prohibited, as required in the Uniform Fire Code.
- (c) The access road surface shall be "all weather", which means a minimum of six inches of compacted aggregate base rock, Class 2 or equivalent, certified by a licensed engineer to 95 percent compaction and shall be maintained. Where the grade of the access road exceeds 15 percent, the base rock shall be overlain by 2 inches of asphaltic concrete, Type B or equivalent, and shall be maintained.
- (d) The maximum grade of the access road shall not exceed 20 percent, with grades greater than 15 percent not permitted for distances of more than 200 feet at a time.
- (e) The access road shall have a vertical clearance of 14 feet for its entire width and length, including turnouts.
- (f) Gates shall be a minimum of 2 feet wider than the access road/driveway they serve. Overhead gate structures shall have a minimum of 15 feet vertical clearance.
- (g) An access road or driveway shall not end farther than 150 feet from any portion of a structure.
- (h) A turn-around area which meets the requirements of the fire department shall be provided for access roads and driveways in excess of 150 feet in length.
- (i) No roadway shall have an inside turning radius of less than 50 feet. Roadways with a radius curvature of 50 to 100 feet shall require an additional 4 feet of road width. Roadways with radius curvatures of 100 to 200 feet shall require an additional 2 feet of road width.

- (j) Drainage details for the road or driveway shall conform to current engineering practices, including erosion control measures.
- (k) Bridges shall be as wide as the road being serviced, meet a minimum load bearing capacity of 25 tons, and have guard rails. Guard rails shall not reduce the required minimum road width. Width requirements may be modified only with written approval from the Fire Chief. Bridge capacity shall be posted and shall be certified every five years by a licensed engineer. For bridges served by 12 foot access roads, approved turnouts shall be provided at each bridge approach.

- (1) All private access roads, driveways, turnarounds and bridges are the responsibility of the owner(s) of record and shall be maintained to ensure the fire department safe and expedient passage at all times.
- (m) To ensure maintenance of private access roads, driveways, turnarounds and bridges, the owner(s) of parcels where new development is proposed shall participate in an existing road maintenance group. For those without existing maintenance agreements, the formation of such an agreement shall be required.
- (n) All access road and bridge improvements required under this section shall be made prior to permit approval, or as a condition of permit approval.
- (o) Access for any new dwelling unit or other structure used for human occupancy, including a single-family dwelling on an existing parcel of record, shall be in the duly recorded form of a deeded access or an access recognized by court order.

Diagrammatic representations of access standards are available at the Santa Cruz County Planning Department and local fire agencies.

6.7.55.2 Exceptions to Access Road Standards

Exceptions to these standards and requirements that apply to all new structures (except Conversion Accessory Dwelling Units or ADUs 500 square feet or less), including additions or ADUs of more than 500 new square feet to single-family dwellings on existing parcels of record, may be granted at the discretion of the Ffire code official Chief for single-family dwellings on existing parcels of record as follows:

- (a) When the existing access road is acceptable to the Fire Department having jurisdiction.
- (b) In addition, any of the following mitigation methods may be required <u>prior to issuance of</u> <u>a building permit and/or as a condition of discretionary development approval</u>:
 - (1) Participation in an existing or formation of a new road maintenance group or association.
 - (2) Completion of certain road improvements such as fill pot holes, resurface access road, provide turnouts, cut back brush, etc. are made, as determined by the fire officials, and provided that the fire department determines that adequate fire protection can still be provided.
 - (3) Provision of approved fire protection systems as determined by the Ffire code officialChief.

(c) The level of road improvement required shall bear a reasonable relationship to the magnitude of development proposed.

6.7.65.3 Conditions <u>and Requirements</u> for <u>Project</u> Approval <u>of Discretionary Development</u> <u>Permits and/or Ministerial Building Permits</u>

Impose requirements on new development through the building permit review process, and/or cCondition approval of all discretionary development permits for new structures and additions, including for additions of larger than 500 square feet or more, and to new single-family dwellings on existing parcels of record, to meet and maintain at all times the following fire protection standards in conformance with adopted standards of State law, County Fire Code, and local fire district ordinances.

- (a) Address numbers shall be posted on the property so as to be clearly visible from the access road. Where visibility cannot be provided, a post or sign bearing the numbers shall be set adjacent to the driveway or access road to the property and shall have a contrasting background. Numbers shall be posted when construction begins.
- (b) Provide adequate water availability. This may be provided from an approved system within 500 feet of a structure, or by an individual water storage facility (water tank, swimming pool, etc.) on the property itself. An approved water supply capable of

supplying required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction in accordance with the Fire Code of Santa Cruz County. The fire department shall determine the adequacy and location of individual water storage to be provided. Built in fire protection features (i.e., sprinkler systems) may allow for some exemptions of other fire protection standards when incorporated into the project.

- (c) Maintain all around structures a clearance of not less than 30 feet or to the property line (whichever is a shorter distance) of all flammable vegetation or other combustible materials; or for a greater distance as may be prescribed by the fire department.
- (d) Provide and maintain a spark arrester constructed with heavy one half inch wire mesh screens on all chimneys.
- (e) Automatic smoke detection devices shall be installed and maintained in accordance with the California Building Code and local Fire Department regulations. Sprinkler and fire alarm systems, when installed, shall meet the requirements of the local Fire Department.
- (f) Provide adequate disposal of refuse. All development outside refuse collection boundaries shall be required to include a suitable plan for the disposal of flammable refuse. Refuse disposal shall be in accordance with state, County or local plans or ordinances. Where practical, refuse disposal should be by methods other than open burning.
- (g) Require fire retardant roofs on all projects, as specified in the County Fire Code and the Uniform Fire Code. Exterior walls constructed of fire resistant materials are recommended, but are not necessarily required.

6.7.75.4 Fire Protection Standards for Land Divisions Outside the Urban Services Line

Require all new minor land divisions and subdivisions outside the Urban Services Line to meet the following fire protection standards:

- (a) If a proposed building site is located on a dead-end access road and is more than one-half mile from the nearest intersection with a through road, then secondary access must be provided. (See section 6.8.85.5, Standards for Dead-End Roads.). If building site is located within a 5 minute response time from the fire department and within 500 feet of a county maintained road, then secondary access will not be required. Secondary access is defined as a 12 foot wide all-weather surface roadway with a recorded right of access and maintenance agreement. The secondary access may be provided with a gate or other barrier on the approval of the Fire Chieffire code official. If these conditions cannot be met, development may take place only at the lowest density allowed for the area by the General Plan and LCP Land Use Plan.
- (b) All primary and secondary roads shall meet the requirements of this section and shall be maintained through a County Service Area or a joint road maintenance agreement with all property owners of record.
- (c) Location within the response time of 20 minutes from the fire station which is responsible for serving the parcel. Response time is defined as the length of time between the dispatch of ground fire vehicles from the fire station to their arrival at the location of the proposed structure(s). In areas exceeding 20 minutes response time, development may take place only at the lowest density allowed by the General Plan and LCP Land Use Plan.
- (d) Locate the building site outside any designated Critical Fire Hazard Area and Very High <u>Fire Hazard Severity Zone (VHFHSZ)</u>. If building sites cannot be located outside a Critical Fire Hazard Area and VHFHSZ, the following criteria shall be met:
 - (1) If the building site is served by a through access road or by secondary access, development may be approved only at the lowest density allowed by the General Plan and LCP Land Use Plan.

(2) If the parcel is on a dead-end access road and cannot develop secondary access, development may consist of only one single-family residence on the existing parcel of record; all land divisions must be denied.

(e) The project can meet the vegetation modification requirements called for by the Fire Chieffire code official, based upon an on-site inspection, including appropriate erosion control facilities. The homeowner must maintain this vegetation modification in order to assure long-term protection. Land clearing of one-quarter acre or more, or other vegetation modification within a Sensitive Habitat Area, shall be in conformance with the Erosion Control Ordinance and/or Sensitive Habitats Ordinance of the Santa Cruz County Code, including obtaining a Land Clearing Permit and/or Biotic Permit if required, and state timberland conversion regulations if applicable. which exceeds one acre, whether planned to take place prior to or after development approval, must submit an erosion control plan for the review and approval of the County Watershed Management Section. Vegetation modification plans shall not be allowed which introduce non-native invasive plant species, and wherever possible should utilize native fire-resistant vegetation.

(f) The project can meet <u>and maintain</u> the standards established by the <u>Fire Chieffire code</u> <u>official</u> for water supply and/or water storage for fire-fighting purposes.

(g) Mitigable Critical Fire Hazard Areas. If the project lies in a Critical Fire Hazard Area and within the area bordered by the following access roads: From Day Valley Road to Freedom Blvd., to Hames Road, to Browns Valley Road to Hazel Dell Road, to Gaffey Road, down Highway 152 to Carlton Road, Carlton Road to Highway 129 and ending at Murphy Road,* and the project can meet the water storage standards, then the development may proceed at a density as determined by the Rural Density Matrix. Mitigation was based upon the following criteria:

- (1) extent of the critical fire hazard vegetation;
- (2) distance to adjacent fire hazard areas;
- (3) accessibility for fire-fighting equipment;
- (4) air moisture content;
- (5) historic record of wildland fires;
- (6) slope and terrain.

*This area has been mapped to denote areas where the fire hazard is of lesser concern, if mitigated by vegetation modification and water supply/storage supplementation. These maps are available at Santa Cruz County Planning Department, or at the California Department of Forestry and Fire Protection headquarters for review.

6.7.85.5 Standards for New Dead End Roads

Prohibit newly constructed dead-end roads without secondary access serving more than one parcel in new minor land divisions or subdivisions which exceed the following distances from an adequate through road unless approved by the applicable fire protection agency, the Department of Public Works, and by the Planning Commission; in no case shall a new dead-end road exceed $\frac{1}{2}$ mile in length.

Urban & Suburban General Plan and LCP Land Use Plan designation	500'
Rural General Plan and LCP Land Use Plan designation	1000'
Mountain General Plan and LCP Land Use Plan designation	1500'

The standard for new subdivisions of 5 or more lots shall not exceed 500' from a through road unless acceptable to and recommended by the applicable fire protection agencies and the Department of Public Works, and approved by the Planning Commission.

6.7.95.6 Maintenance for Private Roads

Require the creation or expansion of County Service Areas (to provide road maintenance), road maintenance agreements or associations (deemed adequate to provide appropriate road maintenance) for all new private roads, and for land divisions in rural areas served by private roads.

6.7.105.7 Certification of Adequate Fire Protection Prior to Permit Approval

(LCP) Require all land divisions, multi-unit residential complexes, commercial and industrial complexes, public facilities and critical utilities to obtain certification from the appropriate fireprotection agency that adequate fire protection is available, prior to permit approval.

6.7.115.8 Public Facilities Within Critical Fire Hazard Areas

(LCP) Discourage location of public facilities and critical utilities in Critical Fire Hazard Areas and Very <u>High Fire Hazard Severity Zones</u>. When unavoidable, special precautions shall be taken to ensure the safety and uninterrupted operation of these facilities.

6.7.125.9 Consistency With Adopted Codes Required for New Development

(LCP) Require all new development to be consistent with the <u>Uniform California</u> Fire Code, California Building Code, and other adopted County and local fire agency ordinances.

6.7.135.10 Land Divisions Access Requirements

- (LCP) (a) Require all private roads used for either primary or secondary access to be maintained through road maintenance agreements and/or associations or through a County Service Area.
 - (b) Prohibit land divisions where any new building site is located more than ¹/₂ mile from a through road unless secondary access is provided.
 - (c) In the North Coast and Bonny Doon planning areas, prohibit new land divisions where any new building site is located more than ½ mile from a publicly maintained road even where secondary access is provided.

6.7.145.11 Fire Protection Standards for Land Divisions Inside the Urban Services Line

Require all new land divisions within the Urban Services Line to be consistent with the California Fire Code, California Building Code, and other adopted County and local fire agency ordinances.

6.7.15 Local Ordinances

Adopt and have certified by the Board of Forestry and Fire Protection local ordinances which meet or exceed the minimum statewide standards in the SRA Fire Safe Regulations.

Programs

a. Encourage fire protection agencies to enter into first alarm response and initiate contractual agreements in order to assure that the fire unit nearest the fire will respond on first alarm to a fire emergency. (Responsibility: County Fire Marshal, Board of Supervisors, local fire protection agencies)

b. Newly constructed or approved public and private roads and streets must be identified by a name or number through a consistent countywide system, which provides for sequenced or patterned numbers and/or non-duplicating naming within the County. All signs shall be mounted and oriented in a uniform manner. This <u>sectionprogram</u> does not require any entity to rename or renumber existing roads or streets, <u>unless a threshold established by the County</u>

<u>Code has been exceeded</u>. Nor shall a <u>A</u> roadway providing access only to a single commercial or industrial occupancy <u>shall not</u> require naming or numbering. (Responsibility: <u>Office of</u> <u>Emergency Services</u>, <u>Planning Department</u>, County Fire Marshal)

c. Define levels of fire protection services using criteria relating to distance from fire stations, density of development and magnitude of fire risk. (Responsibility: Board of Supervisors, local fire protection agencies)

d. Develop <u>firefuel</u> break standards for new development to separate communities or clusters of structures from native vegetation. (Responsibility: County Fire Marshal, Board of Supervisors, State Department of Forestry, and local fire protection agencies)

e. Develop an overall <u>firefuel</u> break plan in Critical Fire Hazard Areas and implement the plan in conjunction with <u>CAL FIRE</u>the Department of Forestry and fire protection agencies. (Responsibility: <u>California Department of Forestry and Fire Protection CAL FIRE</u>, <u>County Fire</u> <u>Marshal</u>, local fire protection agencies, Office of Emergency Services)

f. Provide, to the maximum extent feasible, two emergency access routes for all communities, with at least one developed to County standards. (Responsibility: Board of Supervisors, Planning Department, Public Works)

g. Upgrade water distribution systems where deficient to ensure adequate peak load water supply requirements for fire protection within the service areas of recognized water purveyors. Priority shall be given to areas within the Urban Services Line. (Responsibility: Water Purveyors, County Fire Department, local fire protection agencies, County Office of Emergency Services)

h. Give priority to areas within the Urban Services Line when planning expansion of fire protection facilities and equipment. (Responsibility: fire protection agencies, Board of Supervisors)

i. <u>Encourage all fire protection agencies to participate in the development and</u> <u>implementation of Maintain a joint communications center.</u> (Responsibility: Board of Supervisors, Communications Director, County Fire Department, California Department of Forestry and Fire Protection, local fire protection agencies, County Office of Emergency Services)

j. Update a Periodically review the <u>"Santa Cruz County Master Fire Plan" and the "Santa Cruz County Community Wildfire Protection Plan"</u>, and update the plans as necessary. Fire Protection Improvement Program and Long-Range Plan for Santa Cruz County." (Responsibility: Board of Supervisors, <u>CAL FIRE</u>, Resource Conservation District, County Fire Marshal, local fire protection agencies, County Office of Emergency Services)

k. Encourage-the State Department of Forestry <u>CAL FIRE</u> to provide land and air fire-fighting facilities and equipment adequate to meet estimated peak fire demands. (Responsibility: Board of Supervisors, County Fire Marshal)

1. Encourage fire protection agencies to establish educational fire prevention programs in order to have the public recognize <u>theirits</u> responsibility in preventing fires. (Responsibility: California Department of Forestry and Fire Protection, County Fire Marshal, local fire protection agencies, County Office of Emergency Services)

m. Review and update on a periodic basis the countywide Disaster Contingency Emergency Management Plan. Include the appropriate County agencies in all phases of disaster contingency planning. (Responsibility: Board of Supervisors, Office of Emergency Services)

(LCP) n. Update the Critical Fire Hazard Map and fire hazard severity zone maps as new site- specific information becomes available which more precisely defines these areas. (Responsibility: Planning Department, County Fire Department, <u>CAL FIRECalifornia Department of Forestry and Fire Protection</u>, local fire protection agencies)

o. Identify high fire risk areas fire hazard severity zones within the Urban Services Line and rural areas with topography, hazardous fuels, structures, density similar to those found in the Oakland Hills fire of 1991. (Responsibility: Planning Department, County Fire Marshal, local fire protection agencies, Board of Supervisors)

(LCP) p. In cooperation with fire protection agencies, develop coordinated action programs to reduce the hazard to existing development in critical fire hazard areas <u>and fire hazard severityzones</u> such as the following:

(1) Assessment districts to finance road improvements and secondary access; water storage, distribution and hydrant facilities; purchase of pumper trucks and/or vegetation clearance and firefuel break construction.

(2) Fire hazard inspection and code enforcement.

(3) Public education programs on fire prevention.

(Responsibility: Planning Department, County Fire Marshal, local fire protection agencies, Board of Supervisors)

a.q. Amend and update the Santa Cruz County General Plan Fire Safety Element Wildland and Urban Fire Hazards section as needed, to reflect fire code amendments. (Responsibility: Board of Supervisors, County Fire Marshal, local fire protection agencies, Planning Department)

r. Encourage fire protection agencies to maintain ongoing emergency service trainings

AIR QUALITY

This new section of the Safety Element shifts and amends policies from the Conservation and Open Space Element of the county's 1994 General Plan. This section also overlaps with many policies and programs found in the Circulation Element. Location of the Air Quality section within the Public Safety Element reflects importance of air quality and greenhouse gas emissions as related to climate change, as well as public health and safety impacts on the population caused by air pollution.

Atmospheric pollution is determined by the amount of pollutant emitted and the atmosphere's ability to transport and dilute it. In Santa Cruz County, coastal mountains exert strong influence on atmospheric circulation, creating a breezy coastal environment with generally good ambient air quality. However, in the San Lorenzo Valley and certain small inland valley areas, air quality can be poor at times due to wood smoke generated by fireplaces used for heating and other purposes. Also, localized sources can cause odors or create dust or other air quality problems. Fuels and solvents used for vehicles, space and water heating, industrial processes, and commercial uses; and incineration processes, fires, and pesticides are typical pollutant sources. Autos are the largest source of pollutants.

Air Quality Management Plans (AQMPs) are developed for regions throughout the state to meet the air quality requirements and standards for specific pollutants, including ozone, nitrogen oxide and dioxide, sulfur dioxide, carbon monoxide, and suspended particles, as outlined in the federal and State Clean Air Acts. The North Central Coast Air Basin (Monterey, Santa Cruz, and San Benito counties) has been designated as a moderate, transitional non-attainment area because it exceeds air quality standards for ozone and inhaled particulate matter. The region's AQMP prescribes methods for attaining ozone and particulate matter standards and for maintaining air quality in the region.

Attainment of air quality standards is achieved through measures to control emissions from stationary sources (factories, commercial activities, etc.) and mobile sources (cars and trucks). The County of Santa Cruz offers low-cost permits for change-outs of woodstoves and fireplaces from wood-burning to gas. Transportation control measures (TCMs) and land use programs also contribute to improving air quality. In addition to attaining air quality standards for ozone and particulate matter, the Monterey Bay Unified Air Pollution Control District, the County, and regional and local agencies are concerned with reducing stratospheric ozone depletion and regulating the emission of chlorofluorocarbons (CFCs), carbon dioxide, and other "greenhouse gases" (GHGs).

GOAL: Take actions consistent with the region's air quality management plan, and focus special attention on assisting with efforts to reduce wood smoke pollution in San Lorenzo Valley

Objective 6.8-1

To improve the air quality of Santa Cruz County by meeting or exceeding state and federal ambient air quality standards, protect County residents from the health hazards of air pollution, protect agriculture from air pollution induced crop losses and prevent degradation of the scenic character of the area.

Objective 6.8-2

Address localized air quality issues, including indoor air quality.

Objective 6.8-3

Implement incentive programs to assist homeowners with replacement of wood-burning fireplaces and woodstoves with gas-fired appliances.

Policies

6.8.1 <u>New Development</u>

Require future development projects to implement applicable Monterey Bay Unified Air Pollution Control District (MBUAPCD) control measures and/ or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines." Cf. M3.3.4.

6.8.2 <u>Non-Attainment Pollutants</u>

Prohibit any net increase in emissions of non-attainment pollutants or their precursors above the thresholds established by the MBUAPCD from new or modified stationary sources.

6.8.3 <u>Air Quality Mitigations</u>

<u>Require land use projects generating high levels of air pollutants (i.e., manufacturing facilities, hazardous waste handling operations) to incorporate air quality mitigations in their design.</u>

6.8.4(a) Offshore Oil Development

Prohibit development, construction, or installation of any onshore facility necessary for or intended to support offshore oil or gas exploration and development unless a General Plan and Local Coastal Program amendment is approved by the voters of the County which allows such development. (See policies in sections 5.3 and 5.4.) *Revised by Res.* 142-2014

6.8.4(b) Onshore Oil and Gas Development

Prohibit development, construction, installation, or use of any facility necessary for or intended to support oil or gas exploration or development from any surface location within the unincorporated area of the County of Santa Cruz, whether the subsurface portion(s) of such facility is within or outside the unincorporated area of the County of Santa Cruz, and prohibit development, construction, installation or use of any facility necessary for or intended to support oil or gas exploration or development from surface locations outside the unincorporated area of the County of Santa Cruz, and prohibit development, construction, installation or use of any facility necessary for or intended to support oil or gas exploration or development from surface locations outside the unincorporated area of the County of Santa Cruz which may begin, pass through or terminate below the surface of land located within the unincorporated area of the County of Santa Cruz. This prohibition applies to facilities directly involved in oil and gas exploration, production, and refinement such as wells, pipelines and pumps. *Revised by Res.* 142-2014

6.8.5 Sensitive Land Uses

Locate air pollution-sensitive land uses away from major sources of air pollution or require mitigation measures to protect residential and sensitive land uses from freeways, arterials, point source polluters, and hazardous material locations.

6.8.6 Plan for Transit Use

Encourage commercial development and higher density residential development to be located in designated centers or other areas that can be easily served by transit.

6.8.7 <u>Alternatives to the Automobile</u>

Emphasize transit, bicycles and pedestrian modes of transportation rather than automobiles, as well as telecommuting and alternative work schedules.

6.8.8 Encouraging Landscaping

Maintain vegetated and forested areas, and encourage cultivation of street trees and yard trees for their contributions to improved air quality.

5.18.9 Greenhouse Gas Reduction

Support and implement local actions and County, State and federal plans and legislation promoting the reduced emission of carbon dioxide and other greenhouse gases, and actions to achieve reduction goals and standards.

6.8.10 Elimination of Ozone Depleting Chemicals

Support and implement local actions to achieve the most rapid possible international, national, state, and local elimination of the emission of ozone-depleting chemicals.

Programs

<u>a.</u> Implement the Urban Forestry Master Plan to increase the urban tree canopy. (Responsibility: Board of Supervisors, County Departments)

b. Support air quality monitoring, air pollution control strategies, and enforcement by the Monterey Bay Unified Air Pollution Control District. (Responsibility: Board of Supervisors)

c. Control aerial spraying of pesticides and fertilizers, to the degree possible, to prevent contamination of areas adjacent to sprayed areas. (Responsibility: Agricultural Commissioner)

d. Ensure that agricultural burning practices are in accordance with state and regional laws and permit open burning of debris only in instances where other disposal methods are not feasible. (Responsibility: State Department of Forestry, Regional Air Quality Control District, Agricultural Commissioner)

e. Encourage public education programs promoting reduced emissions from transportationgenerated pollutants and area-wide sources, and sources and encourage lesser polluting transportation alternatives through the construction of bikeways and the provision of public transit. (Responsibility: Board of Supervisors, Santa Cruz Metropolitan Transit District, Transportation Commission)

<u>f.</u> Ensure that forestry and agricultural wastes are chipped rather than burned where feasible and permissible considering disease control and other land use compatibility factors. (Responsibility: State Department of Forestry, Regional Air Quality Control District, Agricultural Commissioner)

g. <u>Closely monitor industrial processes and require them to utilize the best available</u> procedures to protect air quality. (Responsibility: Planning Commission, Regional Air Quality <u>Control District</u>)

<u>h.</u> <u>Update and implement a Trip Reduction Ordinance.</u> (Responsibility: Planning Department, Planning Commission, Board of Supervisors)</u>

i. <u>Replace County-owned and encourage replacement of privately-owned fire extinguishers</u> with models that do not use ozone depleting compounds. (Responsibility: General Services, Board of Supervisors)

j. Encourage and support tree planting programs by governmental agencies, private business, individuals and non-profit organizations with a goal of planting at least one tree in Santa Cruz

County each year for every person born in the County during such year. (Responsibility: County Administrative Office, Board of Supervisors)

<u>k.</u> Investigate methods for developing a carbon dioxide budget for the County that limits carbon dioxide emissions.

<u>1.</u> Implement chlorofluorocarbon (CFC) recycling and elimination regulations.

n. Strive to eliminate the use of polystyrene foam (PSF) packaging products throughout the county.

o. Permit major indirect sources of air pollution only if they provide transportation measures to reduce their impacts to a less-than-significant level, consistent with applicable MBUAPCD recommended mitigation and control measures as set forth in the District's "CEQA Guidelines." Cf. LU1.2.

p. Implement and enforce a Smoking Pollution Control Ordinance.

HAZARDOUS AND TOXIC MATERIALS

For more than a decade, Santa Cruz County government has played a leadership role in helping to minimize toxic hazards to the citizens and residents of Santa Cruz County. In 1984, the Board of Supervisors adopted as a statement of basic policy that it should be a statewide goal completely to eliminate the toxic contamination of any portion of the State's environment, including the land, water, and air resources of the State.

In June 1990, by adopting Measure C, the people of Santa Cruz County made a specific finding that "the introduction of toxic chemicals into all parts of the environment, in increasing quantities, has led to the pollution of the ocean, and of fresh water supplies, and to the presence of toxic chemicals in the tissues of virtually every living thing, placing the future of life on this planet in jeopardy." Measure C requires Santa Cruz County government to attempt to eliminate the use of toxic materials within Santa Cruz County where possible, and requires the reduction, recycling, and reuse of such materials, to the greatest extent possible, where complete elimination of their use is not feasible.

This section of the General Plan and LCP Land Use Plan states the basic objectives of Santa Cruz County with respect to hazardous and toxic materials, and also includes provisions relating to hazardous waste management. The provisions relating to hazardous waste management are a summary of the facilities siting provisions of the Santa Cruz County Hazardous Waste Management Plan (CHWMP), required by State law. Additional background information and more detailed policies, programs, and technical data are included in the County's Hazardous Waste Management Plan.

Objective 6.96 Hazardous and Toxic Materials

To eliminate, to the greatest degree possible, the use of hazardous and toxic materials, and where it is not feasible completely to eliminate the use of such materials, then to <u>maximize</u> minimize the reduction in the use of such materials, so as to ensure that such materials will not contaminate any portion of the County's environment, including the land, water, and air resources of the County.

Policies

6.9.16.1 Hazardous Materials Ordinance

Maintain the County's Hazardous Materials ordinance, placing on users of hazardous and toxic materials the obligation to eliminate or minimize the use of such materials whenever possible, and in all cases to minimize the release, emission, or discharge of hazardous materials to the environment, and properly to handle all hazardous materials and to disclose their whereabouts. Further, maintain the County's ordinance relating to ozone-depleting compounds. Ensure that any amendment of existing ordinance provisions is based on a finding that the amendments will provide protection to the environment and the community against toxic hazards that is equal to or stronger than the existing provisions.

6.9.26.2 County Use of Toxic/Hazardous Materials

Eliminate wherever possible, and minimize where elimination is not feasible, the use of hazardous and toxic materials in the operations and programs of County government.

6.9.36.3 Maintenance of Standards for Use and Control

Ensure that Santa Cruz County maintains standards for the use and control of hazardous materials which are at least equal in their protection for the environment and the community to

measures imposed by other local governments within Santa Cruz County, and in adjoining counties.

Programs

a. Require an annual report by County departments on departmental efforts to eliminate and reduce the use of toxic materials in County operations. (Responsibility: each County department, County Administrative Office, Board of Supervisors)

ba. Enact an ordinance regulating the storage, transportation, and use of toxic gases, with standards at least as protective as those found in comparable ordinances adopted by local governments within Santa Clara County. (Responsibility: Environmental Health, Planning Department, County Office of Emergency Services, Board of Supervisors)

eb. Implement, where funding can be made available, programs to provide assistance to businesses, farmers, and homeowners, to assist them in eliminating and reducing the use of toxic materials. (Responsibility: Environmental Health, Planning Department, Agricultural Commissioner, County Administrative Office)

dc. Continue County programs facilitating the safe disposal of household hazardous wastes. (Responsibility: Public Works)

HAZARDOUS WASTE MANAGEMENT

The Hazardous Waste Management section is a summary of the facilities siting provisions of the Santa Cruz County Hazardous Waste Management Plan (CHWMP), required by state law. Additional background information and more detailed policies, programs and technical data are included in the CHWMP. The intent of this section is to restate the substantive provision, relating to hazardous waste management facilities siting of the CHWMP. If any portion of this section appears to conflict with the County Hazardous Waste Management Plan, the County Hazardous Waste Management Plan shall prevail.

Objective 6.107Hazardous Waste Management

To ensure that hazardous waste management facilities will be safely sited to protect public health and the environment, and to ensure the general management of hazardous waste through the year 2000 occurs in accordance with the implementation policies specified in the Santa Cruz County Hazardous Waste Management Plan, and any applicable state and federal regulations.

ALL FACILITIES WHICH COLLECT, HANDLE, TRANSPORT, TREAT, STORE OR DISPOSE OF HAZARDOUS WASTE

Policies

6.107.1 Managing the County's Fair Share of Hazardous Waste

Any proposed facility shall be consistent with the fair share principle, and with any interjurisdictional agreements on hazardous waste management entered into by Santa Cruz County.

6.107.2 Sizing Facilities

Facilities shall be designed and sized primarily to meet the hazardous waste management needs of this County, or to meet any broader future commitments made as part of an interjurisdictional agreement, or upon a determination of the local body that the project meets local planning criteria and serves public needs.

6.107.3 Location of Facilities

Require any proposed hazardous waste management facility to be located only in those general areas identified in the Hazardous Waste Management Plan.

6.107.4 Conformance to Federal, State and Local Siting Standards

Require all hazardous waste land disposal facilities to conform to the siting standards contained in state statues as well as conform to the General Plan and LCP Land Use Plan and Zoning ordinances of the County of Santa Cruz.

6.107.5 Floodplains and Sensitive Habitats

Prohibit any facility to be located within a floodplain or area which could adversely impact any sensitive habitat.

6.107.6 Depth to Groundwater

Require a minimum 20-foot distance between any hazardous waste facility and the highest anticipated elevation of the underlying groundwater. Proposed sites must be <u>elevated evaluated</u> for <u>consistency with</u> this criteria by a registered geologist before permitting.

6.107.7 Mineral Resources Areas

Allow facilities to be sited only where they will not preclude extraction of minerals necessary to sustain the economy of the state.

6.107.8 Non-Attainment Air Areas (Federal Clean Air Act)

Allow facilities to be sited within federally designated Non-Attainment Air Areas only under the following conditions:

- (a) A risk assessment must be completed and shall consider physical and chemical characteristics of the specific types of wastes that will be handled and design features of the facility. The assessment must show that emissions will not significantly contribute to non-attainment of standards;
- (b) The emissions generated must be mitigated; and
- (c) The emissions generated from such facilities shall not be greater than those associated with the transportation of hazardous waste outside of the non-attainment area.

6.107.9 Prime Agricultural Land

Demonstrate an overriding public service need before approving the siting of hazardous waste management facilities in commercial agricultural lands.

6.107.10 Distance From Residences

- (a) Require a Risk Assessment for the siting of a hazardous waste management facility and a 500 foot minimum buffer zone from the nearest urban and suburban density residentially zoned areas. The risk assessment shall consider the physical and chemical characteristics of the specific type of waste(s) that will be handled and any design feature necessary for the facility.
- (b) Require any facility handling ignitable, volatile or reactive wastes to be sited a minimum of 2000 feet from the nearest residence unless the developer can show that the public is sufficiently safeguarded in the event of an accident.

6.107.11 Distance from Immobile Populations

- (a) Require a Risk Assessment for the siting of a hazardous waste management facility and a 500 foot minimum buffer zone from an immobile population, which includes places where large numbers of people may gather and also includes schools, hospitals, convalescent homes, prisons, facilities for the mentally ill, or similar placesete. The risk assessment shall consider the physical and chemical characteristics of the specific type of waste(s) that will be handled and any design feature necessary for the facility.
- (b) Require any facility handling ignitable, volatile or reactive wastes proposed to be sited within one mile of an immobile population, to prepare, at the developer's expense, a study detailing the maximum credible accident from a facility's operation.

6.107.12 Emergency Response/Safe Transportation Routes

Locate facilities of any type so as to minimize distances to major transportation services. Locate all facilities in areas where the fire departments are trained to respond to hazardous materials accidents. Road networks leading to major transportation routes should not pass through residential neighborhoods, should minimize residential frontages in other areas, and shall be demonstrated to be safe with regard to road design and construction, weight allowances, accident rates, excess traffic, etc.

6.107.13 Public Services

Limit all facility types to sites where public water and sewer and emergency facilities are available, except for existing landfill sites.

TRANSFER STATIONS FOR HOUSEHOLD AND SMALL QUANTITY BUSINESS GENERATORS

Existing and projected hazardous waste generation rates identified in the Santa Cruz County Hazardous Waste Management Plan indicate a need only for local collection and temporary storage (transfer) facilities to receive hazardous waste from household and small quantity (business) generators. Any and all such facilities sited in the unincorporated area of Santa Cruz County shall be subject to the following siting policies.

Policies

6.107.14 Require Environmental Review

Require proposed facilities to <u>comply with the California Environmental Quality Act prior to</u> <u>approval of any permit or commitment of funding for construction of the facility.follow the</u> <u>Environmental Review procedures of the County</u>. At a minimum, projects shall be reviewed for their susceptibility to natural hazards, including seismic and slope stability; and reviewed for their impacts to natural resources including groundwater and Water Supply Watersheds. Consider approval of such facilities only when a risk assessment is performed which indicates that the risks can be made acceptable through proper engineering and appropriate conditions are included as part of the design and construction of the facility.

6.107.15 Permeable Stratas and Soils

Require all above-ground facilities to have engineered structural design features, common to other types of industrial facilities, including spill containment and monitoring devices.

6.107.16 PSD Area (Prevention of Significant Deterioration Areas)

Permit these facilities to be sited in PSD Areas, as defined in the Hazardous Waste Management Plan, only if they are necessary to handle potentially hazardous wastes generated by visitors or residents in recreational or cultural facility areas which are in the PSD zone. PSD areas meet the ambient air standards of the Clean Air Act, and thus should be prevented from significant deterioration.

6.107.17 Proximity to Waste Generators

Locate household hazardous waste collection facilities close to residential and/or commercial zoned areas to encourage their use.

6.107.18 Recreational, Historic, Cultural and Scenic Areas

Allow household hazardous waste management facilities to be located in areas of recreational, historic, cultural or scenic resources only to the extent that they are necessary to handle hazardous wastes generated by visitors, workers or residents in these areas.

TREATMENT /STORAGE DISPOSAL FACILITIES FOR INDUSTRIAL GENERATORS

Existing and projected hazardous waste generation rates identified in the Santa Cruz County Hazardous Waste Management Plan do not indicate a need for local treatment, storage or disposal facilities for industrial generators within Santa Cruz County. The existing and projected needs for treatment, storage and disposal of hazardous wastes can continue to be met by out-of-County facilities. Therefore no industrial treatment, storage or disposal facility will be allowed within Santa Cruz County, <u>unless</u>. If at some future time a need can be demonstrated as determined by the Board of Supervisors, <u>Upon such determination</u>, then the following siting policies shall apply.

Policies

6.107.19 Seismic Hazards

Prohibit facilities of any type to be built in zones of potential surface rupture faulting, areas of high liquefaction potential, and areas most susceptible to landslides (slopes greater than 15%).

6.107.20 Slope Stability

Prohibit facilities of any type to be built in zones of slope instability. These areas include slopes greater than 30% and areas subject to liquefaction and subsidence due to natural and man-made causes.

6.107.21 Groundwater Resources

Prohibit facilities of any type to be built in areas which are known or suspected to be a sole source aquifer or principal aquifer recharge area for a region.

6.107.22 Water Supply Watersheds

Prohibit facilities of any type to be built in areas which are known or suspected to be a Water Supply Watershed area.

6.107.23 Permeable Stratums and Soils

Exclude these facilities unless they are immediately underlain by geologic materials with a permeability of not more than 1×10 to the seventh power cm/second, and thick enough to prevent vertical movement of fluid to groundwater.

6.107.24 Prevention of Significant Deterioration (PSD) Areas

Consider and, if appropriate, conditionally approve, facilities in PSD areas, unless an analysis shows that air emissions cannot be adequately mitigated. These are areas which meet the ambient air standards of the Clean Air Act, and thus should be prevented from significant deterioration.

6.107.25 Coastal Zone

(LCP) Prohibit hazardous waste treatment/storage/disposal facilities of any type to be built in the areas of the Coastal Zone.

6.107.26 Recreational, Cultural or Scenic Areas

Prohibit industrial hazardous waste management facilities in areas of historic preservation and other cultural or scenic areas, as defined by the Santa Cruz County General Plan and LCP Land Use Plan.

6.107.27 Proximity to Waste Generators

Locate industrial hazardous waste collection facilities close to Large Quantity Generator (LOG) sources to minimize the risk of transportation.

Programs

a. Update the County Hazardous Waste Management Plan a minimum of every three years for compliance with State and federal regulations. (Responsibility: Environmental Health, Planning Department, Board of Supervisors)

b. Identify the types of treatment, storage and disposal facilities needed in Santa Cruz County, identify general areas where such facilities can be located, and, where appropriate, develop

agreements with other counties to handle hazardous wastes produced in Santa Cruz County. (Responsibility: Environmental Health, Planning Department, Public Works, Board of Supervisors)

ELECTRIC AND MAGNETIC FIELD EXPOSURE HAZARDS

A number of recent studies have examined the potential for risk to human health that may exist due to long term exposure to electric or magnetic fields found adjacent to electric powerlines. Some of these studies have found a potential for risk to human health. Siting of sensitive land uses (such as schools) and housing next to powerlines may, therefore, have an environmental health impact on users of the sensitive land uses and the residents of such housing.

ELECTRIC AND MAGNETIC FIELDS

In Santa Cruz County electric power is transferred from power generating stations to substations by means of 115,000-volt transmission lines. Substations are used to "step down" the electricity's voltage to facilitate the transfer from transmission to distribution lines. Distribution lines bring electricity from substations into neighborhoods. In Santa Cruz County, distribution lines operate at voltages from 4,000 to 21,000 volts. A magnetic field measured in units of milligauss, and an electric field, measured in volts per meter, found in the vicinity of these powerlines, and commonly called together the electromagnetic field, are a consequence of the delivery of the electric power. These fields fall off rapidly in strength with increased distance from the powerlines.

The strength of a magnetic field at a given site depends on several factors such as how many conductors are carrying the electric current, their spacing, and height above the ground. The magnetic field will also be proportional to the value of electric current being carried, which varies with electric power demand by time of day, day of week, season of the year, and changes over the years due to growth. Furthermore, the magnetic field also varies with height, so that the magnetic field in a second story bedroom could be substantially larger than the magnetic field found three feet off the ground in a first story living room. This is a consequence of getting closer to the current carrying conductors with increase in structure height or even change in ground height. The value of the magnetic field is essentially independent of the powerline voltage.

In contrast to the magnetic field, the electric field from powerline does not depend on the current being carried, but it dependent on the voltage of the line. The higher the line voltage the higher will be the electric field magnitude around the line. The value of the electric field will also be drastically modified by objects in the field. For example, the presence of housing, trees, shrubs, and people will markedly change the electric field value at a given location.

Measurements of the existing electric and magnetic fields across a given site, and at a given time, are easily made and may be available at no cost from local utilities. Estimates of the fields expected can also be obtained from existing computer programs, but would be based on assuming ideal conditions, such as parallel lines with no sag and level ground.

A typical 115,000-volt transmission powerline would have a magnetic field of 25 to 40 milligauss directly under the powerline at a height of three feet. The magnetic field would decrease with distance from the powerline and would drop off to a level of 1.5 milligauss at a distance of about 150 feet from the powerline, at the same three foot height. The same 115,000-volt transmission powerline might have an electric field of 1,000 volts per meter directly under the powerline and the electric field would drop to 50 volts per meterat a distance of somewhere between 100 and 200 feet from the powerline. Any objects in the vicinity of the powerline would drastically change these electric field values.

Numerous studies have suggested a potential for adverse health effects due to long term exposure to electric and magnetic fields, such as found near powerlines. The siting of housing, or other habitable structures,

such as schools, near powerlines will increase the electric and magnetic field exposure to future residents above the background levels and may thus increase the risk of disease.

LIMITING ELECTRIC AND MAGNETIC FIELD EXPOSURE

Due to the potential for adverse health effects a practice of "prudent avoidance" is recommended. Prudent avoidance means limiting exposures that can be avoided with relatively small investments of money or effort and generally includes increasing the distance and decreasing the time of exposure between people and sources of electric and magnetic fields.

There are no national standards or regulations specifically for powerline magnetic fields. Some local attempts at regulation have, however, been made to date. California has not established any limitations for siting homes near powerlines, although some guidelines are currently being used for school sites near transmission powerlines. The School Facilities Planning Division requires that no new schools be sited 100 feet from the edge of the right-of-way of 100,000-to-110,000-volt lines; 150 feet from 220,000-to-230,000-volt lines; and 250 feet from 345,000-volt lines.

There are generally three approaches to mitigating adverse impacts from electric and magnetic fields. The first typically involves site planning techniques to set habitable structures back from sources of electric and magnetic fields and thereby avoid hazardous doses. The second is to use engineering solutions, such as reconfiguring the powerlines, to mitigate electric and magnetic fields. The third, more difficult (and costly) approach involves placing powerlines underground and removing constraints to site development by significantly diminishing the magnetic field strength or completely eliminating the electric field, thus reducing the potential health hazard.

1. Site Planning

With a transmission or distribution powerline crossing a subdivision site, the subdivision could be designed to set habitable buildings back from the powerlines, in a manner consistent with the current state of scientific knowledge.

2. Undergrounding the Powerline

It is possible substantially to reduce the electric and magnetic fields by undergrounding the powerlines in a metallic pipe. The electric field would be <u>esentiallyessentially</u> eliminated by the shielding of the metallic pipe and the magnetic field could be considerably reduced because the conductors are placed closer together causing the magnetic fields from the individual conductors to partially cancel each other.

3. Reconfiguring the Powerlines

The number of conductors in a transmission or distribution powerline can be increased and their current fed (phased) in ways to achieve significant cancellation of the electric and magnetic fields near the ground. The techniques to considerably lower the fringing electric and magnetic fields around powerlines are known at this time. In addition there is considerable research effort underway in this area.

Objective 6.811Electric and Magnetic Energy

To protect the public from potential health hazards associated with electric and magnetic fields based on the then current state of scientific knowledge through appropriate limitations on the use and development of land near electric transmission and distribution powerlines and substations which could create health hazards.

Objective 6.811b New Electrical Facilities

The planning, siting, and construction of future electrical facilities should minimize electric and magnetic fields near sensitive areas (for example schools, hospitals, playgrounds), residential uses, existing areas of high electric and magnetic exposure, and areas of future development.

Policies

6.811.1 Prudent Avoidance

In regard to exposure of electric and magnetic fields, the policy of the County of Santa Cruz is one of "prudent avoidance." Prudent avoidance assumes that exposure to electric and magnetic fields may present a health risk. The policies in this section shall apply to residential land divisions or other new discretionary development and other sensitive land uses, not including development of one single-family dwelling on an existing lot of record.

6.811.2 Measuring Ambient Magnetic Fields

Require the measurement of the ambient magnetic fields for all residential land divisions or other new discretionary development (not including development of one single-family dwelling on an existing lot of record) where such property is within 150 feet of 21 kv or greater transmission or distribution powerlines of the electric power delivery system. The measurements should delineate the area on the site where the magnetic field is above the level at which potential health effects may exist, based on the then current state of scientific knowledge.

6.811.3 Development Mitigation Measures

Utilize the following techniques to minimize exposure to potentially hazardous electric and magnetic fields from electric powerlines.

- (a) Site Planning Locate and/or cluster habitable building envelopes away from the potentially hazardous electric and magnetic fields consistent with the current state of scientific knowledge.
- (b) Underground the Powerline Reduce the electric and magnetic fields by undergrounding powerlines in a metallic pipe or other appropriate insulator.
- (c) Reconfigure the Powerline Reconfigure lines and conductors in transmission or distribution lines to achieve significant cancellation of the electric and magnetic fields near the ground.

6.811.4 New Transmission and Distribution Facilities

The siting of new transmission and distribution powerlines and substations shall minimize electric and magnetic fields near existing sensitive areas, residential uses, existing areas of high electric and magnetic field exposure, and areas of future development. Public exposure to electric and magnetic fields shall not be increased where practical alternatives exist.

Programs

a. Work with PG&E and other relevant private and public organizations to maintain EMF informational handouts and reference lists for public education. (Responsibility: <u>Public</u> <u>WorksPlanning</u> Department, <u>Environmental HealthBoard of Supervisors</u>)

b. Identify those areas where a potential hazard from exposure to electric and magnetic fields exist by mapping the location of the transmission lines, distribution lines, and substations in the County. (Responsibility: <u>Public Works Department, Environmental Health, Information</u> <u>Service-GIS Planning Department</u>)

ENVIRONMENTAL JUSTICE

In 2016, the State of California also adopted requirements for General Plans to address environmental justice for disadvantaged communities. Disadvantaged communities are defined as low-income areas (at or below 80% of area median household income) that are disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure or environmental degradation. While the unincorporated area of Santa Cruz County contains a small agricultural area near Watsonville that meets the technical definition of disadvantaged community, certain sub-areas of unincorporated Santa Cruz County can at times be of similar status as a disadvantaged community, depending upon how the geographic limits are defined and upon economic circumstances of the area population as the economy and housing market changes. This Safety Element therefore incorporates environmental justice requirements and generally addresses these unique or compounded health risks for these certain sub-areas that may at times qualify as disadvantaged communities, including policies regarding promotion of civil engagement in public decision making, and prioritization of improvements and programs that address the needs of disadvantaged communities.

In Santa Cruz, the community areas and environmental hazards that may at times qualify as disadvantaged communities affected by pollution or hazards include:

- 1. Areas of San Lorenzo Valley affected by woodsmoke from heavy use of fireplaces and woodstoves in homes;
- 2. Areas in San Lorenzo Valley that are affected by the lack of sewer infrastructure and existence of older and possibly failing septic systems;
- 3. Areas in Davenport that are subject to high water and sewer treatment rates due to the nature of infrastructure and small number of users;
- <u>4. Areas in Soquel and Live Oak that are subject to moratoriums due to inadequate and/or undersized</u> stormwater and sanitation infrastructure; and
- 5. Areas within the Soquel Creek Water District that are served by a groundwater basin that is in overdraft and households subject to high costs to connect to and be served by the system.
- <u>6.</u> Area within the Freedom area of the County affected by high costs to maintain and upgrade sewer <u>infrastructure</u>.

Objective 6.12.1 Environmental Justice

Address unique or compounded health risks for areas that may be considered disadvantaged communities affected by pollution or hazards, through developing plans to address the pollution or hazards, and providing funding as feasible through the Capital Improvement Plan and County Budget processes and through seeking funding from federal, state, regional or local grant programs.

Policies

- 6.12.1 <u>Civil Engagement</u> Promote civil engagement within disadvantaged communities in public decision making.
- 6.12.2 Woodburning Fireplaces and Stove

In recognition of the broad public health benefits that result from decreased burning of wood and wood pellets to heat homes, reduce or waive permit fees for change-outs of woodburning fireplaces and stoves to gas-fired appliances.

6.12.3 Cement Plan Re-Use

Support a re-use of the cement plant site in Davenport that will modernize and improve water and sewage treatment, and will lower costs to community residents and businesses.

6.12.4 <u>Septic Systems</u>

Support modern septic treatment approaches in the San Lorenzo Valley in order to phase out underperforming septic systems and improve water quality and the environment.

6.12.5 Groundwater Management

Support efforts of the Soquel Creek Water District to identify a water source that will prevent further overdraft of the aquifer and lead to recharge and recovery of the aquifer.

6.12.6 Drainage and Sanitation Facilities

Update Stormwater Drainage and Sanitation Facilities Master Plans in order to ensure availability of infrastructure to serve planned development in the Soquel and Live Oak areas.

6.12.7 Local Income Surveys

<u>Perform local income surveys to determine if an area is considered a disadvantaged community</u> in order to qualify for grant opportunities from state and federal sources.

6.12.8 Disadvantaged Communities

Prioritize improvements and programs that address the needs of disadvantaged communities.

NOISE

Objective 6.9a Noise Environment

To promote land uses which are compatible with each other and with the existing and future noise environment. Prevent new noise sources from increasing the existing noise levels above acceptable standards and eliminate or reduce noise from existing objectionable noise sources.

Objective 6.9b Noise Element

To educate and assist the residents of Santa Cruz County in the meaning and use of this noise element. **Policies**

6.9.1 Land Use Compatibility Guidelines

Require new development to conform with the Land Use Compatibility Guidelines (Figure 6-1). All new residential and noise sensitive land developments should conform to a noise exposure standard of 60dB Ldn (day/night average noise level) for outdoor noise and 45 dB Ldn for indoor noise. New development of land which cannot be made to conform to this standard shall not be permitted. Assure a compatible noise environment for various land uses through site planning, building orientation and design, interior layout, and physical barriers, landscaping, and buffer areas where appropriate.

Figure 6-1

Land Use Compatibility For Community Noise Environments EXTERIOR NOISE EXPOSURE Ldn or CNEL (Both are weighted in Decibels by when noise occurs day or night) 55 60 65 70 75 80 LAND USE CATEGORY **Residential.** Hotels. and Motels **Outdoor Sports and Recreation**, **Neighborhood Parks and Playgrounds** Schools, Libraries, Museums, Hospitals, Personal Care, Meeting Halls, Churches **Office Buildings, Business Commercial**, and Professional Auditoriums, Concert Halls, **Amphitheaters** Industrial, Manufacturing, Utilities, and Agriculture NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. CONDITIONALLY ACCEPTABLE Specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design. **UNACCEPTABLE** New construction or development should generally not be undertaken because mitigation is

usually not feasible to comply with noise element policies.

Notes:

Ldn - Dav/Night Average Sound Level

CNEL = Community Noise Equivalent Level

6.9.2 **Acoustical Studies**

Require acoustical studies for all new residential developments with a future Ldn noise exposure greater than 60dB. The studies shall satisfy the requirements set forth in Title 24, Part 2 of the California

Administrative Code, Noise Insulation Standards. Require acoustical studies for all new projects which may affect the existing noise level and may not conform to the Land Use Compatibility Guidelines in Figure 6-1.

6.9.3 Noise Sensitive Land Uses

Require new development of residential and other noise sensitive land uses, where existing stationary noise sources such as a quarry exceeding the standards of Figure 6-2, to incorporate effective mitigation measures to reduce noise exposure to or below the levels of Figure 6-2.

6.9.4 Commercial and Industrial Development

For all new commercial and industrial developments which would increase noise levels above the maximum allowable standards of the Land Use Compatibility Guidelines in Figure 6-1, or Figure 6-2, the best available control technologies will be used to minimize noise levels. In no case shall the noise levels exceed the standards of Figure 6-2.

Figure 6-2 Maximum Allowable Noise Exposure Stationary Noise Sources (1)		
	Daytime (5) (7PM to 10PM)	Nighttime (2,5) (10PM to 7AM)
Hourly Leq average hourly noise level, dB (3)	50	4 5
Maximum level, dB (3)	70	65
Maximum Level dB Impulsive Noise (4)	65	60

dB = decibel

(1) As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.

(2) Applies only where the receiving land use operates or is occupied during nighttime hours.

(3) Sound level measurements shall be made with "slow" meter response.

(4) Sound level measurements shall be made with "fast" meter response.

(5) Sound level measurements shall be raised to the ambient noise levels where the

ambient levels exceed the allowable levels. Allowable levels shall be reduced 5dB if the

ambient hourly Leq is at least 10 dB lower than the allowable level.

6.9.5 Residential Development

Require that future residential development adjacent to the railroad tracks meet both outdoor and indoor maximum noise level standards stated in the General Plan and LCP Land Use Plan.

6.9.6 Vibrations from Rail

Evaluate vibrations from rail activities for future development within 200 feet of the railroad tracks as part of environmental review.

6.9.7 Construction Noise

Require mitigation of construction noise as a condition of future project approvals.

Programs

a. Review the Ground Transportation Noise Contours when the Circulation Element is updated and the Airport Noise Contours when the Airport Master Plans are updated and amend when necessary. (Responsibility: Planning Department, Planning Commission)

b. Work together with cities, transit authorities, school districts, rest homes, hospitals, and commercial and industrial uses to mitigate existing noise problems. (Responsibility: Planning Department, Environmental Health)

c. Obtain and make available an educational brochure to inform the public of the general hazards of everyday noise, including the various sources inside and outside of the home, consumer advice regarding products, hearing protection techniques, etc. (Responsibility: Planning Department, Office of Consumer Affairs)

d. Consider establishing a Noise Abatement section in the Environmental Health Services, the Planning Department or the Sheriff's Department to facilitate enforcement of County noise control policies as well as noise-related "nuisance" and "disturbing the peace" ordinances. (Responsibility: Board of Supervisors)

e. Enforce the Santa Cruz County Off-road Vehicle ordinance either through use of personnel or physical barriers. (Responsibility: Board of Supervisors, Sheriff's Department)

f. Consider amending chapter 8.3 of Volume I of the Santa Cruz County Code to limit the allowed hours of construction activities near residential areas. (Responsibility: Board of Supervisors)

Objective 6.10 Ground Transportation

To maintain or lower existing noise levels generated by the ground transportation system. **Policies**

6.10.1 Environmental Review

Require environmental review of all proposed transportation projects which may increase the average day/night noise levels including any increased or new uses of the Southern Pacific Railroad right-of-way. **6.10.2 Evaluation and Mitigation**

Require the evaluation of mitigation measures for any project that would cause significant degradation of the noise environment by:

(a) Causing the Ldn in existing residential areas to increase by 5 dB or more and remain below 60 $\frac{dB}{dB}$;

(b) Causing the Ldn in existing residential areas to increase by 3 dB or more and, thereby, exceed an Ldn of 60 dB;

(c) Causing the Ldn in existing residential areas to increase by 3 dB or more if the Ldn currently exceeds 60 dB.

6.10.3 County Road Surfacing and Maintenance

Utilize the latest noise-reducing techniques for County road surfacing and maintenance.

6.10.4 Sirens and Horns

Limit the use of sirens and horns to the minimum necessary.

Programs

a. Attempt to reduce the number of vehicles on the road by vigorously promoting the 30 percent transit, 10 percent bicycles, and 2.0 persons per vehicle occupancy goals which are the 1995 goals of the Regional Transportation Plan. (Responsibility: Board of Supervisors, Transportation Commission, Planning Department)

b. Work with and encourage the California Highway Patrol's existing noise abatement program and enforce existing California State Noise Emission Standards. Establish a Noise Abatement section in the County Sheriff's Department (including purchase of necessary equipment), in order to keep the level of enforcement of State muffler laws within the County's control. (Responsibility: California Highway Patrol, County Sheriff's Department)

c. Support State legislation for noise abatement design measures in all State Highway projects within the County. (Responsibility: Board of Supervisors, Transportation Commission)

d. Analyze changes in street patterns with regard to attendant noise impacts and route and/or divert traffic in order to minimize noise impact upon sensitive land uses such as residences, hospitals, nursing homes, schools and parks. Trucks and automotive through traffic should utilize only designated truck and through routes. Neighborhoods should be protected from through traffic diversion techniques. (Responsibility: Planning Department, Public Works, Board of Supervisors)

e. Maintain and retrofit County vehicles to lower noise emission levels. Consider noise emission levels in the purchase of new vehicles. (Responsibility: General Services)

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Objective 6.11 Air Transportation

To balance the need for aviation service in the County with the right to develop lands around the airports. **Policies**

6.11.1 Airport Expansion

Require a development permit and environmental review for any new air strip or airport or any proposed expansion of air strips or airports over which the County has jurisdiction, including any increase in the number of flights which may increase the noise level of surrounding areas.

6.11.2 Restricting Residential Development

Limit single-family residential development to no more than one dwelling on an existing lot of record where the existing or future aircraft noise exceeds 65 Ldn.

6.11.3 Mitigation for Interior Noise

Require all discretionary residential development proposed within the 60 Ldn aircraft noise contour to mitigate interior noise 45 Ldn or less, and to limit the maximum A-weighted noise level of single aircraft overflights to 50 dBA or less.

6.11.4 Coordination with City of Watsonville

Encourage the City of Watsonville to review noise contour data for Watsonville Airport biannually and forward any new data to the County for its use.

Chapter 16.10

GEOLOGIC HAZARDS

Sections:	
16.10.010	Purpose.
16.10.020	Scope.
16.10.022	Statutory authorization.
16.10.025	Basis for establishing the areas of special flood hazardReserved.
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16.10.010 Purpose.

The purposes of this chapter are:

(A) Policy Implementation. To implement the policies of the National Flood Insurance Program of the Federal Insurance Administration, the State of California Alquist-Priolo Earthquake Fault Zoning Act, the Santa Cruz County General Plan, and the Land Use Plan of the Local Coastal Program; and

(B) Public Health and Safety. To minimize injury, loss of life, and damage to public and private property caused by the natural physical hazards of earthquakes, floods, landslides, and coastal processes; and

(C) Development Standards. To set forth standards for development and building activities that will reduce public costs by preventing inappropriate land uses and development in areas where natural dynamic processes present a potential threat to the public health, safety, welfare, and property; and

(D) Notice of Hazards. To <u>assureensure</u> that potential buyers are notified of property located in an area of <u>special floodgeologic and coastal</u> hazard, and to <u>assureensure</u> that those who occupy areas of <u>special floodgeologic and coastal</u> hazard assume responsibility for their actions.

16.10.020 Scope.

This chapter sets forth regulations and review procedures for development and construction activities including grading, septic systems installation, development permits, changes of use as specified in SCCC 16.10.040(19N)(h6), building permits, minor land divisions, and subdivisions throughout the County-and particularly within mapped geologic hazards areas and areas of special flood hazard (SFHAs). These regulations and procedures shall be administered through a system of geologic hazard assessment, technical review, development and building permits.

16.10.022 Statutory authorization.

The State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local government units the authority to adopt regulations designed to promote public health, safety, and general welfare of its citizenry through the adoption of the following geologic hazard and floodplain management regulations of this chapter.

16.10.025 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA) in the flood insurance study (FIS) dated April 15, 1986, and accompanying flood insurance rate maps (FIRMs) and flood boundary and floodway maps (FBFMs), dated April 15, 1986, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of the flood regulations contained in this chapter, and may be supplemented by studies for other areas. The FIS, FIRMs, and FBFMs are on file at the County Government Center, Planning Department. [Ord. 4518 C § 2, 1999].

16.10.030 Amendment procedure.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of ChapterSCCC 13.03-SCCC and shall be subject to approval by the California Coastal Commission.

16.10.35 Conflict with existing regulations.

This chapter is not intended to repeal, nullify, or impair any existing easements, covenants, or deed restrictions. If this chapter and any other ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

16.10.36 Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by artificial or natural causes. This chapter does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Santa Cruz County, any officer or employee thereof, the State of California, or the Federal Insurance Administration, Federal Emergency Management Agency, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. [Ord. 4518-C § 2, 1999].

16.10.37 Severability.

This chapter and the various parts hereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

Staff Note: Definitions shown in highlight are not part of nor subject to this LCP amendment; they will be reviewed under LCP-3-SCO-20-0066-2

16.10.040 Definitions.

For the purposes of this chapter, the following definitions apply:

(1) "Accessory use" means any use which is clearly incidental and secondary to the main use and does not change the character of the main use.

(2<u>A</u>) "Active <u>fault</u>" means a geologic feature (fault or landslide) which shows evidence of movement, that has had surface displacement, or activity within Holocene time (about the last 11,000 years).

(B) "Active landslide" means a landslide that is presently moving or has recently moved as indicated by distinct topographic slide features such as sharp, barren scarps, cracks, or tipped (jackstrawed) trees. Exhibit 3 $(\underline{3C})$ "Addition" means improvement to an existing structure that increases <u>theits</u> area, measured in square feet. The use of breeze ways, corridors, or other non-integral connections between structures shall not cause separate buildings or structures to be considered additions to an existing structure.

(4D) "Adjacent/contiguous parcel" means a parcel touching the subject parcel and not separated from the subject parcel by a road, street or other property.

(5) "Area of special flood hazard" means an area having special flood hazard as identified by the Federal Insurance Administration, through the Federal Emergency Management Agency, and shown on an FHBM or FIRM map as Zone A, AO, A1 A30, AE, A99, V1 V30, VE or V. Also known as special flood hazard area (SFHA).

(6) "Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year. For flood insurance purposes "100 year flood" and "base flood" have the same meaning.

(7) "Basement" means, for the purposes of this chapter, any area of the building having its floor subgrade (below ground level) on all sides.

(<u>&E)</u> "Beach erosion" means temporary or permanent reduction, transport or removal of beach sand by littoral drift, tidal actions, storms or tsunamis.

(9) "Certified engineering geologist" means a registered geologist who is licensed by the State of California to practice the subspecialty of engineering geology.

(10<u>F)</u> "Coastal bluff" means a bank or cliff along the coast subject to coastal erosion processes, including historic wave erosion. "Coastal bluff" refers to the top edge, face, and base of the subject bluff.

(G) "Bluff line or edge" means the upper termination of a bluff, cliff, or seacliff. In cases where the top edge of the cliff is rounded away from the face of the cliff as a result of erosional processes related to the presence of the steep cliff face, the bluff line or edge shall be defined as that point nearest the cliff beyond which the downward gradient of the surface increases more or less continuously until it reaches the general gradient of the cliff. In a case where there is a step like feature at the top of the cliff face, the landward edge of the topmost riser shall be taken to be the cliff edge. The termini of the bluff line, or edge along the seaward face of the bluff, shall be defined as a point reached by bisecting the angle formed by a line coinciding with the general trend of the bluff line along the inland facing portion of the bluff. Five hundred feet shall be the minimum length of bluff line or edge to be used in making these determinations.

(<u>++H</u>) "Coastal dependent uses" means any development or use which would not function or operate unless sited on or adjacent to the ocean.

(12I) "Coastal erosion processes" means natural forces that cause the breakdown and transportation of earth or rock materials on or along beaches and bluffs. These forces include, but are not limited to, landsliding, surface runoff, wave action and tsunamis.

(13) "Coastal hazard areas" means areas which are subject to physical hazards as a result of coastal processes such as landsliding, erosion of a coastal bluff, and inundation or erosion of a beach by wave action.

(14) "Coastal high hazard area" means areas subject to high velocity waters, including tidal and coastal inundation. These areas and base flood elevations are identified on a Flood Insurance Rate Map (FIRM) as Zones V1 30, VE or V.

(15K) "County geologist" means a County employee who is registered as a <u>California licensed</u> <u>pProfessional gG</u>eologist <u>licensed with the State of CaliforniaCalifornia Board for Professional</u> <u>Engineers, Land Surveyors and Geologists (R.G.) and who</u> has been authorized by the Planning Director to assist in the administration of this chapter, or a <u>California licensed registered pProfessional gG</u>eologist <u>licensed with the California Board for Professional Engineers, Land Surveyors and Geologists</u> under contract by the County who has been authorized by the Planning Director to assist in the administration of this chapter.

(16L) "County geologic advisor" means an individual <u>who is a California licensed pProfessional</u> <u>gGeologist licensed with the California Board for Professional Engineers, Land Surveyors and</u> <u>Geologists</u><u>who is registered as a geologist with the State of California (R.G.),</u> who may be employed by the County to provide geologic services.

(17<u>M</u>) "Critical structures and facilities" means structures and facilities which are subject to specified seismic safety standards because of their immediate and vital public need or because of the severe hazard presented by their structural failure. These structures include hospitals and medical facilities, fire and police stations, disaster relief and emergency operating centers, large dams and public utilities, public transportation and communications facilities, buildings with involuntary occupancy such as schools, jails, and convalescent homes, and high occupancy structures such as theaters, churches, office buildings, factories, and stores.

(18) "Cumulative improvement" means, for the purposes of calculating "substantial improvement" as defined in subsection (65) of this section, two or more instances of repair, reconstruction, alteration, addition, or improvement to a structure, over the course of five consecutive years. If the value of such activities, when added together, equals or exceeds 50 percent of the market value of the structure, the activity as a whole shall be considered to be a "substantial improvement."

(<u>19N</u>) Development/Development Activities. For the purposes of this chapter, and this chapter only, any project that includes activity in any of the following categories is considered to be development or development activity. This chapter does not supersede SCCC 13.20.040 for purposes of determining whether a certain activity or project is considered development that requires a coastal <u>development</u> permit; some activities and projects will require coastal <u>development</u> permits although they do not fall under the following specific definition:

(a<u>1</u>) The construction or placement of any habitable structure, including a manufactured home and including a non-residential structure occupied by property owners, employees and/or the public;

(b2) Modification, reconstruction or replacement of <u>6550</u> percent of the major structural components—consisting of the foundation, floor framing, exterior wall framing, and roof framing—of an existing habitable structure within any consecutive five-year period, or modification, reconstruction or replacement of 50 percent of the major structural components of an existing critical structure or facility, as defined by this chapter, within any consecutive five-year period, whether the work is done at one time or as the sum of multiple projects. For the purpose of this <u>section_chapter</u>, the following are not considered major structural components: exterior siding; nonstructural door and window replacement; roofing material; decks; chimneys; and interior elements including but not limited to interior walls and sheetrock, insulation, kitchen and bathroom fixtures, mechanical, electrical and plumbing fixtures. The extent of alterations to major structural components will be calculated in accordance with administrative guidelines adopted by resolution of the Board of Supervisors;

(e<u>3</u>) The addition of habitable square footage to any structure, where the addition increases the habitable square footage by more than 50 percent or 500 square feet, whichever is greater, over the existing habitable space within a consecutive five-year period. This allows a total increase of up to 50 percent of the original habitable space of a structure, whether the additions are constructed at one time or as the sum of multiple additions over a consecutive five-year period;

(44) An addition of any size to a structure that is located <u>on or adjacent to on a</u> coastal bluff, <u>on a</u> dune, or in the coastal hazard area, that extends the existing structure in a seaward direction;
(e<u>5)</u> A division of land or the creation of one or more new building sites, except where a land division is accomplished by the acquisition of such land by a public agency for public recreational use;

 $(f_{\underline{0}})$ Any change of use from nonhabitable to habitable, according to the definition of "habitable" found in this section, or a change of use from any noncritical structure to a critical structure;

(g7) Any repair, alteration, reconstruction, replacement or addition affecting any structure that meets either of the following criteria:

(ia) Posted "Limited Entry" or "Unsafe to Occupy" due to geologic hazards, or

(iib) Located on a site associated with slope stability concerns, such as sites affected by existing or potential debris flows;

(c) Defined as a critical structure or facility;

(h8) Grading activities of any scale in the 100-year floodplain or the coastal hazard area, and any grading activity which requires a permit pursuant to ChapterSCCC 16.20-SCCC;

(i9) Construction of roads, utilities, or other facilities;

(j<u>10</u>) Retaining walls which require a building permit, retaining walls that function as a part of a landslide repair whether or not a building permit is required, <u>shoreline and coastal bluff</u> protection structures, sea walls, rip-rap erosion protection or retaining structures, and gabion baskets;

 $(\underline{k11})$ Installation of a septic system;

(1<u>12</u>) Any human-made change to developed or undeveloped real estate in the special flood hazard area, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials. This is in addition to any activity listed in subsectionsparagraphs-(19)(a)(1) through (\pm 11) of this subsection; or

(m13) Any other project that is defined as development under SCCC 13.20.040, and that will increase the number of people exposed to geologic hazards, or that is located within a mapped geologic hazard area, or that may create or exacerbate an existing geologic hazard, shallmay be determined by the Planning Director to constitute development for the purposes of geologic review.

(200) "Development envelope" means a designation on a site plan, <u>or parcel map or grading plan</u> indicating where buildings, access roads and septic systems, <u>and other development</u> are to be located.

(21P) "Fault zones" means are areas delineated by the State Geologist, pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.) which encompasses the traces of active faults; as well as a zone or zones of fracture designated in the General Plan or Local Coastal Program Land Use constraints maps, or other maps and source materials authorized by the Planning Director.

(Q) "Fault trace" is that line formed by the intersection of a fault and the earth' surface and is the representation of a fault as depicted on a map, including maps of earthquake fault zones.

(22R) "Fill" means the deposition of earth or any other substance or material by artificial means for any purpose, or the condition resulting from a fill taking place.

(23) "Flood boundary floodway map" means the map adopted by the Board of Supervisors and used for land use planning and permit review on which the Federal Insurance Administration has delineated the areas of special flood hazard.

(24) "Flood control structure" means any structure or material, including but not limited to a berm, levee, dam or retaining wall, placed in areas where flooding occurs, and constructed for the purpose of protecting a structure, road, utility or transmission line.

(25S) "Flood insurance rate map (FIRM)" means the map adopted by the Board of Supervisors and used for insurance purposes on which the Federal Insurance Administration has delineated the special flood hazard areas, base flood elevations and the risk premium zones applicable to the community. The FIRM became effective on April 15, 1986, for insurance purposes.

(26) "Flood insurance study" means the official report on file with the Planning Department provided by the Federal Emergency Management Agency entitled, "The Flood Insurance Study, Santa Cruz County, California" that includes flood profiles, the FIRM, the flood boundary floodway map, and the water surface elevation of the base flood.

(27) "Floodplain" means any land area susceptible to being inundated by water from any source. The 100-year floodplain is used for planning purposes by Federal agencies and the County. For many larger and more densely populated drainages, the 100-year floodplain is designated on flood boundary and floodway maps prepared by the Federal Insurance Administration. See also "area of special flood hazard."

(28) "Floodplain Administrator" means the Planning Director, or single staff member that is designated by the Director, to manage the administration and implementation of the National Flood Insurance Program regulations and the flood control provisions of this chapter.

(29) "Floodproofing" means any combination of structural and nonstructural additions, changes or adjustments to nonresidential structures which reduce or eliminate flood damage to real estate or improved property.

(30) "Floodway" means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to carry and discharge the 100 year flood without cumulatively increasing the water surface elevation more than one foot at any point. Also referred to as the regulatory floodway.

(31<u>T</u>) "Geologic hazard" means a threat to life, property, or public safety caused by geologic or hydrologic processes such as flooding, wave inundation, landsliding, erosion, <u>surface fault ground</u> rupturefaulting, ground cracking, and secondary seismic effects including liquefaction, landsliding, tsunami and ground shaking.

 $(32\underline{U})$ "Geologic hazards assessment" means a summary of the possible geologic hazards present at a site conducted by the staff <u>County geologistGeologist or a California licensed pProfessional gGeologist</u>.

(<u>33V</u>) "Geologic report, full" means a complete geologic investigation conducted by a<u>n</u> certified engineering professional geologist hired by the applicant, and completed in accordance with the County geologic report guidelines, and accepted by the County.

(W) "Geotechnical investigation / report" means a report prepared by a Professional Engineer, hired by the applicant, completed in accordance with the requirements of this chapter- and County soils (geotechnical) report guidelines, and accepted by the County. This term is synonymous with the term "soils investigation-" or "soils report."

 $(34\underline{X})$ "Grading" means excavating or filling land, or a combination thereof.

 $(35\underline{Y})$ "Habitable" means, for the purposes of this chapter, any structure or portion of a structure, whether or not enclosed, that is usable for living purposes, which includes working, sleeping, eating, recreation, or any combination thereof. The purpose and use of the space, as described above, defines the habitable nature of the space. The term "habitable" also includes any space that is heated or cooled, humidified or dehumidified for the provision of human comfort, and/or is insulated and/or finished in plasterboard, and/or contains plumbing other than hose bibs.

 $(36\underline{Z})$ "Hardship" means, for the purposes of administering SCCC 16.10.100, the exceptional hardship that would result from failure to grant the requested exception. The specific hardship must be exceptional, unusual, and peculiar to the property involved. Economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, personal preferences, or the disapproval of neighbors also cannot qualify as exceptional hardship, as these problems can be resolved through means other than granting an exception, even if those alternative means are more expensive, require a property owner to build elsewhere, or put the parcel to a different use than originally intended or proposed.

(37<u>AA</u>) "High and very high liquefaction potential areas" means areas that are prone to liquefaction caused by ground_shaking during a major earthquake. These areas are designated on maps which are on file with the Planning Department, and other areas may be identified by a geotechnical report that describes the site conditions.

(38) "Historic structure" means any structure that is: (a) listed individually in the National Register of Historic Places, or preliminarily determined by the Secretary of the Interior to meet the requirements for such listing; (b) certified as or preliminarily determined by the Department of the Interior to be contributing to the historical significance of a registered historical district or a district preliminarily determined to qualify as a historic district by the Secretary of the Interior; (c) individually listed on the State Register of Historic Places which has been approved by the Secretary of the Interior; or (d) individually listed in the inventory of historic structures in a community with a historic preservation program that has been certified either by an approved State program or directly by the Secretary of the Interior.

(39<u>BB</u>) "Hydrologic investigation" means a report prepared by a <u>certified engineeringprofessional</u> geologist or civil engineer with expertise in hydrology which analyzes surface hydrology and/or groundwater conditions.

 $(40\underline{CC})$ "Littoral drift" means the movement of beach sand parallel to the coast due to wave action and currents.

(41DD) "Liquefaction" means the process whereby saturated, loose, granular materials are transformed by ground shaking during a major earthquake from a stable state into a fluid-like state.

(42) "Lowest floor" means, for flood purposes, the lowest floor of the lowest enclosed area of a structure, including any basement.

(a) An unfinished or flood resistant enclosure, below the lowest floor, that is usable solely for parking of vehicles, building access or storage in an area other than a basement area, for the purposes of this chapter, is not considered a building's lowest floor, provided it conforms to applicable nonelevation design requirements, including, but not limited to:

(i) The wet floodproofing standards in SCCC 16.10.070(F)(3)(h)(i);

(ii) The anchoring and construction materials and methods in SCCC 16.10.070(F)(3)(b);

(iii) The standards for septic systems and water supply in SCCC 16.10.070(F)(5) and (6).

(b) For residential structures, all fully enclosed subgrade areas are prohibited as they are considered to be basements. This prohibits garages and storage areas that are below grade on all sides.

(43) "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days.

(44) "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for sale or rent.

(45) "Mean sea level" means the National Geodetic Vertical Datum (NGVD) of 1929, or other measurement, to which base flood elevations shown on a community's flood insurance rate map are referenced.

(46<u>EE</u>) "Multiple-residential structure" means a single structure containing four or more individual residential units.

(47<u>FF</u>) "Natural disaster" means any situation in which the force or forces of nature causing destruction are beyond the control of people.

(48) "New construction" means, for the purposes of SCCC 16.10.070(F), (G), and (H), structures for which the start of construction commenced on or after April 15, 1986, including any subsequent improvements to such structures.

(49<u>GG</u>) "Nonessential public structures" means public structures which are not integral in providing such vital public services as fire and police protection, sewer, water, power and telephone services.

<u>(50)</u> "Obstruction" includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across, or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, snare or collect debris carried by the flow of water, or is likely to be carried downstream.

(51) "One hundred year flood" means a flood that statistically could occur once in 100 years on the average, although it could occur in any year. For flood insurance purposes, "100-year flood" and "baseflood" have the same meaning. See "base flood."

(52<u>HH</u>) "Planning Director" means the Planning Director of the County of Santa Cruz or his or her<u>their</u> authorized employee<u>designee</u>.

(II) "Professional Engineer" means an engineer who is licensed by the State of California to practice engineering.

(JJ) <u>"Professional Geologist" means a geologist who is licensed by the State of California to practice geology.</u>

(53<u>KK</u>) "Public facilities" means any structure owned and/or operated by the government directly or by a private corporation under a government franchise for the use or benefit of the community.

(54LL) "Recent" means a geologic feature (fault or landslide) which shows evidence of movement or activity within Holocene time (about the last 11,000 years).

(MM) "Shoreline or coastal bluff armoring" means any structure or material, including but not limited to riprap or a seawall, placed in an area where coastal processes operate.

<u>(55)</u> "Registered geologist" means a geologist who is licensed by the State of California to practice geology.

(56) "Registered geotechnical (soils) engineer" means a civil engineer licensed in the State of California, experienced in the practice of soils and foundation engineering.

(57) Regulatory Floodway. See "floodway."

(58) "Recreational vehicle" means a vehicle which is built on a single chassis; is 400 square feet or less when measured at the largest horizontal projection; designed to be self-propelled or permanently towable by a light duty truck; and designed primarily not for uses as a permanent dwelling but a temporary living quarters for recreation, camping, travel, or seasonal use.

(NN) "Shoreline Protection Exception Area" ("SPEA") means the coastal bluffs and beaches between Soquel Point and the Capitola city limit and any other area geographic area that may be designated in an adopted Shoreline Management Plan, and describes locations where shoreline and coastal bluff protection structures are acceptable.

(5900) "Shoreline and coastal bluff protection structure" means any structure or material, including but not limited to riprap or a seawall, placed in an area where coastal processes operate with the intention of preventing erosion of shoreline and coastal bluff materials.

(60PP) "Soils investigation / report" means a report prepared by a registered soils engineerProfessional Engineer, hired by the applicant, and completed in accordance with the County soils report guidelines, and accepted by the County. This term is synonymous with the term "geotechnical investigation."

(61QQ) Special Flood Hazard Area (SFHA). See "area of special flood hazard." The land in a flood plain subject to a 1 percent or greater annual chance of flooding in any given year. Special flood hazard areas are in general shown on a FIRM as Zones A, AO, A1-A30, AE, A99, AH, V1-V30, VE and V, but can also be determined by the Floodplain Administrator to occur where not shown on the FIRM. Also known as the flood hazard area, FHA, area of special flood hazard, or area of the 1% annual chance flood.

<u>(62)</u> "Start of construction" means the date the first building permit was issued, provided actual construction, repair, reconstruction, alteration, addition, rehabilitation, placement, or other improvement was begun within the terms of the permit. "Actual construction" means either the first placement of a structure on the site, such as pouring a slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds which are not occupied as dwelling units or are not part of the main structure. For the purposes of the phrase "substantial improvement," "actual construction" means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

(63RR) "Structure" means anything constructed or erected which requires a location on the ground, including, but not limited to, a building, manufactured home, gas or liquid storage tank, or facility such as a road, retaining wall, pipe, flume, conduit, siphon, aqueduct, telephone line, electrical power transmission or distribution line.

(64) "Substantial damage" means damage of any origin, sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure as it existed before the damage occurred.

(65) "Substantial improvement" means any repair, reconstruction, rehabilitation, addition, alteration or improvement to a structure, or the cumulative total of such activities as defined in subsection (18) of this section, the cost of which equals or exceeds 50 percent of the market value of the structure either immediately prior to the issuance of the building permit. This term includes structures that have incurred "substantial damage" regardless of the actual repair work proposed or performed. This term does not

include any project or portion of a project to upgrade an existing habitable structure to comply with current State or local health, sanitary, or safety code specifications which are the minimum necessary to assure safe living conditions, any alteration of an historic structure; provided, that the alteration will not preclude the structure's continued designation as an historic structure. (See also "cumulative improvement.")

(66<u>SS</u>) "Subsurface geologic investigation" means a geologic report prepared by <u>a certifieda</u> <u>engineering</u> <u>professional</u> geologist that provides information on subsurface materials through trenching, test pits,<u>and</u> borings<u>or other methods acceptable to the County Geologist</u>.

(67) V-Zone. See "coastal high hazard area."

(68) "Violation" means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications or required permits, or other evidence of compliance required in this chapter is presumed to be in violation until such time as the required documentation has been provided.

(69) "Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. "Watercourse" includes specifically designated areas in which substantial flood damage may occur.

16.10.050 Requirements for geologic <u>and geotechnical</u> assessment.

(A) All development is required to comply with the provisions of this chapter., specifically including, but not limited to, the placement of manufactured homes in the areas designated as SFHAs in the flood insurance study.

(B) Hazard Assessment Required. A geologic hazards assessment shall be required for all development activities, and foundation replacements or upgrades, in the following designated areas: fault zones, sites with suspected instability, 100-year floodplains and floodways, and coastal hazard areas, except: as specified in subsections (C) (D) and (E) of this section, where a full geologic report will be prepared according to the County guidelines for engineering geologic reports., or where tThe County Geologist may waive the requirement for a hazard assessment based upon a determination-finds that there is adequate information on file. A geologic hazards assessment shall also be required for development located in other areas of geologic hazard, as identified by the County Geologist or designee, using available technical resources, from environmental review, or from other field review.

(C) <u>Geotechnical (Soils) Report Required. A geotechnical report shall be required when determined</u> to be necessary by County civil engineering staff, the County geologist, or the California Building Code (CBC).

(D) Geologic Report Required. A full geologic report shall be required for the following:

(1) For all proposed land divisions and critical structures and facilities in the areas defined as earthquake fault zones on the State Alquist-Priolo Earthquake Fault Zoning Act maps;

- (2) Whenever a significant potential hazard is identified by a geologic hazards assessment;
- (3) For all new reservoirs to serve major water supplies;
- (4) Prior to the construction of any critical structure or facility in designated fault zones; and

(5) When a property has been identified as "Unsafe to Occupy" due to adverse geologic conditions, no discretionary approval or building permit (except approvals and permits that are necessary solely to mitigate the geologic hazard) shall be issued prior to the review and approval of geologic reports and the completion of mitigation measures, as necessary.

(6) For all new water tanks in excess of 10,000 gallons either as a single tank or multiple tanks on a site, which are located in an area of geologic hazards as identified by the County Geologist;

 $(\underline{\mathbf{PE}})$ Potential Liquefaction Area. A site-specific <u>geotechnicalsoil</u> investigation (with input from a Professional Geologist, when required by County civil engineering staff or the County Geologist) by a certified engineering geologist and/or soil engineer shall be required for all development applications for more than four residential units, and for structures greater than one story in areas of high or very high liquefaction potential, or when required by the California Building Code. Development applications for four units or less, one story structures and nonresidential projects shall be reviewed for liquefaction hazard through environmental review and/or geologic hazards assessment. When a significant hazard may exist, a site-specific soils investigation shall be required.

(EF) Additional Report Requirements. Additional information (including but not limited to full geologic, subsurface geologic, hydrologic, geotechnical or other engineering investigations and reports) shall be required when a hazard or foundation constraint requiring further investigation is identified.

16.10.060 Assessment and report preparation and review.

(A) Timing of Geologic Review. Any required geologic, soil, or other technical report shall be completed, reviewed and accepted pursuant to the provisions of this section before any public hearing is scheduled for consideration of approval of a proposed project, and before any discretionary-or development application or building permit is approved or issued. The County Geologist may agree to defer the date for completion, review, or acceptance of any technical report where the technical information is (1) unlikely to significantly affect the size or location of the project, and (2) the project is not in the area of the Coastal Zone where decisions are appealable to the Coastal Commission. In no event shall such be deferred until after the approval or issuance of a building permit.

(1) An application for a geologic hazards assessment shall include a plot plan showing the property boundaries and location of proposed development activities. Any other information deemed necessary by the County Geologist (including but not limited to topographic map, building elevations or grading plans) shall be submitted upon request.

(2) An application for a geologic hazards assessment or a technical report review constitutes a grant of permission for the Planning Director, or agents, to enter the property for the purposes of responding to the application.

(B) <u>Report-Geologic Hazards Assessment</u> Preparation. The geologic hazards assessment shall be prepared by County staff. Alternately, the assessment may be conducted by a private <u>pP</u>rofessional <u>gG</u>eologist at the applicant's choice and expense. Such privately prepared assessments shall, however, be subject to review and <u>approvalacceptance</u> as specified in this section. <u>Application for review and acceptance of a geologic hazards assessment is not an application for a development permit.</u>

(C) Report Acceptance. All geologic, geotechnical/<u>soils</u>, engineering, and hydrologic reports or investigations submitted to the County as a part of any development application <u>shallmust</u> be found <u>by the</u> <u>County</u> to conform to <u>State and</u> County report guidelines <u>and requirements</u>. The Planning Director may

require an inspection in the field of all exploratory trenches, test pits, and borings excavated for a technical report.

(D) <u>Geologic</u> Hazard Assessment and Report Expiration. A geologic hazards assessment and all recommendations and requirements given therein shall remain valid for three years from the date of completion, <u>unless a shorter period is specified in the report by the preparer</u>. <u>A full Geotechnical and</u> geologic reports shall <u>beremain</u> valid and all recommendations therein shall remain in effect for three years from the date of completion of the report <u>unless a shorter period is specified in the report by the preparer</u>. <u>The An</u> exception to the three-year period of validity is where a change in site conditions, development proposal, technical information or County policy significantly affects the technical data, analysis, conclusions or requirements of the assessment or report; in which case the Planning Director may require a new or revised assessment or report.

(E) <u>Change or Cancellation of Professional In Responsible Charge. When the professional in</u> responsible charge of a report accepted by the County is changed or is no longer involved in the project, notice shall be given by the professional and the property owner to the County within 7 days of such change or cancellation.

16.10.070 **Permit conditions**Incorporation of technical recommendations into project.

The recommendations of the geologic hazards assessment, full geologic report, and/or the recommendations of other technical reports (if <u>evaluatedreviewed</u> and <u>authorizedaccepted</u> by the Planning Director), shall be <u>incorporated into the project plans or</u> included as permit conditions of any permit or approvals subsequently issued for the development. In addition, the requirements described below for specific geologic hazards shall become standard conditions for development, building and land division permits and approvals. No development, building and land division permits or approvals shall be issued, and no final maps or parcel maps shall be recorded, unless such activity is in compliance with the requirements of this section.

(A) General. If a project is not subject to geologic review because the structure is nonhabitable and is not otherwise considered to be development under this chapter, a declaration of restrictions for the nonhabitable structure shall be recorded <u>on the property deed</u> that includes an acknowledgment that any change of use to a habitable use, or physical conversion to habitable space, shall be subject to the provisions of this chapter.

(B) Notice and Acknowledgement of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required, as a condition of development approval and building permit approval, to record a Notice of Geologic/Coastal Hazards, Acceptance of Risk, Liability Release, and Indemnification with the County Recorder. The Notice shall be in a form approved by the County of Santa Cruz, and shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted, and shall include acknowledgements and agreements, as applicable to the specific project.

(**BC**) Fault Zones.

(1) Location. Development shall be located away from potentially hazardous areas as identified by the geologic hazards assessment or full geologic report.

(2) Setbacks. Habitable structures shall be set back a minimum of 50 feet from the edge of the area of fault induced offset and distortion of active and potentially active fault traces. This setback may be reduced to a minimum of 25 feet from the edge of this zone, based upon paleoseismic studies that include observation trenches. Reductions of the required setback may

only occur when both the consulting <u>engineeringProfessional gG</u>eologist 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 100 feet from the edge of the area of fault induced offset and distortion of active and potentially active fault traces.

(3) Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required, as a condition of development approval and building permit approval, to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted.

(43) Other Conditions. Other permit conditions, including but not limited to project redesign, elimination of building sites, and the delineation of development envelopes, building setbacks and foundation requirements, shall be required as deemed necessary by the Planning Director.

(CD) Groundshaking.

(1) New Dams. Dams shall be constructed according to high seismic design standards of the Dam Safety Act and as specified by structural engineering studies.

(2) Public Facilities and Critical Structures and Facilities. All new public facilities and critical structures shall be designed to withstand the expected groundshaking during the design earthquake on the San Andreas fault or San Gregorio fault.

(3) Other Conditions. Other permit conditions including but not limited to structural and foundation requirements shall be required as deemed necessary by the Planning Director.

 $(\underline{\mathbf{PE}})$ Liquefaction Potential.

(1) Permit Conditions. Permit conditions including, but not limited to, project redesign, elimination of building sites, delineation of development envelopes and drainage and foundation requirements shall be required as deemed necessary by the Planning Director.

(2) Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required, as a condition of development approval and building permit approval, to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted.

 $(\underline{\mathbf{EF}})$ Slope Stability.

(1) Location. All development activities shall be located away from potentially unstable areas as identified through the geologic hazards assessment, full <u>engineering</u> geologic report, soils (geotechnical) report or other environmental or technical assessment.

(2) Creation of New Parcels. Allow the creation of new parcels in areas with potential slope instability as identified through a geologic hazards assessment, full geologic report, soils (geotechnical) report or other environmental or technical assessment only under the following circumstances:

(a) New building sites, roadways, and driveways shall not be permitted on or across slopes exceeding 30 percent grade.

(b) A full <u>engineering</u> geologic report and any other appropriate technical report shall demonstrate that each proposed parcel contains at least one building site and access which are not subject to significant slope instability hazards, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize <u>potential for</u> landslide damage and not cause a health <u>or safety</u> hazard.

(c) New building sites shall not be permitted which would require the construction of engineered protective structures such as retaining walls, diversion walls, debris walls or slough walls, or foundations designed to mitigate potential slope instability problems such as debris flows, slumps or other types of landslides.

(3) Drainage. Drainage plans designed to direct runoff away from unstable areas (as identified from the geologic hazards assessment or other technical report) shall be required. <u>New drainage improvements shall not adversely affect slope stability and not increase the danger that any other property or public improvements will be impacted by potentially unstable slopes or landsliding. Drainage plans shall be completed by a Professional Engineer and reviewed by both the Professional Geologist (if required by the County Geologist) and other Professional Engineers as part of the design team. Such plans shall be reviewed and approved accepted by the County Geologist.</u>

(4) Leach Fields. Septic leach fields shall not be permitted in areas subject to landsliding as identified through the geologic hazards assessment, environmental assessment, or full geologic report.

(5) Road <u>and Driveway</u> Reconstruction. Where washouts or landslides have occurred on public or private roads<u>and driveways</u>, road <u>and driveway</u> reconstruction shall meet the conditions of appropriate geologic, soils<u>(geotechnical)</u> and/or engineering reports and shall have adequate <u>geologic</u>, soils, and other engineering supervision<u>and permits as required by the County Code</u>.

(6) <u>New Road and Driveway Construction. New roads and driveways shall be located away</u> from potentially unstable areas as identified through the geologic hazards assessment, full engineering geologic report, soils(geotechnical) report or other environmental or technical assessment.

<u>(6)</u><u>Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted.</u>

(7) Other Conditions. Other permit conditions including but not limited to project redesign, building site elimination and the development of building and septic system envelopes, building setbacks and foundation and drainage requirements shall be required as deemed necessary by the Planning Director.

(FG) Floodplains. The provisions of SCCC 16.13 Flood Hazards shall apply to all development, as defined in that chapter, that is wholly within, partially within, or in contact with any flood hazard area, or other areas as identified by the Floodplain Administrator, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, replacement, repair, relocation or demolition of any building or structure; placement, installation, or replacement of manufactured homes; installation or replacement of tanks;

placement of temporary structures and temporary storage; installation of swimming pools; and miscellaneous and utility structures.

(1) Critical and Public Facilities. Critical facilities and nonessential public structures and additions shall be located outside of the 100-year floodplain unless such facilities are necessary to serve existing uses, there is no other feasible location and construction of these structures will not increase hazards to life or property within or adjacent to the floodplain.

(2) Creation of New Parcels. Allow the creation of new parcels including those created by minor land division or subdivision in the 100-year floodplain only under the following circumstances:

(a) A full hydrologic report and any other appropriate technical report must demonstrate that each proposed parcel contains at least one building site, including a septic system and leach field site, which is not subject to flood hazard, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.

(b) A declaration indicating the limits and elevations of the 100-year floodplain certified by a registered professional engineer or surveyor must be recorded with the County Recorder.

(c) Adequate drainage to reduce exposure to flood hazards must be provided.

(d) Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood.

(3) Development Criteria and Design Requirements. All development within the 100-year floodplain shall meet the following criteria. Any addition, repair, reconstruction, rehabilitation, alteration, or improvement of structures for which building permits were issued prior to April 15, 1986, when subject to the definition of "cumulative improvement," does not meet the definition of "substantial improvement" (pursuant to SCCC 16.10.040(18) and (65)), is exempt from this section.

(a) Location of proposed structures outside of the 100-year floodplain when a buildable portion of the property exists outside the floodplain;

(b) Anchoring of foundations and the structures attached to them by a method adequate to prevent flotation, collapse and lateral movement of the structures due to the forces that may occur during the base flood, including hydrostatic and hydrodynamic loads and the effects of buoyancy.

A project involving a manufactured home shall achieve this by one of the following methods:

(i) By providing an anchoring system designed to withstand horizontal forces of 15 pounds per square foot and uplift forces of nine pounds per square foot; or

(ii) By the anchoring of the unit's system, designed to be in compliance with the Department of Housing and Development Mobile Home Construction and Safety Standards;

(c) Shall be constructed with materials and utility equipment resistant to flood damage and using construction methods and practices that minimize flood damage;

(d) Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located to prevent water from entering or accumulating within the components during conditions of flooding;

(e) In flood zones A-O and A-H, provide drainage paths adequate to guide water away from structures and reduce exposure to flood hazards;

(f) For residential structures, including manufactured homes, the lowest floor, including the basement, and the top of the highest horizontal structural member (joist or beam) which provides support directly to the lowest floor, and all elements that function as a part of the structure, such as furnace, hot water heater, etc., shall be elevated at least one foot above the 100-year flood level. Foundations shall be designed to minimize flood water displacement and flow damage. Where a piling or caisson foundation system is used the space below the lowest floor shall be free of obstruction or be enclosed with wood-constructed lattice work or screens designed to collapse or be carried away under the stress of flood waters without jeopardizing the structural support of the building. Compliance with the elevation requirement shall be cause to issue a stop work notice for a project. The Planning Director will maintain records of compliance with elevation requirements;

(g) Nonresidential structures shall be floodproofed if elevation above the 100-year flood level in accordance with subsection (F)(3)(f) of this section is not feasible. Floodproofed structures shall:

(i) Be floodproofed so that below an elevation one foot higher than the 100-year flood level, the structure is watertight with walls substantially impermeable to the passage of water based on structural designs, specifications and plans developed or reviewed by a registered professional engineer or architect;

(ii) Be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(iii) Be certified by a registered professional engineer or architect that floodproofing standards and requirements have been complied with; the certification shall be submitted to the Planning Director and shall indicate the elevation to which floodproofing was achieved prior to a final building inspection. The Planning Director shall maintain records of compliance with floodproofing requirements;

(h) In flood zone AO, residential structures shall have the lowest floor at or above the highest adjacent grade, at least as high as the depth number given on the FIRM, and nonresidential structures, where elevation is not feasible, shall have the lowest floor completely floodproofed at or above the highest adjacent grade, at least as high as the depth number given on the FIRM;

(i) Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or shall provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices; provided, that they permit the automatic entry and exit of flood waters. Nonresidential structures that are floodproofed in compliance with subsection (F)(3)(g) of this section are an exception to this requirement.

(4) Recreational Vehicles. RVs that are placed on a site that is within the A, A1 – A30, AH, AO or AE zones as designated in the FIS, and that are not fully licensed and highway ready, shall meet the criteria given in subsections (F)(3)(b) and (3)(f) of this section, unless they are on the site for less than 180 consecutive days. For the purposes of this chapter, "highway ready" means on wheels or jacking system, attached to the site by quick disconnect type utilities and security devices, and having no attached additions.

(5) Septic Systems. New septic systems and leach fields shall not be located within the 100-year floodplain. The capacity of existing septic systems in the floodplain shall not be increased.

(6) Water Supplies and Sanitary Sewage Systems. All new and replacement water supplies and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(7) Placement of Fill. Allow the placement of fill within the 100 year floodplain in the minimum amount necessary, not to exceed 50 cubic yards. Fill shall only be allowed if it can be demonstrated that the fill will not have cumulative adverse impacts.

(8) Flood Control Structures. Flood control structures shall be permitted only to protect existing development (including agricultural operations) where no other alternative is feasible or where such protection is needed for public safety. Such structures shall not adversely affect sand supply, increase erosion or cause flooding on adjacent properties or restrict stream flows below minimums necessary to maintain fish and wildlife habitats or be placed further than necessary from the development requiring protection.

(9) Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic or flood hazards shall be required, as a condition of development approval and building permit approval, to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel or parcels and the level of prior hydrologic or geologic investigation conducted.

(10) Other Conditions. Other permit conditions, including but not limited to project redesign, building site elimination, development of building and septic envelopes, and foundation requirements shall be required as deemed necessary by the Planning Director. When base flood elevation data are not provided in the flood insurance study, the Planning Director shall obtain, review, and reasonably utilize the best base flood data available from Federal, State or other sources, as a basis for elevating residential structures and floodproofing nonresidential structures, to at least one foot above the base flood level. Residential structures shall be elevated no less than two feet above natural grade when base flood data do not exist. Nonresidential structures may elevate or flood proof to meet this standard.

(11) Alteration or Relocation of Watercourse. Adjacent communities, the California Department of Water Resources and the Federal Emergency Management Agency shall be notified prior to any alteration or relocation of a major watercourse. The flood carrying capacity of any altered or relocated watercourses must be maintained.

(12) Permit Requirements. All other required State and Federal permits must be obtained.

(G) Permit Conditions Floodways. Located within areas of special flood hazard as established in SCCC 16.10.025, and within some areas not mapped as part of the flood insurance study, are areas designated as floodways (see also SCCC 16.10.040(30)). The floodway is an extremely hazardous area due to the quantity and velocity of flood waters, the amount of debris which may be transported, and the high potential for erosion during periods of large stream flows. In the floodway the following provisions apply:

(1) Development and Building within Floodway Prohibited. All development activity, except for the reconstruction, repair, alteration or improvement of an existing structure, is prohibited within the floodway unless exempted by State or Federal laws. Any encroachment which would cause any increase in the base flood level is prohibited.

(2) Sites Where Floodway Not Established. Where the Flood Insurance Study or other technical report has identified a flood hazard area but has not designated a floodway, the applicant must demonstrate, through hydrologic analysis, that the project will not adversely affect the carrying capacity of the area. For the purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development in the watershed, will increase the water surface elevation of the base flood more than one foot at any point. The hydrologic analysis must identify the boundaries of the floodway, and the project must comply with the provisions of subsection.

(3) Setback from Floodway. Where neither a base flood elevation nor a floodway has been identified by the flood insurance study or by a site-specific hydrologic study, a minimum setback of 20 feet from the top edge of the banks of a drainage course shall be maintained, and all activity that takes up flood storage area within this setback shall be prohibited. This floodway setback may be reduced by the Planning Director only if a full hydrologic analysis identifies the boundaries of the floodway, demonstrates that a smaller setback will not increase the susceptibility of the proposed activity to flood-related hazards, and there is no alternative location outside of the 20-foot setback. (See also Chapter <u>16.30</u> SCCC, Riparian Corridor and Wetlands Protection, for vegetation related setbacks from streams.)

(4) Location of Septic Systems. New septic systems and leach fields shall not be located in the floodway. The capacity of existing systems in the floodway shall not be increased.

(5) Alteration of Structures in Floodway. Reconstruction, repair, alteration or improvement of a structure in a floodway shall not cause any increase in the base flood elevation. Substantial improvements, regardless of cause, shall only be permitted in accordance with subsection (F) of this section. Repair, reconstruction, alteration, or replacement of a damaged structure which does not exceed the ground floor square area of the structure before the damage occurred shall not be considered an increase in the base flood elevation.

(6) Permit Requirements. All other required local, State and Federal permits must be obtained.

16.10.080 **Project density limitations.**

The following requirements shall apply to density calculations for new building sites created through minor land division, subdivision, or other development approval or permit:

(A) Fault Zones.

(1) Exclusion from Density Calculations. The portion of a property within 50 feet of the edge of the area of fault induced offset and distortion of an active or potentially active fault trace shall be excluded from density calculations.

(2) Creation of New Parcels and/or New Building Sites. The following standards shall apply to the creation of new parcels and/or building sites within State Alquist-Priolo earthquake fault zones and County seismic review zones:

(a) All new structures shall meet setbacks as specified in SCCC 16.10.070(B)(2).

(b) Outside of the urban services line and the rural services line, a 20-gross-acre minimum parcel size shall be required, and a 10-gross-acre minimum parcel size shall be required for parcels within the portions of the County seismic review zones that are not also part of a State Alquist-Priolo earthquake fault zone, and are outside the Coastal Zone, if at least 25 percent of the perimeter of the original parcel to be divided is bounded by parcels of one acre or less in size.

(B) Landslides and Steep Slopes. The portion of a property with slopes over 30 percent in urban areas and 50 percent in rural areas, and the portion of a property within recent or active landslides, shall be excluded from density calculations. Landslide areas determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report

suitable for development shall be granted full density credit.

(C) <u>FloodwaysSpecial Flood Hazard Area</u>. The portion of a parcel within the <u>special flood hazard</u> <u>area100-year floodway</u> shall be excluded from any density calculations.

(D) Floodplains. The portion of a property within the 100-year floodplain shall be excluded from density calculations.

16.10.090 Project denial.

A development permit or the location of a proposed development shall be denied if the Planning Director determines that geologic hazards cannot be adequately mitigated or the project would conflict with National Flood Insurance Program regulations. Development proposals shall be approved only if the project density reflects consideration of the degree of hazard on the site, as determined from the technical information as reviewed and approvedaccepted by the Planning Director or the decision making body.

16.10.100 Exceptions.

(A) Request for Exception. A request for an exception to the provisions of this chapter <u>including but</u> not limited to an exception to the applicable geologic setback requirement, or the permit conditions, may be considered by the Planning Director, or decision making body, if the exception is necessary to mitigate a threat to public health, safety and welfare or if the exception is necessary to avoid an unconstitutional taking of private property without just compensation pursuant to Policy 6.4.10.

(B) Reason for Request. A request for an exception shall state in writing the reason why the exception is requested, the proposed substitute provisions, when the exception would apply, <u>andor</u> the threat to public health, safety, or welfare that would be mitigated.

(C) Required Findings. In granting an exception, the Planning Director <u>or decision making body</u> shall make the following findings:

(1) That hardship, as defined in SCCC 16.10.040(3627), exists; and

(2) The project is necessary to mitigate a threat to public health, safety, or welfare or to avoid an unconstitutional taking of private property without just compensation pursuant to Policy <u>6.4.10; and</u>

(3) The request is for the smallest amount of variance from the provisions of this chapter as possible; and

(4) <u>Adequate mM</u>easures will be taken to ensure consistency with the purposes of this chapter and the County General Plan to the maximum extent feasible.

(5) Any approval of a geologic setback less than the applicable 75- or 100-year standard expected design life is acknowledged and accepted by the property owner and properly characterized and reflected within the Notice of Geologic Hazards to be recorded on the title to the subject property.

(D) Exceptions for Projects in the Special Flood Hazard Area. For projects in the SFHAs the following additional procedures and provisions also apply:

(1) Nature of Exception. The exception criteria set forth in this section are based on the general principle of zoning law that exceptions pertain to a piece of property and are not personal in nature. An exception may be granted for a parcel of property with physical characteristics so

unusual that complying with the requirements of this chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

The interest in protecting citizens from flooding is compelling, and the cost of insuring a structure built below flood level so onerous that exceptions from the flood elevation or other health and safety requirements in the flood ordinance shall be granted in rare circumstances and only where no other alternative is available.

(2) Criteria for Exceptions.

(a) In considering requests for exceptions, technical evaluations, all other relevant information and standards specified in other sections of this chapter shall be considered, including the following:

(i) Danger that materials may be swept onto other lands to the injury of others;

(ii) Danger of life and property due to flooding or erosion damage;

(iii) Susceptibility of the proposed structure and its contents to flood damage and the effect of such damage on the existing individual owner and future owners of the property;

(iv) Importance of the services provided by the proposed structure to the community;

(v) Necessity to the structure of a waterfront location, where applicable;

(vi) Availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

(vii) Compatibility of the proposed use with existing and anticipated development;

(viii) Relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

(ix) Safety of access to the property in time of flood for ordinary and emergency vehicles;

(x) Expected heights, velocity, duration, rate of rise, and sediment transport of the floodwater expected at the site; and

(xi) Costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.

(b) Any applicant to whom an exception is granted shall be given written notice of the terms and conditions, if any, of the exception, and said notice shall also include the following:

(i) That the issuance of an exception to construct a structure below the base flood level will result in substantially increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage; and

(ii) That such construction below the base flood level increases risks to life and property; and

(iii) That a copy of the written notice shall be recorded on the deed so that it appears in the chain of title of the affected parcel of land.

(c) The Floodplain Administrator will maintain a record of all exception actions, including justification for their issuance, and report such exceptions issued in its biennial report submitted to the Federal Insurance Administration of the Federal Emergency Management Agency.

(3) Conditions for Exception.

(a) Exceptions may be issued for new construction, substantial improvement, and other proposed new development to be erected on a lot of one half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing that the procedures of SCCC 16.10.050, 16.10.070, and 16.10.080 have been considered. As the lot size increases beyond one-half acre, the justification required for issuing the exception increases.

(b) Exceptions shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result from the project.

(c) Exceptions shall only be issued upon a determination that the exception is the "minimum necessary" considering the flood hazard to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this chapter. For example, in the case of exceptions to an elevation requirement, exceptions need not be granted for permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to that elevation which will both provide relief and preserve the integrity of the regulatory requirements.

(d) Exceptions shall only be issued upon:

(i) Showing of good and sufficient cause;

(ii) Determination that failure to grant the exception would result in a "hardship" (as defined in SCCC 16.10.040) to the applicant; and

(iii) Determination that the granting of an exception will not result in increased flood heights, additional threats to public safety, or extraordinary public expense; ereate a nuisance, cause fraud or victimization of the public, or conflict with existing local laws or ordinances.

(e) Exceptions may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use (a functionally dependent use is one that would not function or operate unless sited on or adjacent to flood prone location in question); provided, that the provisions of this section are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood, does not result in additional threats to public health or safety, and does not create a public nuisance.

(f) Exceptions may be issued for the repair or rehabilitation of historic structures (as defined in SCCC 16.10.040) upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and that the exception is the minimum necessary to preserve the historic character and design of the structure.

(g) Upon consideration of the factors in subsection (D)(2)(a) of this section and the purposes of this chapter, conditions may be attached to the granting of exceptions as necessary to further the purposes of this chapter.

16.10.105 Notice of geologic hazards in cases of dangerous conditions.

(A) Whenever a site inspection, geologic hazards assessment or full geologic report identifies the presence of a geologic hazard that causes a site, building, structure, or portions thereof to be rendered unsafe or dangerous, then pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.070(L)425, the Planning Director may issue a notice of geologic hazard and order thereon, and may record a notice of geologic hazard with the County Recorder.

(B) The Planning Director may initiate abatement procedures pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.070(L)425.

16.10.110 Appeals.

Except as otherwise provided herein, appeals taken pursuant to the provisions of this chapter shall be made in conformance with the procedures of ChapterSCCC 18.10-SCCC, including appeal of the requirement for geologic hazard assessment or technical report. All appeals taken concerning the decision to issue and record a notice of geologic hazard pursuant to the provisions of SCCC 16.10.105 shall be governed by the procedures commencing with Section 501 of the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.425070(A)(10) through (14).

16.10.120 Violations.

(A) Compliance. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with all the provisions of this chapter and other applicable regulations. Nothing herein shall prevent the taking of lawful action as necessary to prevent or remedy any violation.

(B) Actions Constituting Violation. In the event of a violation of this chapter or of the provisions of permit conditions as specified in this chapter, or if the permit has been exercised in a manner which creates a nuisance or is otherwise detrimental to the public health, safety and welfare, the permittee shall be given notice of such violation, and a reasonable time shall be specified for its correction.

16.10.130 Fees.

Fees for the geologic hazards assessment, other field reviews, applications for exceptions, and the review of technical reports shall be set by resolution by the Board of Supervisors.

ORDINANCE NO. 5350

ORDINANCE ADDING CHAPTER 16.13 TO THE SANTA CRUZ COUNTY CODE REGARDING FLOODPLAIN REGULATIONS AND AMENDING SECTION 13.03 OF THE SANTA CRUZ COUNTY CODE ADDING CHAPTER 16.13 TO THE SANTA CRUZ COUNTY LOCAL COASTAL PROGRAM

The Board of Supervisors of the County of Santa Cruz hereby ordains as follows:

SECTION I

Title 16 of the Santa Cruz County Code is hereby amended by adding Chapter 16.13 thereto, said new Chapter to read:

Chapter 16.13

FLOODPLAIN MANAGEMENT REGULATIONS

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PART I. GENERAL AND APPLICABILITY

<u>16.13.010</u> Statutory authorization.

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the County of Santa Cruz does hereby adopt the following floodplain management regulations.

16.13.020 Findings of fact.

(A) Flood hazard areas in the County of Santa Cruz are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(B) <u>These flood losses are caused by uses that are inadequately elevated, floodproofed, or protected</u> from flood damage. The cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities also contributes to flood losses.

16.13.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the County of Santa Cruz to all publicly and privately owned land within flood prone, mudslide [i.e. mudflow] or flood-related erosion areas. These regulations are designed to:

(A) <u>Protect human life and health and property from the dangers of flooding;</u>

(B) <u>Minimize the need for publicly funded and hazardous rescue efforts to save those who are isolated by flood waters;</u>

(C) <u>Minimize expenditure of public money for costly flood damage repair and flood control projects;</u>

(D) <u>Minimize disruption of commerce and governmental services;</u>

(E) <u>Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone</u> and sewer lines; and streets and bridges located in areas of special flood hazard;

(F) <u>Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;</u>

(G) <u>Maintain the County of Santa Cruz's participation in the National Flood Insurance Program,</u> thereby giving citizens and businesses the opportunity to purchase flood insurance;

(H) <u>Retain the natural channel, shoreline, and floodplain creation process and other natural floodplain</u> functions that protect, create, and maintain habitat for threatened and endangered species;

(I) <u>Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels;</u>

(J) Encourage that those who occupy the areas of special flood hazard assume responsibility for their actions;

(K) <u>Exceed the minimum standards for participation in the National Flood Insurance Program,</u> thereby giving citizens and businesses the opportunity to purchase flood insurance at reduced rates.

<u>16.13.040 Scope.</u>

The provisions of this chapter shall apply to all development that is wholly within, partially within, or in contact with any flood hazard area, or other areas as identified by the Floodplain Administrator, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, replacement, repair, relocation or

demolition of any building or structure; placement, installation, or replacement of manufactured homes; installation or replacement of tanks; placement of temporary structures and temporary storage; installation of swimming pools; and placement of miscellaneous and utility structures.

16.13.050 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes regulations to:

(A) <u>Restrict or prohibit uses and developments which are dangerous to health, safety, and property</u> due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

(B) <u>Require that uses and developments vulnerable to floods, including facilities which serve such</u> uses, be protected against flood damage at the time of initial construction;

(C) <u>Control the alteration of natural floodplains, stream channels, and natural protective barriers,</u> which help accommodate or channel floodwaters;

(D) Control filling, grading, dredging, and other development which may increase flood damage; and

(E) <u>Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.</u>

16.13.060 Basis for establishing flood hazard areas.

(A) <u>The Flood Insurance Study for Santa Cruz County dated April 15, 1986 and all subsequent</u> amendments and revisions, the accompanying Flood Insurance Rate Maps (FIRM), and all subsequent amendments and revisions to such maps, are adopted by reference as a part of this chapter and serve as the basis for establishing flood hazard areas.

(B) <u>The Flood Insurance Study and attendant mapping is the minimum area of applicability of the</u> flood regulations contained in this chapter, and may be supplemented by studies for other areas.

(C) <u>Pursuant to Part V of this chapter, the Floodplain Administrator may require submission of additional data to establish flood hazard areas. This shall apply to areas adjacent to a mapped or unmapped watercourse.</u>

(D) In addition, where field surveyed topography indicates that ground elevations are below the closest applicable base flood elevation, even in areas not delineated as a flood hazard area on a FIRM, the area shall be considered a flood hazard area and subject to the requirements of this chapter and, as applicable, the requirements of the building codes.

(E) <u>When a draft or preliminary Flood Insurance Study indicates an increase in the base flood</u> elevation or an expansion of the flood hazard area, this information shall be considered as available data, however projects are not required to design to the draft or preliminary standards and may be issued building permits based on the existing adopted FIRM. However, no building permit shall be issued that is not in compliance with the applicable adopted FIRM, and projects that have received discretionary permit approvals may need to be revised in order to be issued a building permit, if the FIRM maps have changed between the date of the discretionary permit and the time that the building permit is approved and ready for issuance.

(F) <u>Maps and studies that establish flood hazard areas are on file at the Santa Cruz County Planning</u> Department, 701 Ocean Street, Room 400, Santa Cruz, CA 95060.

16.13.070 Amendment procedure.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When a chapter revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of SCCC 13.03 and shall be subject to approval by the California Coastal Commission.

16.13.080 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. If this chapter and any other ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

16.13.090 Warning.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage.

16.13.100 Liability.

This chapter shall not create liability on the part of the County of Santa Cruz, any officer or employee thereof, the State of California, or the Federal Insurance & Mitigation Administration, Federal Emergency Management Agency for any flood damages that may result from reliance on this chapter or any administrative decision lawfully made hereunder. The Floodplain Administrator or any employee charged with the enforcement of this chapter, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this chapter or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this chapter shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Floodplain Administrator and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this chapter.

16.13.110 Severability.

If any section, subsection, sentence, clause or phrase of this chapter is, for any reason, declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any part thereof, other than the part so declared.

16.13.120 Coordination with building codes.

Pursuant to the requirement established in State statute that the County of Santa Cruz administer and enforce the State building codes, the Board of Supervisors of Santa Cruz County does hereby acknowledge that the State building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, this chapter is intended to be administered and enforced in conjunction with the State building codes, which are adopted as SCCC 12.10, Building Regulations, with local amendments as adopted by the County Board of Supervisors.

Where, in any specific case, requirements of this chapter conflict with the requirements of the building codes, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

16.13.130 Areas to which this ordinance applies.

This ordinance shall apply to all mapped and unmapped flood hazard areas within the jurisdiction of the County of Santa Cruz, as established in SCCC 16.13.060.

<u>16.13.140 Other laws.</u>

The provisions of this chapter shall not be deemed to nullify any provisions of local, state or federal law.

16.13.150 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

- (A) <u>Considered as minimum requirements;</u>
- (B) <u>Construed in favor of protecting floodplain functions over development allowances; and</u>
- (C) <u>Deemed neither to limit nor repeal any other powers granted under State statutes.</u>

PART II. DEFINITIONS

<u>16.13.160 Definitions.</u>

For the purpose of this chapter, the definitions in SCCC 16.13.160-A through 16.13.160-Z apply.

<u>16.13.160-A "A" Definitions.</u>

"Accessory structure" means a structure that is located on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure.

"Addition" means an improvement to an existing structure that increases the area, measured in square feet. The use of breezeways, corridors, or other non-integral connections between structures shall not cause separate buildings or structures to be considered additions to an existing structure.

"Area of shallow flooding" means a designated AO or AH Zone on the County of Santa Cruz Flood Insurance Rate Map (FIRM). In these zones, the base flood elevations and depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by sheet flow or ponding.

"Area of special flood hazard" means special flood hazard area. See definition of special flood hazard area.

"Alteration of a watercourse" means an alteration of a watercourse including, but not limited to, any dam, impoundment, levee, channel realignment, conversion to pipe conveyance, bank hardening, refuse dumping, backfilling, excavating, grading, alteration of vegetation, diversion, dewatering or change in cross-sectional area or capacity, which may alter, impede, retard, accelerate, or change the direction and/or velocity of the riverine flow of water and its natural materials transport during conditions of the base flood.

<u>16.13.160-B "B" Definitions.</u>

"Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year. The base flood is commonly referred to as the "100-year flood" or the "1-percent-annual-chance flood".

"Base flood elevation (BFE)" means the water surface elevation of the base flood in relation to the datum specified on the FIRM, or as established in a hydraulic investigation.

"Base flood height" means the water surface height of the base flood in relation to existing grade <u>elevations.</u>

"Basement" means any area of a building having its floor subgrade (below ground level) on all sides.

"Breakaway wall" means a wall that is not part of the structural support of the building and is designed and constructed to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

"Building Official" means the officer or other designated authority charged with the administration and enforcement of the building codes, or a duly authorized representative.

"Building permit" means an official document issued by the Building Division of the Planning Department which authorizes performance of specific activities that are determined to be compliant with the building codes.

<u>16.13.160-C "C" Definitions.</u>

"Coastal high hazard area" means a special flood hazard area extending from offshore to the inland limit of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. Coastal high hazard areas are also referred to as "V Zones" or "flood hazard areas subject to high velocity wave action" and are designated on Flood Insurance Rate Maps (FIRM) as Zone V1-V30, VE, V, or A (when located in a coastal area).

"County Geologist" means a County employee who is a professional geologist registered with the California Board for Professional Engineers, Land Surveyors and Geologists or a professional geologist under contract by the County, who has been authorized by the Planning Director to assist in the administration of this chapter.

"Critical structure or facility" means a facility necessary to protect health, safety, and welfare during a flood. Critical facilities include, but are not limited to, hospitals and medical facilities; fire and police stations; disaster relief and emergency operating centers; large dams and public utilities; public transportation and communications facilities; buildings with involuntary occupancy such as schools, jails, and convalescent nursing homes; high occupancy structures such as theaters, churches, office buildings, factories, and stores; and installations which produce, use or store hazardous materials or hazardous waste.

"Cumulative improvement" means a substantial improvement that involves two or more instances of repair, reconstruction, alteration, addition, or improvement to a structure, over the course of five consecutive years. For example, any improvement permit that is applied for within five years of the permit final of another instance of repair, reconstruction, alteration, addition, or improvement of the same structure, where, if the value of such activities, when added together, equals or exceeds fifty (50) percent of the market value of the structure prior to issuance of the first permit, the activity as a whole shall be considered to be a "substantial improvement."

<u>16.13.160-D</u> "D" Definitions.

"Detailed cost estimate" means a form provided by the Planning Department and completed by a licensed contractor titled "Cost Breakdown" which includes a breakdown of the costs to perform the improvement, the costs to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs to a building or structure. If acceptable to the Floodplain Administrator, a detailed cost estimate may also be an estimate prepared by a licensed contractor. "Development" means any man-made change to improved or unimproved real estate within the special flood hazard area, including but not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of equipment or materials, mining, dredging, filling, grading, paving, excavations, removal of more than 5% of the vegetation on the property, or any other land disturbing activities.

<u>16.13.160-E "E" Definitions.</u>

"Encroachment" means activities or construction within the floodway including fill, new construction, substantial improvements, and other development. These activities are prohibited within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses that the proposed encroachment would not result in any increase in flood levels. The County of Santa Cruz is responsible to review and maintain record of the documentation demonstrating that any permitted floodway encroachment meets National Flood Insurance Program (NFIP) requirements. A "no-rise certification" for floodways is required to document the analyses.

"Exception" means a grant of relief from the requirements of this chapter, or the flood resistant provisions of the building codes, which permits construction in a manner that would otherwise be prohibited by this chapter.

"Existing construction or structure" means structures for which the "start of construction" commenced before April 15, 1986, which is the date of the County of Santa Cruz's first map showing flood hazard areas.

"Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before April 15, 1986.

"Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

<u>16.13.160-F "F" Definitions.</u>

"Federal Emergency Management Agency (FEMA)" means the Federal agency that, in addition to carrying out other functions, administers the National Flood Insurance Program.

"Fill" means the deposition of earth or any other substance or material by artificial means for any purpose, or the condition resulting from a fill taking place.

"Flood or flooding" means a general and temporary condition of partial or complete inundation of normally dry land from:

- (1) The overflow of inland or tidal waters; or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

"Flood control structure" means any structure or material, including but not limited to a berm, levee, dam or retaining wall, placed in areas where flooding occurs, and constructed for the purpose of protecting a structure, road, driveway, utility or transmission line.

"Flood damage-resistant materials" means any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair.

"Flood fringe" means the area that is subject to the base flood outside of the floodway boundary.

"Flood hazard area" means special flood hazard area. See definition of special flood hazard area.

"Flood Insurance Rate Map (FIRM)" means the official map of the County on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to the jurisdiction. For insurance purposes, the original FIRM date for Santa Cruz County is April 15, 1986.

"Flood Insurance Study (FIS)" means the official report provided by the Federal Emergency Management Agency that contains the Flood Insurance Rate Map, the water surface elevations of the base flood, and supporting technical data.

"Floodplain" means any land area susceptible to being inundated by water from any source. The base flood is used to define the floodplain by Federal agencies and the County of Santa Cruz.

"Floodplain Administrator" means the Planning Director or designee, who manages the administration and implementation of the National Flood Insurance Program regulations and the provisions of this chapter.

"Floodplain development permit" means a permit or document issued by the jurisdiction which authorizes performance of specific development activities located in a flood hazard area that are determined to be compliant with this chapter.

"Floodproofing" means any combination of structural and non-structural additions, changes or adjustments to non-residential structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

"Floodway" means regulatory floodway. See definition of regulatory floodway.

"Floodway encroachment analysis" means the hydrologic and hydraulic analyses of the impact a proposed development is expected to have on the floodway boundaries and base flood elevations. The analyses shall be prepared by a registered professional civil engineer using standard engineering methods and models.

"Freeboard" means a factor of safety usually expressed in feet above a base flood elevation or height for purposes of floodplain management. "Freeboard" is required to compensate for the many unknown factors that could contribute to flood heights or elevations greater than the height or elevation calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, climate change, sea level rise, and the hydrological effect of urbanization of the watershed. Unless otherwise noted, freeboard shall be three feet in coastal high hazards areas and two feet in all other flood hazard areas.

<u>16.13.160-G</u> "G" Definitions. <u>Reserved</u>

<u>16.13.160-H "H" Definitions.</u>

"Hardship" means, for the purpose of administering this chapter, the exceptional hardship that would result from failure to grant the requested exception. The specific exception must be an exceptional, unusual, and peculiar issue specific to the property involved. Economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, personal preferences, or the disapproval of neighbors also cannot qualify as exceptional hardship, as these problems can be resolved through means other than granting an exception, even if those means are more expensive, require the property owner to build elsewhere, or put the parcel to a different use than originally intended or proposed.

"Highest adjacent grade (HAG)" means the highest natural elevation of the ground surface prior to construction next to the existing or proposed walls or foundation of a structure.

"Historic structure" means any structure that is:

(1) <u>Listed individually in the National Register of Historic Places (a listing maintained by the</u> U.S. Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) <u>Certified or preliminarily determined by the Secretary of the Interior as contributing to</u> the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

(4) <u>Individually listed on a local inventory of historic places in communities with historic</u> preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states without approved programs.

"Hydrologic investigation" means a report prepared by a registered professional civil engineer with expertise in hydrology and hydraulics which analyzes surface hydrology and hydraulics.

<u>16.13.160-I</u> "I" Definitions. Reserved

16.13.160-J"J" Definitions.Reserved

16.13.160-K "K" Definitions. Reserved

<u>16.13.160-L "L" Definitions.</u>

"Lowest adjacent grade (LAG)" means the lowest natural elevation of the ground surface prior to construction next to the existing or proposed walls or foundation of a structure.

"Lowest floor" means the lowest floor of the lowest enclosed area, including basement (see "Basement" definition in this chapter), but excluding an enclosure below the lowest floor that is used solely for parking of vehicles, building access, or storage and provided the enclosure is built in accordance with the applicable design requirements of the building codes for flood openings, anchoring, construction materials and methods, and utilities in flood zones.

<u>16.13.160-M "M" Definitions.</u>

"Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

"Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

"Market value" means the price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in this chapter, the term refers to the market value of structures (not including the land or any value associated with the location; other site improvements or accessory structures; or indirect costs such as financing, construction loan interest or consultant costs).

<u>16.13.160-N "N" Definitions.</u>

"New construction" means structures for which the "start of construction" commenced on or after April 15, 1986 and includes any subsequent improvements to such structures.

"New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after April 15, 1986.

"Nonresidential" means any building or structure or portion thereof that is not classified Residential Group R or Institutional Group I in accordance with the building code.

<u>16.13.160-O "O" Definitions.</u>

Reserved

<u>16.13.160-P "P" Definitions.</u>

"Planning Director" means the Planning Director of the County of Santa Cruz or their authorized designee.

"Preliminary cost estimate" means an estimate required from a licensed contractor based upon preliminary plans, such as those submitted with a discretionary application, which details the costs to perform the improvement, the costs to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs to the building or structure.

"Primary frontal dune" means a continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope and is determined or accepted by the County Geologist.

"Recreational vehicle" means a vehicle which is:

- (1) <u>Built on a single chassis;</u>
- (2) <u>400 square feet or less when measured at the largest horizontal projection;</u>
- (3) <u>Designed to be self-propelled or permanently towable by a light-duty truck; and</u>

(4) <u>Designed primarily not for use as a permanent dwelling but as temporary living quarters</u> for recreational, camping, travel, or seasonal use.

<u>16.13.160-Q</u> "Q" Definitions.

Reserved

<u>16.13.160-R "R" Definitions.</u>

"Regulatory floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to carry and discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point. Also referred to as the Floodway.

"Repetitive loss" means flood-related damages sustained by a structure on two separate occasions during a 10-year period ending on the date of the event for which the second claim is made, for which the cost of repairs at the time of each such flood event, on the average, equaled or exceeded 25% of the market value of the structure before the damages occurred.

"Road / roadway" means an open way for vehicular traffic. For the purpose of this chapter, a driveway is considered a road or roadway.

<u>16.13.160-S "S" Definitions.</u>

"Sand dunes" means naturally occurring accumulations of sand in ridges or mounds landward of the beach.

"Special flood hazard area (SFHA)" means the land in a flood plain subject to a 1 percent or greater annual chance of flooding in any given year. Special flood hazard areas are in general shown on a FIRM as Zones A, AO, A1-A30, AE, A99, AH, V1-V30, VE and V, but can also be determined by the Floodplain Administrator to occur where not shown on the FIRM. Also known as the flood hazard area, FHA, area of special flood hazard, or area of the 1% annual chance flood.

"Start of construction" means the date the building permit was issued, whether for new construction or substantial improvement of a building or structure, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

"Structure" means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

"Substantial damage" means damage of any origin sustained by a building or structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a building or structure, or the cumulative total of such activities as defined in this section, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include:

(1) <u>Any project for improvement of an existing building or structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been</u>

identified in writing by the local code enforcement official prior to a permit application and which are the minimum necessary to ensure safe living conditions; or

(2) Any alteration of a "historic structure," provided the alteration will not preclude the structure's continued designation as a "historic structure".

<u>16.13.160-T "T" Definitions.</u>

Reserved

16.13.160-U "U" Definitions. Reserved

16.13.160-V "V" Definitions.

"V Zone" means coastal high hazard area. See definition of coastal high hazard area.

"V Zone certificate" means a certification prepared by a registered professional engineer and/or architect, in a form prepared by the Planning Department, that certifies that the design and planned methods of construction meet the requirements of the NFIP and this chapter for construction in a V Zone.

"V Zone certificate, final" means a certification prepared by a registered professional engineer, architect and/or surveyor in a form prepared by the Planning Department, which is submitted prior to final inspection of a structure that certifies that the construction met the requirements of the NFIP and this chapter for construction in a V Zone.

"Violation" means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications or required permits, or other evidence of compliance required in this chapter is presumed to be in violation until such time as the required documentation has been provided.

<u>16.13.160-W</u> "W" Definitions.

"Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature in, on, through, or over which water flows at least periodically.

"Watercourse crossing" means a road, driveway, bridge, culvert, low-water crossing or similar mean for vehicles, pedestrians or utilities to travel from one side of a watercourse to the other side.

16.13.160-X "X" Definitions. Reserved

16.13.160-Y "Y" Definitions. Reserved

16.13.160-Z "Z" Definitions. Reserved

16.13.170 Terms defined in other codes.

Where terms are not defined in this chapter and are defined in the building codes, such terms shall have the meanings ascribed to them as in the building codes.

16.13.180 Terms not defined.

Where terms are not defined in this chapter or the building codes, such terms shall have ordinarily accepted meanings such as the context implies.

Part III. ADMINISTRATION

16.13.190 Designations.

The Planning Director, or designee, is the Floodplain Administrator. The Floodplain Administrator may delegate performance of certain duties to other employees, such as plans examiners and inspectors.

16.13.200 Duties and powers of the Floodplain Administrator.

The Floodplain Administrator is authorized and directed to administer and enforce the provisions of this chapter. The Floodplain Administrator shall have the authority to render interpretations of this chapter and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be consistent with the intent and purpose of this chapter. Such interpretations, policies and procedures shall not have the effect of waiving requirements specifically provided for in this chapter without the granting of an exception pursuant to Part IX of this chapter.

16.13.210 Applications and permits.

The Floodplain Administrator, or their designee in coordination with other pertinent offices of the jurisdiction, shall:

(A) <u>Review applications to determine whether proposed new development will be located in flood</u> <u>hazard areas;</u>

(B) <u>Review applications for modification of any existing development in flood hazard areas for</u> compliance with the application requirements of this chapter;

(C) Interpret flood hazard area boundaries, provide available flood elevation and flood hazard information;

(D) Determine whether additional flood hazard data shall be obtained or developed;

(E) <u>Review applications to determine whether proposed development will be reasonably safe from</u> <u>flooding;</u>

(F) <u>Issue floodplain development permits when the provisions of this chapter have been met, or disapprove the same in the event of noncompliance;</u>

(G) <u>Coordinate with the Building Official to ensure that applications for building permits for buildings and structures comply with the requirements of this chapter;</u>

(H) When a damaging event has occurred, regardless of the cause of damage, coordinate with the Building Official to inspect areas where buildings and structures in flood hazard areas have been damaged and notify owners of damaged buildings and structures in these flood hazard areas that (a) permits may be required prior to repair, rehabilitate, demolish, relocate, or reconstruct; and (b) buildings and structures that are determined to have sustained substantial damage are subject to the requirements of the building codes and this chapter.

16.13.220 Determinations for existing structures.

For applications for permits to modify existing structures in the special flood hazard area, including additions, repairs, renovations, and alterations, the Floodplain Administrator, in coordination with the Building Official, shall:

(A) Estimate the market value, or require the applicant to obtain a professional appraisal of the market value, of the structure before the proposed work is performed and / or before any unpermitted improvements. When repair of damage is proposed, the market value estimate or appraisal shall be of the structure's value before the damage occurred;

(B) <u>Require, during review of discretionary applications, a preliminary cost estimate. If the</u> preliminary cost estimate exceeds 40% of the market value or if the Floodplain Administrator determines that a more detailed estimate is needed, require a detailed cost estimate and detailed plans with the discretionary application;

(C) <u>Require, prior to issuance of a building permit, a detailed cost estimate from the licensed</u> <u>contractor who is contracted by the owner of the property to perform the work, or a qualified licensed</u> <u>contractor who has submitted a proposal to perform the work. If the work will be performed by someone</u> <u>other than a licensed contractor, the detailed cost estimate will still be required to be completed by a</u> <u>licensed contractor. Alternatively the Floodplain Administrator may estimate the costs;</u>

(D) <u>Require the contractor to certify that the detailed cost estimate includes all costs associated with</u> the work as shown on the referenced plans, or described in the permit description if plans are not required by the Building Department;

(E) <u>Require the property owner to certify that the contractor's estimate includes all project costs</u> associated with the work shown on the referenced plans, or described in the permit description if plans are not required;

(F) <u>Compare the cost to perform the proposed improvements, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, as applicable, to the market value of the building or structure as established in SCCC 16.13.220(A);</u>

(G) <u>Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage;</u>

(H) <u>Determine and document whether the proposed work constitutes a cumulative improvement</u> and/or repair of damage;

(I) Notify the applicant of the results of the determination and whether compliance with the requirements for new construction is required; and

(J) <u>Maintain a record of the value of all permitted improvements and repairs to existing structures to facilitate the determination of cumulative improvement.</u>

16.13.230Modifications of the strict application of the provisions of the building codes.The Floodplain Administrator shall review requests submitted to the Building Official that seek approval
to modify the strict application of the flood load and flood-resistant construction requirements of the
building codes to determine whether such requests can be considered for an exception pursuant to Part IX
of this chapter.

16.13.240 Notices and orders.

The Building Official shall issue all necessary notices or orders pursuant to the County's adoption of the Uniform Code for the Abatement of Dangerous Buildings to ensure compliance with this chapter.

<u>16.13.250 Inspections.</u>

The Floodplain Administrator or designee shall make the required inspections specified in Part VII and VIII of this chapter. The Building Official shall make the required inspections of buildings and structures specified in Part VII and VIII of this chapter.

16.13.260 Other duties of the Floodplain Administrator.

The Floodplain Administrator shall have other duties, including but not limited to:

(A) Establish, in coordination with the Building Official, written procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to SCCC 16.13.220, including cumulative substantial improvement;

(B) <u>Require that applicants proposing an alteration of a watercourse in a mapped FEMA flood hazard</u> area notify adjacent communities, the California Department of Water Resources, and the Federal <u>Emergency Management Agency (FEMA)</u>;

(C) Require applicants who submit a hydrologic investigation or a floodway encroachment analysis to support permit applications to submit to FEMA, the data and information necessary to maintain the Flood Insurance Rate Maps if the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available; and

(D) <u>Notify the Federal Emergency Management Agency when the corporate boundaries of the County of Santa Cruz have been modified.</u>

16.13.270 Department records.

Regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of this chapter and the flood provisions of the building codes, including Flood Insurance Rate Maps; Letters of Map Amendment and Letters of Map Revision; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the building codes and this chapter, including but not limited to Elevation Certificates, Floodproofing Certificates, and V Zone Certificates; notifications to adjacent communities, FEMA, and the state related to alterations of watercourses; assurance that the flood carrying capacity of altered watercourses will be maintained; documentation related to exceptions, including justification for their issuance; and records of enforcement actions taken pursuant to this chapter and the flood resistant provisions of the building codes.

Part IV. PERMITS

16.13.280 Permits required.

Anyone who intends to undertake any development activities within the scope of this chapter which is wholly within or partially within any reasonably suspected flood hazard area shall first make application to the Planning Department and obtain any required permit(s). No such permit shall be issued until compliance with the requirements of this chapter and all other applicable codes and regulations has been satisfied.
16.13.290 Floodplain development permit.

Floodplain permits shall be issued for all development activities including those which are not subject to the requirements of the building codes and those which do not constitute a substantial improvement.

16.13.300 Buildings and structures exempt from a building permit are subject to the requirements of this chapter.

Floodplain permits are required for buildings and structures that are explicitly exempt from requirements to obtain a building permit under the building codes, including but not limited to:

(A) <u>One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses of any size;</u>

- (B) <u>Fences of any height;</u>
- (C) <u>Retaining walls of any height;</u>
- (D) <u>Water tanks of any size; and</u>
- (E) <u>Fill placement of any scale.</u>

16.13.310 Application for a permit.

Anyone who proposes development within a flood hazard area shall file an application with the Planning Department. The information provided shall:

(A) <u>Identify and describe the development to be covered by the permit;</u>

(B) <u>Describe the land on which the proposed development is to be conducted by legal description</u>, street address or similar description that will readily identify and definitely locate the site;

(C) <u>Indicate the use and occupancy for which the proposed development is intended;</u>

(D) <u>Be accompanied by a site plan and/or construction documents as specified in Part V of this</u> chapter, if required;

(E) State the valuation of the proposed work, based upon a preliminary or detailed cost estimate, as required by the Floodplain Administrator and this chapter. The cost estimate shall include a list of all plan sheets used to develop the estimate, including title, latest revision date and plan preparer, as well as the signature and license number of the contractor who prepared the cost estimate; and

(F) <u>Be signed by the applicant or the applicant's authorized agent.</u>

16.13.320 Validity of permit.

The issuance of a permit pursuant to this chapter shall not be construed to be a permit for, or approval of, any violation of this chapter, the building codes, or any other local law. The issuance of a permit based on submitted documents and information shall not prevent the Floodplain Administrator from requiring the correction of errors. The Planning Director or the Building Official is authorized to prevent occupancy or use of a building or structure which is in violation of the permit, the building codes or of any other laws of this jurisdiction.

16.13.330 Notice of hazards.

The developer and/or subdivider of a parcel or parcels in an area of flood hazards shall be required, as a condition of development or building permit approval, to record a Declaration of Flood Hazards, Acceptance of Risk, liability Release, and Indemnification with the County Recorder. The Declaration shall be in a form approved by the County of Santa Cruz and shall include acknowledgements and agreements, as applicable to the specific project, including but not limited to, description of the hazards on the parcel or parcels, the level of hydrologic analysis conducted, and an acknowledgement and assumption of risks posed by flood hazards.

16.13.340 Permit requirements.

All other required state and federal permits shall be obtained by the applicant as a condition of floodplain permit approval.

16.13.350 Other conditions.

Other permit conditions, including but not limited to, project redesign, building site elimination, development of building and septic envelopes, and foundation requirements shall be required as deemed necessary by the Floodplain Administrator.

16.30.360 Determination of the base flood elevation.

When base flood elevation data are not provided in the Flood Insurance Study, the Floodplain Administrator shall obtain, review, and reasonably utilize the best base flood data available from Federal, State or other sources, as a basis for elevating new and substantially improved residential structures and elevating or floodproofing new and substantially improved non-residential structures, to at least two feet above the base flood level. If data are not available, the applicant shall provide an analysis to estimate the base flood elevation, in compliance with SCCC 16.13.400(B), (C), and (D).

16.13.370 Expiration and extension.

A floodplain development permit shall become invalid pursuant to expiration limits of Building Permits pursuant to SCCC 12.10. If a building permit has been issued then the validity of the floodplain development permit shall be linked to the life and validity of the associated building permit and if the building permit is valid then the floodplain development permit remains valid. Extensions to floodplain development permits shall be granted pursuant to the provisions for extensions to building permits established in SCCC 12.10.

16.13.380 Suspension or revocation.

The Floodplain Administrator is authorized to suspend or revoke a floodplain development permit wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of this chapter or any applicable local law.

Part V. CONSTRUCTION DOCUMENTS

16.13.390 Information for all construction and development in flood hazard areas.

The Floodplain Administrator is authorized to waive the submission of construction documents and other data if it is found that the nature of the work applied for is such that the review of such submissions is not necessary to ascertain compliance with this chapter.

The site plan or construction documents for any development subject to the requirements of this chapter shall be drawn to scale and shall include, as applicable to the proposed development:

(A) <u>A site plan prepared by a licensed surveyor;</u>

(B) <u>Delineation of flood hazard areas, floodway boundaries and flood zones, and the base flood elevation, as appropriate;</u>

(C) If base flood elevations are not included on the FIRM or in the Flood Insurance Study (FIS), delineation of any flood hazard area, flood elevation and floodway data that may be available from Federal, State, or other sources that the Floodplain Administrator determines are applicable pursuant to SCCC 16.13.400;

(D) <u>Location of the proposed activity and proposed structures, and locations of existing buildings and structures;</u>

(E) Location, extent, amount, and proposed final grades of filling, grading, or excavation, and location and extent of any proposed alteration of sand dunes;

(F) If the placement of fill is proposed: the amount, type, and source of fill material; a description of the intended purpose of the fill areas; evidence that the proposed fill areas are mitigated with compensatory storage; and compaction specifications; and

(G) <u>Existing and proposed alignment of any watercourses proposed to be altered.</u>

16.13.400 Information in flood hazard areas without base flood elevations.

Where flood hazard areas are delineated on the FIRM and base flood elevation data have not been provided (approximate A Zones) or in un-mapped areas identified by the Floodplain Administrator as susceptible to flooding, the Floodplain Administrator shall:

(A) <u>Obtain, review, and reasonably use, or require the applicant to obtain and use, available data from a Federal or state agency or other source; or</u>

(B) <u>Require that a registered professional engineer develop base flood data prepared in accordance</u> with currently accepted engineering practices; and

(C) <u>Require a 25 percent factor of safety be added to the hydrologic analysis when USGS Regional</u> Regression equations are used to calculate the 100-year (one percent chance) peak discharge.

If the base flood data are to be used to support a Letter of Map Change from FEMA, the Floodplain Administrator shall advise the applicant that the analyses shall be prepared in a format required by FEMA, and that it shall be the responsibility of the applicant to satisfy the submittal requirements.

16.13.410 Additional analyses and certifications.

As applicable to the location and nature of the proposed development, and in addition to the requirements of this section, the applicant shall have the following analyses prepared and sealed by a registered design professional for submission with the site plan or construction documents:

(A) For activities proposed to be located in a floodway, a floodway encroachment analysis that demonstrates that the proposed development will not cause any increase in the base flood elevation. Any encroachment which would cause any increase in the base flood elevation is prohibited.

(B) For activities proposed to be located in a riverine flood hazard area for which floodways have not been designated, a hydrologic investigation, prepared by a registered professional engineer, that determines the base flood elevation and identifies the boundaries of the floodway. If the activities are proposed to be located within the floodway, compliance with SCCC 16.13.470 is required.

(C) For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices which demonstrates that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained in a manner which preserves the channel's flood-carrying capacity; the applicant shall submit such analysis to FEMA as specified in SCCC 16.13.420.

(D) For activities that propose to alter sand dunes in coastal high hazard areas, an engineering analysis that demonstrates that the proposed alteration will not increase the potential for flood damage.

(E) For new structures and substantial improvement/damage projects in the coastal high hazard area, a V-Zone Certificate, provided by the Floodplain Administrator, signed by the project architect or registered professional engineer, stating that the plans comply with all FEMA and County regulations for V-Zone construction.

16.13.420 Submission of additional data to FEMA.

If additional hydrologic, hydraulic or other engineering data and studies are submitted to support an application, the applicant has the right to seek a Letter of Map Change from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on the FIRM, and to submit new technical data to FEMA for such purposes. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant. The applicant shall notify the Floodplain Administrator of such submittal.

16.13.430 Additional information for buildings and structures in flood hazard areas.

In addition to other requirements of this chapter, the site plan or construction documents for buildings and structures located in whole or in part in flood hazard areas shall include:

(A) <u>In flood hazard areas other than coastal high hazard areas, the elevation of the proposed lowest</u> floor of structures proposed to be elevated.

(B) In flood hazard areas other than coastal high hazard areas, the elevation below which nonresidential buildings and structures, if not proposed to be elevated, will be dry floodproofed.

(C) In areas of shallow flooding shown on FIRMs as AO zones, the height of the proposed lowest floor, including basement, above the highest adjacent grade as established by a licensed surveyor.

(D) In coastal high hazard areas, the elevation of the bottom of the lowest horizontal structural member of the lowest floor.

(E) In coastal high hazard areas, the location of any proposed building, which shall be landward of the reach of mean high tide.

Part VI. DEVELOPMENT STANDARDS

16.13.440 Permit conditions.

The recommendations of technical reports (if evaluated and accepted by the Floodplain Administrator) shall be included as permit conditions of any permit or approvals subsequently issued for the development. In addition, the requirements described below shall become standard conditions for development, building and land division permits and approvals. No development, building and land division permits or approvals shall be issued, and no final maps or parcel maps shall be recorded, unless such activity is in compliance with the requirements of this part.

Article 1. Structures

16.13.450 Design and construction of new and substantially improved structures.

(A) <u>New structures within the scope of the California Residential Code (CRC), and substantial</u> improvement of existing structures within the scope of the CRC, shall be designed and constructed in accordance with the flood-resistant construction provisions of the California Residential Code.

(B) <u>New structures within the scope of the California Building Codes, and substantial improvement</u> of existing structures within the scope of the CBC, shall be designed and constructed in accordance with the flood-resistant construction provisions of the California Building Codes.

16.13.460 General standards – floodplains.

All development within any flood hazard area other than a coastal high hazard area shall meet the following criteria. Structures for which building permits were issued prior to April 15, 1986 are exempt from this section if any addition, repair, reconstruction, rehabilitation, alteration, or improvement does not meet the definition of "substantial improvement", including when subject to the definition of "cumulative improvement" (pursuant to SCCC 16.13.160).

(A) <u>Structures shall be located outside of the flood hazard area when a buildable portion of the property exists outside of the flood hazard area.</u>

(B) <u>Structures and the foundations attached to them shall be anchored by a method adequate to</u> prevent flotation, collapse and lateral movement of the structures due to the forces that may occur during the base flood, including hydrostatic and hydrodynamic loads and the effects of buoyancy.

(C) <u>Structures shall be constructed with materials and utility equipment resistant to flood damage and using construction methods and practices that minimize flood damage below two feet above the base flood elevation.</u>

(D) Structures shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are elevated at least two feet above the base flood elevation. Minimum electric service required to address life safety and electric code requirements for parking of vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating within components.

(E) In flood zones A-O and A-H, drainage paths adequate to guide water away from structures and reduce exposure to flood hazards shall be provided.

(F) For residential structures, including manufactured homes, the lowest floor, including the basement, and the top of the highest horizontal structural member (joist or beam) which provides support directly to the lowest floor, and all elements that function as a part of the structure, such as furnace, hot water heater, etc., shall be elevated at least two feet above the one-hundred year flood level. Compliance with the elevation requirement shall be certified by a registered professional engineer, architect, or surveyor and submitted to the Floodplain Administrator prior to a subfloor building inspection.

(G) <u>Non-residential structures shall be elevated in accordance with SCCC 16.13.460(F) or</u> floodproofed if elevation is not feasible. Floodproofed structures shall:

(1) <u>Be floodproofed so that below an elevation two feet higher than the one-hundred year</u> flood level, the structure is watertight with walls substantially impermeable to the passage of water based on structural designs, specifications and plans developed or reviewed by a registered professional engineer or architect;

(2) <u>Be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and,</u>

(3) <u>Be certified by a registered professional engineer or architect that floodproofing</u> standards and requirements have been complied with; the certification shall be submitted to the Floodplain Administrator and shall indicate the elevation to which floodproofing was achieved prior to a final building inspection.

(H) <u>In flood zone AO, residential structures and elevated non-residential structures shall have the</u> <u>lowest floor elevated above the highest adjacent grade at least two feet higher than the depth number</u> given on the FIRM. Non-residential structures, where elevation is not feasible, shall have the lowest floor completely floodproofed above the highest adjacent grade at least two feet higher than the depth number given on the FIRM.

(I) <u>Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to</u> <u>automatically equalize hydrostatic flood forces on exterior walls allowing for the entry and exit of flood</u> <u>water. Designs for meeting this requirement must either be certified by a registered professional engineer</u> <u>or architect, or shall provide a minimum of two openings having a total net area of not less than one</u> <u>square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be</u> <u>no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other</u> <u>coverings or devices provided that they permit the automatic entry and exit of flood waters. Non-</u> <u>residential structures that are floodproofed in compliance with SCCC 16.13.460(G)(1) are exempt from</u> <u>this requirement.</u>

16.13.470 General standards – floodways.

Located within special flood hazard areas as established in SCCC 16.13.060, and within some areas not mapped as part of the Flood Insurance Study, are areas designated as floodways (see also SCCC 16.13.160). The floodway is an extremely hazardous area due to the quantity and velocity of flood waters, the amount of debris which may be transported, and the high potential for erosion during periods of large stream flows. In the floodway, and in flood hazard areas for which a floodway has not been designated, the following provisions apply:

(A) Encroachment Within Floodway Prohibited: Any encroachment, including fill, new construction, or other development activity is prohibited within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels during the base flood. Reconstruction, repair, alteration, or improvement of an existing structure, provided no additional encroachment is proposed, is exempt from the hydrologic and hydraulic engineering analysis requirement.

(B) <u>Sites Where Floodway Not Established. Where the Flood Insurance Study or other technical</u> report has identified a flood hazard area but has not designated a floodway, the applicant must demonstrate, through hydrologic and hydraulic analyses, that the project will not adversely affect the carrying capacity of the area. For the purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development in the watershed, will increase the water surface elevation of the base flood more than one foot at any point. The hydrologic analysis must identify the boundaries of the floodway, and the project must comply with the provisions of SCCC 16.13.470(A), above. (C) <u>Setback from Floodway: Where neither a Base Flood Elevation nor a floodway has been</u> identified by the Flood Insurance Study or if a site specific hydrologic study to determine the floodway has not been required, a minimum setback of 20 feet for an ephemeral stream, 30 feet for an intermittent stream and 50 feet for a perennial stream, as measured from the top edge of the banks of the drainage course, shall be maintained, and all activity that takes up flood storage area within this setback shall be prohibited. This floodway setback may be reduced by the Planning Director only if a full hydrologic analysis identifies the boundaries of the floodway, demonstrates that a smaller setback will not increase the susceptibility of the proposed activity to flood related hazards, and there is no alternative location outside of the setback. (See also SCCC 16.30, Riparian Protection, for other regulations regarding setbacks from streams.)

(D) <u>Alteration of Structures in Floodway: Reconstruction, repair, alteration or improvement of a structure in a floodway shall not cause any increase in the base flood elevation. Substantial improvements, regardless of cause, shall only be permitted in accordance with SCCC 16.13.460 (Floodplain General Standards), 16.13.490 (Manufactured Homes), and 16.13.500 (Non-habitable Accessory Structures), as applicable. Repair, reconstruction, alteration, or replacement of a damaged structure which does not exceed the ground floor square footage area of the structure before the damage occurred shall not be considered an encroachment.</u>

(E) <u>Permit Requirements: All other required local, State and Federal permits must be obtained.</u>

16.13.480 General standards – coastal high hazard area.

All development, specifically including the placement of and construction of manufactured homes, shall meet the following criteria. Structures for which building permits were issued prior to April 15, 1986 are exempt from this section if any addition, repair, reconstruction, rehabilitation, alteration, or improvement does not meet the definition of "substantial improvement", including when subject to the definition of "cumulative improvement".

(A) <u>Demonstration that the potential hazards on the site can be mitigated, over the 100-year lifetime</u> of the structure, as determined by the geologic hazards assessment or full geologic report and any other appropriate technical reports. Mitigations can include but are not limited to building setbacks, elevation of the proposed structure and foundation design.

(B) Location of the proposed structure landward of the reach of mean high tide.

(C) <u>Location of the structure outside of the area of storm wave inundation where a buildable portion</u> of the property is outside of the area of storm wave inundation.

(D) <u>Elevation of all structures (including manufactured homes) on pilings and columns so that the</u> bottom of the lowest portion of the lowest structural member of the lowest floor (excluding the pilings or columns) and elements that function as part of the structure, such as furnace, hot water heater, etc., are elevated at least three feet above the base flood elevation. Compliance with the elevation requirement shall be certified by a registered professional engineer, architect, or surveyor and submitted to the Building Official and Floodplain Administrator prior to a subfloor building inspection.

(E) Anchoring of the pile or column foundation and structure attached thereto to prevent flotation, collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval).

(F) <u>Structures shall be constructed with materials and utility equipment resistant to flood damage and using construction methods and practices that minimize flood damage below three feet above the base flood elevation.</u>

(G) <u>Structures shall be constructed with electrical, heating, ventilation, plumbing and air conditioning</u> equipment and other service facilities that are elevated at least three feet above the base flood elevation. <u>Minimum electric service required to address life safety and electric code requirements for parking of</u> vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating within components.

(H) The space below the lowest floor shall either be free of obstruction or constructed with nonsupporting breakaway walls, open wood lattice-work or insect screening intended to collapse under wind and water loads without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. The total space below the lowest floor that is enclosed with non-supporting breakaway walls shall be less than 300 square feet. For the purposes of this section, a breakaway wall shall be of non-masonry construction and have a design safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls which do not meet the above material and strength criteria may be permitted only if a registered professional engineer or architect certifies that the designs proposed will permit the breakaway wall to collapse under a water load less than that which would occur during the base flood and that the elevated portion of the building or supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water loads acting simultaneously on all building components. Such enclosed space shall be useable solely for vehicle parking, building access or storage, and shall not be a finished area or habitable area.

(I) <u>A registered professional engineer or architect shall develop or review the structural design,</u> specifications and plans for the construction, and shall certify on a "V-Zone Certificate" that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of paragraphs (D), (E), (F), (G) and (H) of this section prior to permit issuance.

- (J) <u>The use of fill for structural support of buildings is prohibited.</u>
- (K) <u>The alteration of sand dunes which would increase potential flood damage is prohibited.</u>
- (L) <u>Pavement and flat work (such as sidewalks and patios, etc.) shall be frangible (easily broken).</u>
- (M) <u>Detached garages are prohibited.</u>

(N) For purposes of this subsection and this subsection only repetitive loss properties shall be as defined in SCCC 16.10.070(H)(13) and shall be subject to SCCC 16.10.070(H)(1)(1).

16.13.490 Manufactured homes.

All manufactured homes installed in flood hazard areas shall be installed by an installer that is licensed as a General Manufactured Housing Contractor by the California Department of Consumer Affairs and shall comply with the requirements of that agency and the requirements of this section.

(A) <u>All new manufactured homes and replacement manufactured homes shall be installed on</u> permanent, reinforced foundations that:

(1) <u>In flood hazards areas other than coastal high hazard areas, are designed in accordance</u> with the California Residential Code (CRC); (2) In floodways, are designed in accordance with ASCE 24 (American Society of Civil Engineers); and

(3) <u>In coastal high hazard areas, are designed in accordance with the CRC.</u>

(B) <u>All new manufactured homes and replacement manufactured homes shall be installed using</u> methods and practices which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

(C) <u>All new, replacement, and substantially improved manufactured homes shall be installed per the requirements of the residential code, ASCE 24 and SCCC 16.13.460, 16.13.470, and 16.13.480, as applicable.</u>

16.13.500 Non-habitable accessory structures.

Non-habitable accessory structures, when proposed to be located within any flood hazard area, including substantial improvement of such accessory structures shall:

(A) <u>Be located outside of the flood hazards area when a buildable portion of the property exists</u> outside of the flood hazard area.

(B) <u>Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads,</u> including the effects of buoyancy, during conditions of the base flood.

(C) <u>Have electric service and / or mechanical equipment elevated two feet above the base flood</u> elevation or three feet above the base flood elevation if located in the coastal high hazard area. Minimum electric service required to address life safety and electric code requirements for parking of vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating within components.

(D) <u>Be constructed with flood damage-resistant materials below two feet above the base flood</u> elevation or below three feet above the base flood elevation in coastal high hazard areas.

(E) <u>Be used only for parking of vehicles or storage.</u>

(F) If built in flood hazard areas other than coastal high hazard areas, have flood openings in compliance with the residential code to allow for the automatic entry and exit of flood waters.

(G) If built in coastal high hazard areas, be less than 100 square feet in area and constructed with breakaway walls.

16.13.510 Underground and above ground tanks.

(A) <u>Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral</u> movement resulting from hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the base flood.

(B) <u>Above-ground tanks in flood hazard areas shall be anchored or otherwise designed and</u> <u>constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic and</u> <u>hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the</u> <u>base flood.</u> (C) <u>Tank inlets, fill openings, outlets and vents shall be at or above the base flood elevation or fitted</u> with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the base flood.

16.13.520 Temporary structures and storage.

(A) <u>Temporary structures shall be located outside of the flood hazards area when a buildable portion</u> of the property exists outside of the flood hazard area.

(B) <u>Temporary structures shall be allowed in the special flood hazard area during the period April</u> 15th through October 15th.

(C) <u>Temporary storage includes storage of goods and materials for a period of less than 180 days.</u> <u>Stored materials shall not include hazardous materials.</u>

16.13.530 Swimming pools.

(A) <u>Pools shall be located outside of the flood hazard area when a buildable portion of the property</u> exists outside of the flood hazard area.

(B) Where pools are proposed in a flood hazard area and the location of the pool is:

(1) In a flood hazard area for which a floodway has not been designated and the pool is above natural grade, the requirements of SCCC 16.13.470(B) and (C) shall apply.

(2) In a coastal high hazard area, the pool shall be designed and constructed in conformance with ASCE 24.

16.13.540 Critical and public facilities.

Critical facilities and nonessential public structures and additions shall be located outside of the flood hazard area unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life on property within or adjacent to the floodplain or coastal inundation areas.

16.13.550 Utility and miscellaneous Group U.

Utility and Miscellaneous Group U, as defined in the Building Code, includes buildings and structures that are accessory in character and miscellaneous structures not classified in any specific occupancy in the Building Code, including, but not limited to, agricultural buildings, aircraft hangars (accessory to a oneor two-family residence), barns, carports, fences more than 6 feet high, grain silos (accessory to a residential occupancy), greenhouses, livestock shelters, private garages, retaining walls, sheds, stables, and towers.

(A) <u>Utility and Miscellaneous Group U structures, when proposed to be located within any flood</u> hazard area, including substantial improvement of such accessory structures, shall:

(1) <u>Be located outside of the flood hazards area when a buildable portion of the property</u> exists outside of the flood hazard area.

(2) <u>Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic</u> loads, including the effects of buoyancy, during conditions of the base flood.

(3) <u>Have electric service and or mechanical equipment two feet above the base flood</u> elevation, except that minimum electric service required to address life safety and electric code requirements for parking of vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating.

(4) <u>Use flood damage-resistant materials below the base flood elevation.</u>

(5) If built in flood hazard areas other than coastal high hazard areas, have flood openings in compliance with the residential code to allow for the automatic entry and exit of flood waters.

(6) If built in coastal high hazard areas, be less than 100 square feet in area and constructed with breakaway walls.

Article 2. Creation of New Parcels

16.13.560 Creation of new parcels.

Allow the creation of new parcels including those created by minor land division or subdivision on parcels which include a flood hazard area only under the following circumstances:

(A) <u>Subdivision proposals, including proposals for manufactured home parks and subdivisions, shall</u> <u>be reviewed to determine that:</u>

(1) <u>Such proposals are consistent with the need to minimize flood damage and will be</u> reasonably safe from flooding;

(2) All public utilities and facilities such as sewer, gas, electric and water systems are located and constructed to minimize or eliminate flood damage;

(3) Adequate drainage is provided to reduce exposure to flood hazards; and

(4) <u>Development of structures on newly created parcels will not be dependent on coastal protection structures.</u>

(B) <u>A full hydrologic report and any other appropriate technical report must demonstrate that each proposed parcel contains at least one building site, including a septic system and leach field site, which is located outside of the flood hazard area, and that public utilities and facilities such as roadways, stormwater management facilities, sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.</u>

(C) If any portion of proposed subdivisions, including manufactured home parks and manufactured home subdivisions, lies within a flood hazard area, the following shall be required:

(1) <u>Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood.</u>

(2) <u>Delineation of flood hazard areas, floodway boundaries and flood zones, and base flood</u> elevations, as appropriate, shall be shown on preliminary maps and final maps and certified by a registered professional engineer;

16.13.570 Project density limitations.

The following requirements shall apply to density calculations for new building sites created through minor land division, subdivision, or other development approval or permit:

(A) The portion of a property within the flood hazard area shall be excluded from density calculations.

(B) <u>Coastal Hazards. The portions of a property subject to coastal inundation, as determined by a geologic hazards assessment, geologic report, or adopted Flood Insurance Rate Map (FIRM), shall be excluded from density calculations.</u>

Article 3. Site Improvements, Utilities and Limitations

16.13.580 General requirements.

All proposed new and replacement development shall meet the following criteria:

(A) Such proposals are consistent with the need to minimize flood damage, will be reasonably safe from flooding, and shall meet the minimum requirements of the County design criteria;

(B) <u>All public utilities and facilities such as sewer, gas, electric, communication, and water systems are located or designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.</u>

(C) <u>Adequate drainage is provided to reduce exposure to flood hazards.</u>

16.13.590 Sanitary sewage facilities.

(A) <u>Replacement. All replacement sanitary sewage facilities, private sewage treatment plants</u> (including all pumping stations and collector systems), and on-site waste disposal systems shall be designed in accordance with current building code standards as well as SCCC 7.38, to minimize or eliminate infiltration of flood waters into the facilities and discharge from the facilities into flood waters, or impairment of the facilities and systems. The capacity of existing septic systems in the floodplain and floodway shall not be increased.

(B) <u>New septic systems and leach fields prohibited. New septic systems and leach fields shall not be</u> <u>located within the flood hazard area.</u>

16.13.600 Water supply facilities.

All new and replacement water supply facilities shall be designed in accordance with the provisions of current building code standards, to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into flood waters.

16.13.610 Grading and placement of fill.

(A) <u>No net increase in fill shall be allowed in flood hazard areas.</u>

(B) <u>Grading and the placement of fill is allowed within the flood hazard area in the minimum amount</u> necessary, only when shown through analysis that compensatory storage is being provided by the project that proposes fill. Compensatory storage shall provide equivalent volume at equivalent elevations to that being displaced. For this purpose, "equivalent elevation" means having similar relationship to ordinary high water and the best available 10-year, 50-year and 100-year water surface profiles.

(C) <u>Subject to the limitations of this chapter, fill shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour. In addition to these requirements, if intended to support buildings and structures, fill shall comply with the requirements of the building codes.</u>

(D) <u>All excavations in flood hazard areas shall be constructed to drain freely to the watercourse and not be subject to ponding when not inundated by flood waters.</u>

(E) Any grading or fill is prohibited within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels during the base flood.

(F) The applicant shall provide to the Floodplain Administrator a certified survey of the excavation and fill sites demonstrating the fill and excavation comply with this article.

16.13.620 Limitations on sites in coastal high hazard areas.

In coastal high hazard areas, alteration of sand dunes shall be permitted only if it has been demonstrated by engineering analysis that the alteration will not increase potential flood damage consistent with SCCC 16.13.410(D). Construction or restoration of dunes under or around elevated buildings and structures shall comply with SCCC 16.13.710.

Article 4. Recreational Vehicles

16.13.630 Temporary placement.

Recreational vehicles placed temporarily in flood hazard areas shall:

(A) Be on the site for fewer than 180 consecutive days; and

(B) <u>Be fully licensed and ready for highway use (on wheels or jacking system and attached to the site only by quick-disconnect type utilities and security devices and with no permanent attachments such as additions, stairs, decks and porches).</u>

16.13.640 Permanent placement.

Recreational vehicles that do not meet the requirements in SCCC 16.13.630 for temporary placement shall meet the requirements of SCCC 16.13.490 for manufactured homes.

Article 5. Other Development

16.13.650 General requirements for other development.

All development, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in this chapter, shall:

(A) <u>Be located and constructed to minimize flood damage;</u>

(B) If development is proposed in a floodway, it shall not be authorized unless a floodway encroachment analysis demonstrates that the proposed development or land disturbing activity will not result in any increase to the level of the base flood;

(C) <u>Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;</u>

(D) <u>Be constructed of flood damage-resistant materials; and</u>

(E) <u>Have electric service and or mechanical equipment two feet above the base flood elevation in A</u> Zones and three feet in coastal high hazard areas, except that minimum electric service required to address life safety and electric code requirements is allowed below the base flood elevation.

16.13.660 Fences in floodways.

Fences in floodways shall not block the passage of floodwaters and shall be designed to break away if debris is caught during a flood event.

16.13.670 Flood control structures.

Flood control structures shall be permitted only to protect existing development (including agricultural operations) where no other alternative is feasible or where such protection is needed for public safety. Such structures shall not adversely affect sand supply, increase erosion or cause flooding on adjacent properties or restrict stream flows below minimums necessary to maintain fish and wildlife habitats or be placed further than necessary from the development requiring protection. An appropriate hydrologic investigation shall be required as determined by the Floodplain Administrator.

16.13.680 Roads and watercourse crossings in floodways.

Roads and watercourse crossings in floodways shall not cause any increase in the base flood, as demonstrated through a floodway encroachment analysis. For bridges serving as watercourse crossings, hydraulic calculations shall be submitted (based upon the 100 year storm) which indicate that there is no increase in the base flood elevation.

16.13.690 Decks and patios in coastal high hazard areas.

In addition to the requirements of the building codes, in coastal high hazard areas, decks and patios shall be located, designed, and constructed in compliance with the following:

(A) <u>A deck that is structurally attached to a building or structure shall have the bottom of the lowest</u> <u>horizontal structural member located three feet above the base flood elevation and any supporting</u> <u>members that extend below the base flood elevation shall comply with the foundation requirements that</u> <u>apply to the building or structure, which shall be designed to accommodate any increased loads resulting</u> <u>from the attached deck.</u>

(B) <u>A deck or patio that is located below the base flood elevation shall be structurally independent</u> from buildings and structures and their foundation systems, and shall be designed and constructed either to remain intact and in place during base flood conditions or to break apart into small pieces that will not cause structural damage to adjacent elevated buildings and structures.

(C) <u>A deck or patio that has a vertical thickness of more than 12 inches or that is constructed with</u> more than the minimum amount of fill that is necessary for site drainage shall not be approved unless an analysis demonstrates that no harmful diversion of floodwaters or wave runup and wave reflection would increase damage to adjacent elevated buildings and structures.

(D) <u>A deck or patio that has a vertical thickness of 12 inches or less and that is at natural grade or on</u> fill material that is similar to and compatible with local soils and is the minimum amount necessary for site drainage may be approved without requiring analysis of the impact on diversion of floodwaters or wave runup and wave reflection.

16.13.700 Other development in coastal high hazard areas.

In coastal high hazard areas, other development activities may be permitted only if located outside the footprint of, and not structurally attached to, buildings and structures, and only if an analysis demonstrates no harmful diversion of floodwaters or wave runup and wave reflection on adjacent elevated buildings and structure. These activities include but are not limited to:

(A) <u>Bulkheads, seawalls, retaining walls, revetments, and similar erosion control structures;</u>

(B) <u>Solid fences and privacy walls, and fences prone to trapping debris, unless designed and constructed to fail under design flood conditions; and</u>

(C) <u>Mounded septic systems.</u>

16.13.710 Nonstructural fill in coastal high hazard areas.

In coastal high hazard areas:

(A) <u>Nonstructural fill with finished slopes that are steeper than one unit vertical to five units</u> horizontal may be permitted only if an analysis demonstrates no harmful diversion of floodwaters or wave runup and wave reflection on elevated adjacent buildings and structures.

(B) <u>Sand dune construction and restoration of sand dunes under or around elevated buildings may be</u> permitted without engineering analysis or certification of the diversion of floodwater or wave runup and wave reflection if the scale and location of the dune work is consistent with local beach-dune morphology and the vertical clearance is maintained between the top of the sand dune and the lowest horizontal structural member of the building.

Part VII. INSPECTIONS

<u>16.13.720 General.</u>

Development for which a permit is required shall be subject to inspection.

16.13.730 Buildings and structures.

The Building Official and Floodplain Administrator or designees shall inspect buildings and structures to determine compliance with the flood load and flood-resistance construction requirements of the building codes. Upon placement of the lowest floor, including the basement, and prior to further vertical construction, the documentation of the elevation requirements required by this code shall be submitted to the Building Official.

16.13.740 Development other than buildings and structures.

The Floodplain Administrator or designee shall inspect development other than buildings and structures that are within the scope of the building codes to determine compliance with the requirements of this chapter and the conditions of the issued permit.

<u>16.13.750</u> Right of entry.

The filing of an application for development in a floodplain constitutes a grant of permission for the County to enter the development area for the purpose of administering this chapter from the date of the application to the termination of the permit. The Planning Director shall be supplied with a key or lock combination or permitted to install a County lock.

Part VIII. BUILDING PERMIT FINAL INSPECTION REQUIREMENTS

16.13.760 Use and occupancy of buildings and structures.

Prior to the final inspection the owner or authorized agent shall submit the following documentation that has been prepared and sealed by a registered professional surveyor, engineer or architect, as required:

(A) For elevated buildings and structures in flood hazard areas other than coastal high hazard areas, the elevation of the lowest floor, including basement, and all other required information on an Elevation Certificate, provided by FEMA, and based on final construction.

(B) For buildings and structures in coastal high hazard areas, the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor, and all other required information on an Elevation Certificate, provided by FEMA, and based on final construction.

(C) For buildings and structures in coastal high hazard areas, a completed Final V Zone Certificate, available from the Planning Department.

(D) <u>Flood Hazards Declaration. The developer and/or the subdivider of a parcel or parcels in an area</u> subject to flood hazards shall be required, as a condition of development approval and building permit approval, to record a Declaration of Flood Hazards with the County Recorder. The Declaration shall include a description of the hazards on the parcel and the level of technical investigation, if any, conducted, and include an acknowledgement and assumption of risk.

Part IX. EXCEPTIONS

<u>16.13.770 General.</u>

A request for an exception to the provisions of this chapter or the permit conditions may be considered by the Planning Director if the exception is necessary to mitigate a threat to public health, safety and welfare.

16.13.780 Limitations on authority.

The Planning Director shall base their decisions on technical justifications submitted by applicants, the considerations for issuance in SCCC 16.13.820, and the conditions of issuance set forth in SCCC 16.13.830, and has the right to attach such conditions as they deem necessary to further the purposes and objectives of this chapter.

16.13.790 Restrictions in floodways.

An exception shall not be issued for any proposed development in a floodway if any increase in base flood elevations would result, as evidenced by the applicable analyses and certifications required in SCCC 16.13.410.

16.13.800 Reason for request.

A request for an exception shall state in writing the reason why the exception is requested, the proposed substitute provisions, when the exception would apply, and the threat to public health, safety, or welfare that would be mitigated.

16.13.810 Nature of exception.

The exceptions set forth in this part are based on the general principle of zoning law that exceptions pertain to a piece of property and are not personal in nature. An exception may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

The interest in protecting citizens from flooding is compelling, and the cost of insuring a structure built below flood level so onerous that exceptions from the flood elevation or other health and safety requirements in the flood regulations of this chapter shall be granted in rare circumstances and only where no other alternative is available.

16.13.820 Criteria for issuance of exceptions.

In reviewing applications for exceptions, the Planning Director shall consider all technical evaluations, all relevant factors, all other applicable provisions of the building codes, this chapter, and all of the following:

(A) The danger that materials and debris may be swept onto other lands resulting in further injury or damage;

(B) <u>The danger to life and property due to flooding or erosion damage;</u>

(C) The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners;

(D) <u>The importance of the services provided by the proposed development to the County of Santa</u> <u>Cruz;</u>

(E) <u>The necessity to the structure of a waterfront location, where applicable;</u>

(F) <u>The availability of alternate locations for the proposed development that are not subject to flooding or erosion;</u>

(G) <u>The compatibility of the proposed development with existing and anticipated development;</u>

(H) The relationship of the proposed development to the comprehensive plan and floodplain management program for that area;

(I) The safety of access to the property in times of flood for ordinary and emergency vehicles;

(J) <u>The expected heights, velocity, duration, rate of rise and debris and sediment transport of the</u> floodwaters and the effects of wave action, if applicable, expected at the site, and;

(K) <u>The costs of providing governmental services during and after flood conditions including</u> maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

16.13.830 Conditions for issuance of exceptions.

Exceptions shall be issued only upon:

(A) <u>Submission by the applicant of technical information showing good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site renders the elevation standards inappropriate;</u>

(B) <u>A determination by the Floodplain Administrator that failure to grant the exception would result</u> in exceptional hardship by rendering the lot undevelopable;

(C) <u>A determination by the Floodplain Administrator that the granting of an exception will not result</u> in any increase to flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws;

(D) <u>A determination by the Floodplain Administrator that the exception is the minimum necessary, considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this chapter. For example, in the case of exceptions to an elevation requirement, exceptions need not be granted for permission for the applicant to build at grade,</u>

or even to whatever elevation the applicant proposes, but only to that elevation which will both provide relief and preserve the integrity of the regulatory requirements.

Upon consideration of the factors in SCCC 16.13.820 and the purposes of this chapter, conditions may be attached to the granting of exceptions as necessary to further the purposes of this chapter.

<u>16.13.840</u> Required findings.

In granting an exception, the Planning Director shall make the following findings:

(A) <u>That the project is necessary to mitigate a threat to public health, safety, or welfare;</u>

(B) <u>That hardship exists;</u>

(C) That the request is for the smallest amount of variance from the provisions of this chapter as possible; and

(D) That adequate measures will be taken to ensure consistency with the purposes of this chapter and the County General Plan.

<u>16.13.850 Notice.</u>

Any applicant to whom an exception is granted shall be given written notice of the terms and conditions, if any, of the exception, and said notice shall also include the following:

(A) <u>That the issuance of an exception to construct a structure below the base flood level, or not meet the standards prescribed in this chapter will result in substantially increased premium rates for flood insurance;</u>

(B) That such construction below the base level or construction that does not meet the standards prescribed in this chapter increases risks to life and property;

(C) <u>The County of Santa Cruz shall be exempt from liability for any personal or property damage</u> caused by construction below the base flood level or construction that does not meet the standards prescribed by this chapter; and

(D) That a copy of the written notice shall be recorded on the deed so that it appears in the chain of title of the affected parcel of land.

16.13.860 Records.

The Floodplain Administrator will maintain a record of all exception actions, including justification for their issuance, and report such exceptions issued in its biennial report submitted to the Federal Insurance Administration of the Federal Emergency Management Agency.

Part X. VIOLATIONS

16.13.870 Compliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with all the provisions of this chapter and other applicable regulations. Nothing herein shall prevent the taking of lawful action as necessary to prevent or remedy any violation.

16.13.880 Actions constituting a violation.

(A) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer, or furnish equipment or labor for any development in a flood hazard area as defined in 16.13.160(18) unless

- 1) <u>A floodplain permit has been obtained and is in effect which authorizes the development;</u> or
- 2) <u>The development is exempt from the requirement for a floodplain permit approval.</u>

(B) It shall be unlawful for any person to exercise a development permit which authorizes development in a flood hazard area without complying with all of the conditions of such permit.

(C) In the event of a violation of this chapter or of the provisions of permit conditions as specified in this chapter, or if the permit has been exercised in a manner which creates a nuisance or is otherwise detrimental to the public health, safety or welfare, the permittee shall be given notice of such violation, and a reasonable time shall be specified for its correction. It shall be unlawful for any person to refuse or fail to abate a condition as spelled out in such notice.

(D) <u>It shall be unlawful for any person to knowingly do, cause, permit, aid, abet, or furnish any</u> equipment or labor for any work in violation of a Stop Work Notice from and after it is posted on the site until the Stop Work Notice is authorized to be removed by the Planning Director.

(E) If the Planning Director determines that any floodplain development occurring in the County does not comply with the approved floodplain permit or this chapter, they may stop all work until corrective measures have been completed. The site shall be posted with a "Stop Work" notice. No other permits shall be issued by the County on the site, and the County may require that all work shall be stopped pursuant to any such permits issued, until corrections have been made to the satisfaction of the Planning Director.

(F) <u>Whenever the Planning Director determines that floodplain development has been done without the required floodplain development permit, they may refuse to issue a permit for the work already completed and require mitigating action.</u>

Part XI. PROJECT DENIAL

16.13.890 Project denial.

A floodplain permit or the location of a proposed development shall be denied if the Planning Director determines that development is not in compliance with this chapter or the project would conflict with National Flood Insurance Program regulations.

Part XII. NOTICES OF GEOLOGIC HAZARDS IN CASES OF DANGEROUS CONDITIONS

16.13.900 Issuance and recordation of notices of geologic and / or flood hazards.

Whenever a site inspection, flood study, geologic hazards assessment or full geologic report identifies the presence of a geologic or flood hazard that causes a site, building, structure, or portions thereof to be rendered unsafe or dangerous, then pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10, the Planning Director may issue a notice of geologic hazard and order thereon, and may record a notice of geologic hazard with the County Recorder.

16.13.910 Abatement procedures.

The Planning Director may initiate abatement procedures pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.

Part XIII. APPEALS

<u>16.13.920 Appeals.</u>

Except as otherwise provided herein, appeals taken pursuant to the provisions of this chapter shall be made in conformance with the procedures of SCCC 18.10, including appeal of the requirement for geologic hazard assessment or technical report. All appeals taken concerning the decision to issue and record a Notice of Geologic Hazard pursuant to the provisions of SCCC 16.13.900 and 16.13.910 shall be governed by the procedures commencing with Section 501 of the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.425.

Part XIV. FEES

16.13.930 Fees.

Fees for processing, checking, reviewing, reviewing technical reports, inspection, violations, and exception requests related to floodplain management shall be set by resolution by the Board of Supervisors.

SECTION III

Paragraph (2) of Subsection (B) of Section 13.03.050 of the Santa Cruz County Code is hereby amended to read:

(2) The implementing ordinances consisting of the following County Code chapters:

Chapter 7.38 SCCC	Sewage Disposal	
Chapter 7.70 SCCC	Water Wells	
Chapter 7.73 SCCC	Individual Water Systems	
Chapter 7.78 SCCC	Preservation of Monterey Bay and Coastal Water Quality: Regulation of Wastewater Discharge	
Chapter 12.01 SCCC	Building Permit Regulations	
Chapter 12.06 SCCC	Demolition or Conversion of Residential Structures	
Chapter 13.01 SCCC	General Plan Administration	
Chapter 13.02 SCCC	Specific Plan Administration	
Chapter 13.03 SCCC	Local Coastal Program Administration	
Chapter 13.10 SCCC	Zoning Regulations	
Chapter 13.11 SCCC	Site, Architectural and Landscape Design Review	
Chapter 13.14 SCCC	Rural Residential Density Determinations	
Chapter 13.20 SCCC	Coastal Zone Regulations	
Chapter 13.36 SCCC	Development Agreement	
Chapter 14.02 SCCC	Condominium and Townhouse Conversion Regulations	
Chapter 15.01 SCCC	Park Dedication and Public Access Requirements	
Chapter 15.10 SCCC	Roadway and Roadside Improvements	
Chapter 16.10 SCCC	Geologic Hazards	
Chapter 16.13 SCCC	Floodplain Management Regulations	

Chapter 16.20 SCCC	Grading Regulations	
Chapter 16.22 SCCC	Erosion Control	
Chapter 16.30 SCCC	Riparian Corridor and Wetlands Protection	
Chapter 16.32 SCCC	Sensitive Habitat Protection	
Chapter 16.34 SCCC	Significant Trees Protection	
Chapter 16.40 SCCC	Native American Cultural Sites	
Chapter 16.44 SCCC	Paleontological Resource Protection	
Chapter 16.50 SCCC	Agricultural Land Preservation and Protection	
Chapter 16.52 SCCC	Timber Harvesting Regulations	
Chapter 16.54 SCCC	Mining Regulations	
Chapter 17.02 SCCC	Urban Services Line and Rural Services Line	
Chapter 17.04 SCCC	Annual Population Growth Goal for Santa Cruz County	
Chapter 18.10 SCCC	Permit and Approval Procedures	

SECTION III

This Ordinance shall take effect on the 31st day following adoption outside the Coastal Zone and shall take effect on the 31st day following adoption or upon certification by the California Coastal Commission, whichever is later, inside the Coastal Zone.

PASSED AND ADOPTED this <u>6th</u> day of <u>October</u>, 2020 by the Board of Supervisors and the County of Santa Cruz by the following vote:

AYES:	5
NOES:	S
ABSENT:	S
ABSTAIN:	S

SUPERVISORSLeopold, McPherson, Friend, Coonerty, CaputSUPERVISORSNoneSUPERVISORSNoneSUPERVISORSNone

GREG CAPUT

8/29/2020 (AMS# 9507)

CHAIRPERSON, BOARD OF SUPERVISORS

ATTEST:

SUSAN GALLOWAY Clerk of the Board

APPROVED AS TO FORM:

21/20

Office of the County Counsel

DISTRIBUTION:

County Counsel Planning Department

Chapter 16.20 GRADING REGULATIONS

Sections:

16.20.010	Purpose.
16.20.020	Scope.
16.20.025	Amendment.
16.20.030	Definitions.
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16.20.080	Approval limitations and conditions.
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16.20.110	Diking, dredging and filling.
16.20.115	Shoreline protection structures.
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16.20.120	Fees.
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16.20.140	Design standards for excavations.
16.20.150	Design standards for fills.
16.20.160	Cut and fill slope setback.
16.20.170	Design standards for drainage facilities and terraces.
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16.20.185	Exceptions to road standards
16.20.195	Agricultural grading.
16.20.200	Inspection and compliance.
16.20.210	Grading violations.
16.20.220	Transfer of responsibility.
16.20.230	Completion and approval.
16.20.240	Repealed.
16.20.250	Repealed.
16.20.260	Repealed.
16.20.270	Repealed.
16.20.280	Appeals.
	••

16.20.010 Purpose.

The purpose of this chapter is to safeguard health, safety, and the public welfare; to minimize erosion and the extent of grading; to protect fish and wildlife; to protect the watersheds; to ensure the natural appearance of grading projects; and to otherwise protect the natural environment of Santa Cruz County.

16.20.020 Scope.

This chapter sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, dredging, diking, fills and embankments; establishes the administrative procedure for issuance of grading permits; and provides for approval of plans and inspections. This chapter shall apply to both private and public activities including those of the County and other such governmental agencies as are not exempted by State or Federal law.

16.20.025 Amendment.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of ChapterSCCC 13.03 SCCC, and shall be subject to approval by the California Coastal Commission.

16.20.030 Definitions.

<u>All definitionsWords</u> shall be as defined in the General Plan or Local Coastal Program Land Use Plan glossaries, and as follows for the purposes of this chapter, the following definitions apply:

(A) "Agricultural grading" means any grading which takes place on land designated on the County's agricultural resource maps for exclusive agricultural use as specified in SCCC 16.50.040 and for vineyards and associated terracing; provided, however, that agricultural grading does not include any grading on such lands connected with the construction of access roads or building sites; except greenhouse sites. Agricultural grading also does not include the movement of earth for purposes defined in the Chapter as agricultural work and, with the exception of vineyards, does not include grading on hillsides or slopes of twenty percent or greater or grading for specialized agricultural activities as defined in SCCC 16.20.030.-in SCCC 16.20.050(I).

(B) "Bedrock" means the in-place solid, undisturbed material either at the ground surface or beneath superficial deposits of gravel, sand or soil.

(C) "Bench" means a relatively level step excavated into earth material.

(D) "Civil engineer" means a professional engineer registered in California to practice civil engineering.

(E) "Clearing" means the removal of vegetation down to bare soil, whether by hand, machine or any other method.

(F) "Compaction" means the densification of earthen solids.

(G) "Contractor" means any person licensed in the State of California to do grading as defined by State law.

(H) "Diking" means construction of an earthen dam to control or confine water.

(1) "Drainage course" means a natural or manmade channel which conveys storm runoff either year-round or intermittently.

(J) "Dredging" means scooping or digging of earth material from the bed of a body of water.

(K) "Driveway" means any private road leading from the street to two or fewer habitable structures or parcels. (See "roadway.")

(L) "Earth material" means rock, natural soil, sand or combination thereof.

(M) <u>"Emergency" means a sudden, unexpected occurrence involving a clear and present danger that</u> demands immediate action to prevent loss of or damage to life, health, property or essential public services. "Engineering geologist" means a professional geologist registered in the State of California to practice engineering geology.

 (\underline{N}) "Erosion" means the wearing away of the ground surface as a result of movement of wind, water or ice.

(O) "Excavation" means the mechanical removal of earth material, or a cavity formed by cutting, digging or scooping.

(P) "Existing grade" means the grade prior to grading.

(Q) "Fill" means the deposition of earth or other material by artificial means for any purpose, for any length of time, including the stockpiling of material, or the conditions resulting therefrom.

(R) "Finish grade" means the final grade of the site which conforms to the approved plan.

(S) "Grade" means the vertical location of the ground surface, or the degree of rise or descent of a slope.

(T) "Grading" means excavating, or filling, dredging, diking, prospecting, exploratory mining operation or combination thereof.

(U) "Key" means a designed compacted fill placed in a trench excavated in undisturbed earth material or rock beneath the toe of a proposed fill slope for the purpose of developing a shearing resistance (see Figure 1).



Figure 1

(V) "Land disturbance" means clearing, excavating, grading or other manipulation of the terrain.

(W) "Littoral cell" means a continuous section of shoreline within which sand moves in a prevailing direction in response to seasonal current.

(X) "Permittee" means the property owner, or any contractor or other person undertaking grading upon the property of the property owner, pursuant to a <u>grading</u> permit granted according to the provisions of this chapter.

(Y) "Planning Director" means the Director of the Planning Department or a designated employeetheir designee.

(Z) <u>"Professional geologist" means a geologist who is licensed by the State of California to practice geology</u>

(AA) "Riparian corridor" means any of the following:

(1) Lands within a stream channel, including the stream and the area between the mean rainy season (bankfull) flowlines;

(2) Lands extending 50 feet (measured horizontally) out from each side of a perennial stream. Distance shall be measured from the mean rainy season (bankfull) flowline;

(3) Lands extending 30 feet (measured horizontally) out from each side of an intermittent stream. Distance shall be measured from the mean rainy season (bankfull) flowline;

(4) Lands extending 100 feet (measured horizontally) from the high water mark of a lake, wetland, estuary, lagoon or natural body of standing water;

- (5) Lands containing a riparian woodland;
- (6) Lands within an arroyo located within the urban services line, or the rural services line.

(BB) "Road gradient (percent)" means a vertical rise multiplied by 100 and divided by horizontal run.

(CC) "Road" or "roadway" means an open way for vehicular traffic serving more than two habitable structures or parcels. (See "driveway.")

(DD) "Security" means a cash deposit, time certificate of deposit or equivalent security acceptable to the County.

(EE) "Site" means a parcel of land or contiguous combination thereof, where grading is performed or proposed.

(FF) "Slope" means an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance. (See Table A and Figure 2.)

Ratio	Percent	Degrees
1:1 =	100% =	45
2:1 =	50% =	22
3:1 =	33% =	15
4:1 =	25% =	11
5:1 =	20% =	9

Table A



Figure 2

(GG) "Soil" means naturally occurring superficial deposits of earth material overlying bedrock.

(HH) "Soil engineer" or "geotechnical engineer" means a professional civil engineer, registeredlicensed in the State of California, experienced and knowledgeable in the practice of soil and foundation engineering.

(II) <u>"Specialized agricultural activities" means any agricultural activities involving greenhouses, growing in indoor structures, aquaculture and cannabis activities.</u>

(JJ) "Stream" means any watercourse as designated by a solid line or dash and three dots symbol shown on the largest scale of the United States Geological Survey map most recently published, or as indicated in the grading permit when it has been field determined that a watercourse either:

- (1) Supports fish at any time of the year; or
- (2) Has a significant water flow 30 days after the last significant storm; or
- (3) Has a channel, free of soil and debris.

(KK) "Terrace" means a relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

(LL) "Waterbreak" means a ditch, dike, dip or combination thereof, constructed to effectively divert water as an aid to erosion control.

(MM) "Winter season" means October 15th through April 15th. [Ord. 4346 § 67, 1994; Ord. 3599 § 2, 1984; Ord. 3321 § 1, 1982; Ord. 2972, 1980; Ord. 2500, 1977].

16.20.040 Approval required.

Except as exempted by SCCC 16.20.050, no person shall do, cause, permit, aid, abet, suffer or furnish equipment or labor for any grading until a grading approvalpermit has been obtained for the project. A separate approvalgrading permit shall be required for each site and shall be obtained as follows:

(A) Planning Commission. All approvals applications for grading permits involving in excess of 8,000 cubic yards, or for which an environmental impact report was prepared, or for grading in excess of 1,000 cubic yards on a site which is visible from a scenic corridor roadway, as designated in the Local Coastal Program Land Use Plan, shall be processed according to <u>ChapterSCCC</u> <u>18.10</u> <u>SCCC</u>, Level VI as a

discretionary permit application that is the subject of a noticed public hearing and acted upon by the Planning Commission.

(B) Planning Director. Applications for grading permits involving less than 1,000 cubic yards of earth material on less than 50 percent slopes shall be processed as ministerial building permits and comply with standards of applicable county codes and recommendations of a soils or geotechnical report in order to be approved and issued. Applications for grading permits involving any amount of grading on greater than 50 percent slopes, or grading between 1,000 and 8,000 cubic yards of earth material on a site and which is not located in a designated scenic area or visible from a scenic road All other permits shall be processed according to SCCC 18.10.123.

(C) Subdivisions. The <u>Public Works</u> Director <u>of the Department of Public Works</u> is hereby authorized and directed to enforce the provisions of this chapter for grading done within parcel map subdivisions for which improvement plans have been signed by the Public Works Director or within subdivisions for which a final map has been recorded or for property on which a tentative subdivision map has been approved and grading is permitted prior to recording of a final map. Grading permits are not issued by the Planning Director for subdivision work administered by the <u>Director of</u> Public Works <u>Director</u>.

(D) <u>Ministerial Permits. Applications for grading permits involving less than 1,000 cubic yards of</u> earth material on less than 50 percent slopes or grading that is part of a consolidated coastal development permit process shall be processed as ministerial building permits and comply with standards of applicable county codes and recommendations of a soils or geotechnical report in order to be approved and issued.

16.20.050 Exemptions.

The following work is exempt from the provisions of this chapter; however, it remains subject to the <u>coastal zone regulations (SCCC 13.20) and requirements for coastal development permits</u>, riparian corridor protection ordinance (<u>SCCC Chapter 16.30 SCCC</u>), the County environmental review regulations (<u>SCCC Chapter 16.01 SCCC</u>), the erosion control-ordinance (<u>SCCC Chapter 16.22 SCCC</u>), the geological hazards<u>-ordinance (SCCC Chapter 16.10 SCCC</u>), the sensitive habitat protection-ordinance (<u>SCCC Chapter 16.32 SCCC</u>), and the County Native American cultural sites-ordinance (<u>SCCC Chapter 16.40 SCCC</u>). The following work may also be subject to other requirements imposed in County and State law.

(A) Excavations. An excavation which does not exceed 100 cubic yards and which does not create a cut slope greater than five feet in depth.

(B) Fills. A fill containing earth material only which is less than two feet in depth, is placed on natural terrain which has a slope flatter than five horizontal to one vertical, does not exceed 100 cubic yards on any one site, does not alter or obstruct a drainage course, and will not be used for structural support.

(C) Basements, Footings. An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. This shall not exempt any fill as provided under subsection (B) of this section made with the material from such excavation, nor exempt any excavation having an unsupported height greater than five feet after the completion of such structure.

(D) Cemeteries. Cemetery graves.

(E) Refuse Disposal. Refuse disposal sites which are permitted and <u>aetuallyactively</u> being controlled pursuant to other County regulations, and excavations for individual and community sewage disposal systems, made pursuant to permit.

(F) Wells and Utilities. Excavations for wells or utilities.

(G) Mining and Quarrying. Mining, quarrying, excavating, processing, stockpiling of rock, sand, gravel, aggregate or clay materials, pursuant to a County permit.

(H) Soil Testing. Exploratory excavations under the direction of a soils engineer or engineeringprofessional geologist where such excavation is to be returned to the original condition under the direction of such engineer or geologist within 45 days after the start of work.

(I) Agricultural Work. Routine plowing, harrowing, disking, ridging, listing, land planing, and similar operations necessary to prepare a field or growing area on land with less than twenty percent slopes, for a crop for continued agricultural use, and not including grading for specialized agricultural activities as defined in this chapter. (All other <u>non-exempt</u> agricultural grading shall <u>require either an</u> agricultural grading permit or a regular grading permit in compliance with this chapter). be subject to the procedures of SCCC 16.20.195.)

(J) Timber Harvesting. Work done pursuant to a valid timber harvesting permit.

(K) County Public Works. Routine maintenance and other work undertaken by the County Department of Public Works that does not impact an environmental resource of hazardous or critical concern where designated, mapped and officially adopted pursuant to law by Federal or State agencies, or by the Santa Cruz County Board of Supervisors, or where identified through field or technical investigation.

16.20.055 Special exemption for prevention or mitigation of Pajaro River/Salsipuedes Creek flooding.

(A) In areas outside of the Coastal Zone, the operation, repair and maintenance of the Pajaro River and Salsipuedes Creek levees and the areas within the levees, for the purpose of restoring flood conveyance capacity, including bench excavation, sediment removal, and similar projects shall be exempt from the provisions of this chapter if all of the following conditions are met:

(1) The work is conducted by or under the direction of the Department of Public Works;

(2) The work is in accordance with a streambed alteration agreement approved by the California Department of Fish and GameWildlife, to the extent that such an agreement is required; and

(3) The project has been subjected to environmental review with the County of Santa Cruz serving as the lead agency.

16.20.060 Application.

Applications for approvals grading permits granted pursuant to this chapter shall be made in accordance with the requirements of <u>SCCC</u> chapter 18.10 SCCC and shall include the following:

(A) General. An application for a grading <u>approval permit</u> shall be submitted by the owner(s) of the property or agent when authorized in writing. The application shall be signed by the owner(s) of each site or their designated representative, as defined under SCCC 16.20.030. A civil engineer or other licensed

professional authorized by State law shall prepare and sign the plans and specifications if grading will be in excess of 2,000 cubic yards. Special design requirements for dredging and diking shall be determined by the Planning Director.

(B) The application shall be accompanied by all fees required by SCCC 16.20.120.

(C) Plans and Specifications. Two sets of plans shall be <u>submitted with the application</u>required by the <u>Planning Director</u>. Plans shall be drawn to scale upon substantial material, minimum size 18 inches by 24 inches, and shall be of sufficient clarity to indicate the nature and the extent of the work proposed and show in detail that it will conform to the provisions of this chapter and all relevant laws and regulations. The plans shall include but not be limited to the following information, in writing and/or diagrams as required by the Planning Director:

(1) A statement as to the specific intentions or ultimate purpose for which the grading is being done.

(2) General location of the proposed site.

(3) Property lines and contours of the existing ground and details of terrain and area drainage, and delineation of hillsides or slope areas of twenty percent or more.

(4) Limiting dimensions, elevations or finish contours to be achieved by the grading, and proposed drainage channels and related construction.

(5) Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains. The location of any ravines and drainage courses and the pathway of offsite drainage shall be indicated.

(6) Location of buildings or structures on the property where the work is to be performed and the approximate location of buildings or structures on adjacent land owned by other owners which is within 15 feet of the property line or which may be affected by the proposed operations.

(7) A statement of the quantity of excavation and fill.

(8) Specifications, if required, shall contain information covering construction and material requirements.

(9) <u>An erosionA storm water pollution</u> control plan and erosion prevention measures for all surfaces exposed or expected to be exposed during grading activities, in accordance with the requirements of the erosion control ordinance (<u>SCCC Chapter 16.22 SCCC</u>) and runoff and pollution control ordinance (<u>SCCC 7.79</u>) shall accompany every proposed grading plan; including information about whether a Land Clearing Permit or a Winter Grading Operations Permit is also being requested for the grading activity pursuant to the provisions of SCCC 16.22.

(10) Revegetation proposal for all surfaces exposed or expected to be exposed during grading activities.

(11) Name and address of the owner(s).

- (12) Assessor's parcel number(s) of the property on which the work is to be done.
- (13) Location of on-site trees.

(14) When required by the Planning Director, each application for a grading approvalpermit shall be accompanied by supporting data consisting of a soil engineering report and/or engineering geology report. The soil engineering report shall include data regarding the nature, distribution and strength of existing soils; conclusions and recommendations for grading procedures; design criteria for corrective measures when necessary; and opinions and recommendations covering adequacy of sites to be developed by the proposed grading. The engineering geology report shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading. Recommendations included in the reports and approvedaccepted by the Planning Director shall be incorporated in the grading plans and specifications.

(15) When required by the Planning Director because it appears that the location of the property line may be in question in connection with the proposed grading, a parcel survey or other boundary evidence deemed necessary by the Planning Director shall be provided.

(D) Starting and Completion Dates. Each application for a grading permit shall state estimated starting and completion dates <u>and whether phasing of activity is anticipated</u>.

16.20.070 **Variances**Exceptions.

(A) A request for an <u>varianceexception</u> from the provisions of this chapter, the approval conditions, or the plan specifications, may be approved, conditionally approved, or denied according to <u>SCCC 18.10</u> at the level specified in SCCC 16.20.040(A) and (B). A request for a <u>varianceexception</u> must state in writing the provision from which it is to be varied, the proposed substitute provision, when it would apply and its advantages. The following findings shall be required for approval of an exception:

(1) That there are special circumstances or conditions affecting the property; and

(2) That the <u>varianceexception</u> is necessary for the proper design and/or function of the project.

(B) No <u>varianceexception</u> shall be granted unless the project, with such <u>varianceexception</u>, is consistent with the purpose of this chapter.

(C) As contemplated in this section, an <u>varianceexception</u> shall be granted for alternative methods of construction for projects which could be constructed under the basic standards established in this chapter, but which, if an <u>varianceexception</u> is granted, can be better and/or more economically designed and constructed than if an <u>varianceexception</u> were not given. An <u>varianceexception</u> shall not be granted if the <u>partresult</u> of an <u>varianceexception</u> would have the effect of allowing the construction of a project which would otherwise, without the <u>varianceexception</u>, not be possible under the provisions of the County Code.

(D) Fees for <u>variance_exception</u>s shall be set by resolution of the Board of Supervisors.

16.20.080 Approval limitations and conditions.

(A) Issuance. The issuance of a grading approval permit shall constitute an authorization to do only that work which is described or illustrated on the application for the approval permit or on the approved plans and specifications.

(B) Plan Checking. The application, plans, and specifications filed by an applicant for an approval grading permit shall be checked by the Planning Director within 30 days after receipt of all information required for submittal of the application issuance of the approval. The Planning Director shall notify the applicant in writing within 30 days of the time the application is filed, of any deficiencies that must be corrected in order to allow for approval of the grading permit. The Planning Director or Planning Commission shall approve an application for approvala grading permit if the plans filed therewith conform to the requirements of this chapter, zoning ordinances, any use permit and/or design review conditions and other applicable laws. The Planning Commission shall take its action after carrying out a noticed public hearing on the application and shall approve, conditionally approve or deny the application, based upon whether or not the proposal is consistent with the General Plan, Local Coastal Program, and applicable provisions of the County Code including but not limited to permit approval findings within SCCC 18.10.

(C) Denial of <u>ApprovalGrading Permit Application</u>.

(1) An application for a grading, dredging or diking approval permit shall be denied if the Planning Director or Planning Commission makes any of the following findings:

(a) That the design of the proposed site is not consistent with the applicable general and specific plans adopted pursuant to <u>SCCC_Chapters_13.01_and_-13.03_SCCC.</u>;

(b) That the proposed grading plan for the development contemplated does not comply with the requirements of the Santa Cruz County $Code_{\frac{1}{2}}$

(c) If the project is for the creation of a building site, that adequate sewage facilities and water supplies cannot be provided $\frac{1}{2}$

(d) If the project as proposed will cause excessive and unnecessary disturbance of the site particularly as defined in the geologic hazard assessment or other geotechnical or geology report prepared for the application, or as addressed by the slope stability provisions of SCCC 16.10.0570(E).; or

(e) If the project is for the purpose of a new, extended or widened road providing access to enable a specialized agricultural activity or to an agricultural growing area on slopes of twenty percent or more, and the road work will involve a degree or nature of grading that involves significant grading which may not be wholly consistent with existing natural topography or grades of the subject area, and which does not provide offsetting public safety, neighborhood or community benefits to a degree that provides reason to support the proposed degree or nature of grading, as specified in findings for approval of the grading permit.

(2) An application for a grading approval permit shall be denied if the work proposed would be hazardous by reason of flood, geological hazard, or unstable soils; be liable to endanger other properties or result in the deposition of debris on any public way, property, or drainage course; or otherwise create a hazard.

(3) An application for a grading approval permit which would create unavoidable adverse environmental impact shall be denied.

(4) An application for grading in a riparian corridor shall be denied if it is not in conformance with other chapters of the County Code which regulate development activity in riparian corridors.

(5) An application for a grading approval permit to place fill within a 100-year floodplain<u>flood hazard area</u> shall be denied, unless the fill-is the minimum amount necessary, not to exceed 50 cubic yards, and it can be demonstrated through environmental review that the fill will not cause significant cumulative impacts is in conformation with the Floodplain Management Regulations (SCCC 16.13).

(6) The Planning Director shall notify the applicant in writing of a denial or conditional denial and shall state the reasons therefor.

(D) Restriction on Certain Grading <u>ApprovalPermits</u>. If the project is for the creation of, or access to, a building site, land disturbance shall not take place until a building permit has been issued. If an <u>approvalgrading permit</u> cannot be issued until a determination of adequate water source and sewage disposal or other required site investigation is made, land disturbance shall be limited to the extent necessary to allow such an investigation. This provision shall not apply to improvements or road construction required as a condition of approval of a minor land division or other permit.

(E) Conditions of Approval. In granting acting to approve any approval grading permit under this chapter, the Planning Director or Planning Commission shall attach such conditions as necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

(1) Improvement of any existing grading project to bring it up to the standards of this chapter.

(2) Requirements for fencing of excavations or fills which would otherwise be hazardous.

(3) Haul routes for materials.

(4) Conditions recommended by the Environmental Coordinator.

(5) Conditions recommended by a geological hazard review.

(6) Check dams, cribbing, riprap or other devices which may be required to prevent erosion: and a requirement that a Winter Operations Erosion Control permit be obtained if grading will occur between October 15th and April 15th, pursuant to the requirements of SCCC 16.22.

(7) Mulching, fertilizing, watering or other methods may be required to establish new vegetation. On slopes less than 20 percent, stockpiling and reapplication of topsoil shall be required, unless it can be shown that adequate erosion control measures, as per the erosion control ordinance (<u>SCCC Chapter 16.22-SCCC</u>), can be implemented.

(8) Dust from grading operations shall be controlled.

(9) No earth or organic material shall be deposited or placed where it may be deposited into a stream, marsh, slough, lagoon or body of standing water in a quantity deleterious to wildlife, aquatic life, or other beneficial uses of the water.

(10) <u>Requirement that a Land Clearing Permit be approved either in conjunction with the</u> subject grading permit, or prior to grading operations involving land clearing taking place, if land clearing is subject to the requirements of SCCC 16.22.

(F) Approved <u>Grading</u> Plans. When the Planning Director issues the <u>grading</u> permit <u>that has been</u> approved by the Director or the Planning Commission, all of the plans and specifications shall be endorsed "approved." Such approved plans and specifications shall not be changed, modified, or altered without written authorization by the Planning Director, and all work shall be done in accordance with the approved plans and this chapter.

(G) Amendment. Amendments to <u>grading permits</u> approvals granted pursuant to this chapter whether for <u>minor or major</u> change of project, conditions, or expiration date or other time limits, shall be processed in accordance with the <u>applicable</u> provisions of <u>SCCCChapter 18.10</u>-SCCC, as a minor administrative permit (Level III) for minor changes of project, changes of conditions for administratively issued grading permits, and extensions of time limits for any grading permit; and as a major amendment (Level VI) for major changes of project and changes of conditions of approval for grading permits approved the the Planning Commission.

(H) Retention of Plans. One set of plans and specifications shall be retained by the Planning Director for a period of not less than two years from the date of completion of work covered therein. Plans which have been submitted for checking and for which no grading permit is issued may be <u>considered</u> <u>abandoned and</u> destroyed by the Planning Director if not picked up by the applicant within <u>90180</u> days of <u>issuance of the latest staff review comments</u>.

(I) Posting of Permit. At the time a grading permit is issued which has been the subject of a Planning Commission public hearing, the County shall also publish a copy of the permit issue the permittee a notice of permit form or forms. The permittee shall cause such form or forms to be posted on the property at a place at which such form or forms can easily be seen from any public or private road or from adjacent properties during any time that grading is taking place on the property. A copy of the plans shall be attached to the notice of permit or, in lieu thereof, a brief description in writing and diagrams of the permitted grading on the planning department website, and retain it on the website until the activity is final, so that members of the public may assess information about the approved grading activity. All other grading permits shall retain the job copy of the approved grading plans on site.

(J) Work Time Limits. The permittee shall fully perform and complete all of the work required to be done within the time limit specified. If no time limit is specified, the permittee shall complete <u>all of</u> the work <u>or the first phase of work</u> within <u>180 daysone year</u> after the date of the issuance of the grading permit, and the remaining phase(s) of the work within the following year or in accordance with the timeline for a development permit that is associated with the project.

If the permittee is unable to complete the work within the specified time, <u>hethey</u> shall, prior to the expiration of the permit, present in writing a request for an extension of time, setting forth the reasons for the requested extension. If, in the opinion of the Planning Director, an extension is warranted, additional time may be granted for the completion of the work.

(K) Working Hours. Hours of grading operation shall be between 7:00 a.m. and 6:00 p.m. on weekdays. No grading shall be permitted on Saturdays, Sundays, and holidays, unless specifically authorized <u>in advance and in writing part of a variance approved</u> by the Planning Director <u>or Building Official</u>.

(L) Expiration. Unless otherwise specified, <u>grading permit</u> approvals issued pursuant to this chapter shall expire one year from the date of issuance if not exercised. Where <u>approvalsgrading permits</u> are issued in conjunction with a development permit granted pursuant to <u>SCCCChapter 18.10</u> <u>SCCC</u> the <u>grading permit</u> approval shall expire in accordance with the provisions of <u>SCCCChapter 18.10</u> <u>SCCC</u>.

(M) Safety Precautions. The permittee shall take all appropriate and necessary precautions to protect adjacent public and private property from damage that may result from the operations.

(N) Property Lines. Whenever the location of a property line is in question as the result of or during operations, the Planning Director may require any boundary evidence which the Planning Director deems necessary. The Planning Director may require the applicant to furnish a parcel survey.

(O) Inclement Weather and Winter Grading. The Planning Director shall stop grading during periods of inclement weather when weather-generated problems are not being controlled adequately. No grading shall occur during the winter season (October 15th through April 15th), unless <u>a Winter Operations</u> <u>Erosion Control Permit authorized in advance by the Planning Director with reference to the erosion control ordinance has been approved and issued</u>.

(P) Validity. The issuance or granting of approval of <u>a grading permit and its</u> plans and specifications shall not be construed to be approval of any violation of any of the provisions of this chapter or of any other law.

The issuance of an approval grading permit based on plans and specifications shall not prevent the Planning Director from thereafter requiring the correction of errors in plans and specifications or from preventing operations from being carried on when in violation of this chapter or of any other law.

(Q) Suspension or Revocation of <u>Grading Permit</u> Approval. The Planning Director may, in writing, suspend or revoke an <u>grading permit</u> approval issued under <u>the</u> provisions of this chapter whenever the <u>approvalgrading permit</u> is issued in error or on the basis of incorrect information supplied, or in violation of any law or regulation or any of the provisions of this chapter.

16.20.090 Environmental review.

Applications for grading approvalspermits shall be subject to environmental review consistent with the California Environmental Quality Act (CEQA) and the most current version of the CEQA <u>Guidelines.submitted to the Environmental Coordinator pursuant to Santa Cruz County environmental impact regulations.</u>

16.20.100 Hazardous conditions.

Whenever the Planning Director determines that an excavation, embankment, or fill has become a hazard to life and limb, endangers property, or adversely affects the safety, use, or stability of a public way or drainage channel, he shall notify in writing the owner(s) of the property or other person or agent in control of the property on which the hazard exists shall be notified. On receipt of the notice, the owner(s) shall within the period specified eliminate the hazard and bring the property into conformance with the requirements of this chapter. [Ord. 3321 § 1, 1982; Ord. 2500, 1977].

16.20.110 Diking, dredging and filling.

(A) A grading approval permit is required for diking, dredging, and filling of open coastal waters above the ordinary high water line, wetlands, lagoons, estuaries and lakes. An approval grading permit shall be issued only for the following purpose and only where there is no other feasible, less environmentally damaging alternative:

- (1) Restoration purposes, including the protection and enhancement of existing harbors.
- (2) Nature study, aquaculture, or similar resource-dependent activities.

(B) Diking, filling, and dredging in existing estuaries and wetlands is permitted only if it is determined that such activities will maintain or enhance the functional capacity of the wetland or estuary, as determined by the <u>County Environmental CoordinatorPlanning Director</u>.

(C) The dredged material shall be redistributed into the same littoral cell from which it was taken. The deposition of such dredged materials must be timed and located so as not to interfere with shoreline processes, longshore current systems, and public use.

16.20.115 Shoreline and coastal bluff protection structures.

A grading <u>permit</u> approval shall be required for all shoreline <u>and coastal bluff</u> protection structures which involve the placement of rocks, blocks, or fill material in the coastal hazard zone, including the placement of less than 100 cubic yards of material and maintenance and repair <u>activities</u>, <u>even if the activities are being carried out in conformance with an approved Monitoring, Maintenance and Repair Program and do not require a coastal development permit. The design of the proposed structure shall conform to the County's geologic hazard ordinance, <u>SCCCChapter 16.10</u> SCCC, as determined by the Planning Director. Information including, but not limited to, geologic reports, engineered plans, beach sand profiles and structural profiles shall be required as deemed necessary by the Planning Director, <u>County Geologist, or designees</u>.</u>

16.20.116 Emergency <u>permit</u> approvals.

(A) Emergency grading <u>permit</u> approvals may be granted at the discretion of the Planning Director when a sudden, unexpected occurrence involving a clear and present danger demands immediate action to prevent loss of or damage to life, health, property or essential public services. The emergency <u>grading</u> permit shall conform to the objectives of this chapter and the geologic hazards ordinance, <u>SCCCChapter 16.10</u> SCCC; compliance with requirements of coastal zone regulations (SCCC 13.20) shall also be required, if applicable. The Planning Director may request, at the applicant's expense, verification by a qualified professional of the nature of and solutions to the emergency situation.

(B) Applications for an emergency grading permit shall include the following:

(1) Letter from the project civil and/or geotechnical engineer describing the nature of and recommended measures necessary to address the emergency situation, along with monitoring and testing requirements to be fulfilled by the engineering professional or their designee during construction; and

(2) Approximate construction schedule and phasing, along with corresponding best management practices to prevent erosion and sediment from leaving the construction site.

(BC) The emergency work authorized under this the emergency permit approval shall be limited to necessary activities to protect the endangered structure or essential public structure. The emergency approval grading permit shall be voided if the approval permit is not exercised within 15 days of issuance. The emergency grading permit approval expires 30 days after commencement of work. Any work completed outside of these time periods requires a regular grading permit approval unless an extension is granted by the Planning Director.

(CD) At the time of application for an emergency <u>grading permit</u> approval or within 60 days of issuance of the emergency <u>grading permit</u> the applicant shall submit a completed application and the appropriate fees for a regular <u>grading permit</u> approval.

 $(\underline{\mathbf{PE}})$ Within 90 days of the issuance of an emergency <u>approvalgrading permit</u>, the owner of the property shall submit <u>an as-built plan showing completed emergency grading, along with all construction</u> <u>monitoring and testing reports from the responsible engineer, and</u> all required technical reports and <u>final</u> project plans, unless a time extension is granted by the Planning Director. If the information described above is not submitted within the specified time, the emergency <u>approvalgrading permit</u> shall be voided and the emergency work shall be considered a violation of this chapter.

 (\underline{EF}) If the emergency work is required during nonbusiness hours, the property owner shall submit an emergency grading permit application on the following business day.

16.20.120 Fees.

Fees for processing grading <u>permitapproval</u> applications and requests for <u>varianceexception</u>s shall be set by resolution of the Board of Supervisors.

(A) Grading <u>ApprovalPermit Application</u> Fees—Subdivision. No plan-checking or grading <u>approvalpermit application</u> fees shall be charged for a grading <u>approvalpermit</u> for property for which a final subdivision map has been recorded (or a tentative subdivision map has been approved subject to a specific condition that grading will be permitted prior to recording of the final map); provided, that all of the contemplated grading is shown on approved improvement plans pursuant to <u>SCCC</u> <u>Chapter 14.01 SCCC</u>. Costs for plan checking and construction inspection for compliance with this chapter shall be determined in the same manner as fees <u>provided set forth</u> in SCCC 14.01.506.

16.20.130 Securities.

Approvals for of grading <u>permits</u> shall not be valid and work shall not be started until the required securities have been provided <u>as determined by the Planning Director</u>. Securities shall remain in effect one winter after final inspection and approval <u>of completed work</u>. All expenditures by the County for corrective work necessary because of the permittee's failure to comply with the provisions of the <u>approvalgrading permit</u> and this chapter shall be charged against the security.

(A) If a grading is in excess of 2,000 cubic yards the permittee shall provide a cash deposit, time certificate of deposit, or equivalent security, acceptable to the County, payable to the County to insure compliance with the provisions of the <u>grading permit</u> approval and this chapter.

(B) If deemed necessary by the Planning Director, a similar security, acceptable to the County, may be required for grading operations of less than 2,000 cubic yards.

(C) The amount of security for grading shall be based on the number of cubic yards of material of either excavation or fill, whichever is larger, plus the cost of drainage or other protective devices. The minimum amount required shall be computed as indicated in the following schedule:

(1) Two thousand to 10,000 cubic yards: $\frac{0.501.00}{0.00}$ per cubic yard, plus the cost of drainage or other protective devices.

(2) Ten thousand and one cubic yards or more: 5,000 plus 0.250 per cubic yard for each additional cubic yard in excess of 10,000, plus the cost of drainage or other protective devices.
(D) No separate grading security except for security required for winter grading operations shall be required for work on which a final subdivision map has been recorded (or a tentative subdivision map has been approved subject to a specific condition that grading will be permitted prior to recording of the final map); provided, that all of the contemplated grading is shown on approved improvement plans pursuant to <u>SCCC Chapter 14.01 SCCC</u> and the amount of the subdivision improvement, performance, labor and material securities is sufficient to cover all grading.

(E) A separate security for any grading operations authorized during the winter, between October 15th and April 15th, may be required if deemed necessary by the Planning Director. [Ord. 3599 § 7, 1984; Ord. 3438 § 1, 1983; Ord. 3321 § 1, 1982; Ord. 2500, 1977].

16.20.140 Design standards for excavations.

(A) Slope. Cut slopes shall be no steeper than one and one-half horizontal to one vertical. Steeper slopes may be allowed if the Planning Director determines they will be stable or if a civil engineer or <u>professional engineering</u> geologist provides a written statement that the site has been investigated and that in <u>histhe engineer's</u> opinion the proposed deviation will be and remain structurally stable. The tops of cut slopes shall be rounded off so as to blend in with the natural terrain. (See Figure 3.)

(B) Drainage and Terraces. Drainage and terraces shall be provided as required by SCCC 16.20.170.

(C) Vegetation Removal. No vegetation removal or grading pursuant to a permit will be allowed which will result in erosion. Vegetation removal shall conform to SCCC 16.22.080.

16.20.150 Design standards for fills.

(A) General. Unless otherwise recommended in the soil engineering report approved by the Planning Director, fills shall conform to the provisions of this section.

(B) Fill Location. Fills shall not be constructed on natural slopes steeper than two to one unless a civil engineer devises a method of placement which will <u>assureensure</u> the fill will remain in place. The toe of a fill shall be no closer than 12 feet horizontally to the top of existing or planned cut slopes (See Figure 3).



Figure 3

(C) Preparation of Ground for Fill. The ground surface shall be prepared to receive fill by the removal of topsoil and other unsuitable materials and by keying into sound bedrock or other suitable material.

(D) Material Permitted. Earth material free from tree stumps, organic matter, trash, sod, peat and similar material shall be used in fills. Rock, cobbles, and similar material shall be distributed and not nested or piled together, and pieces larger than 12 inches in greatest dimension shall not be used unless a method of placement is approved by the Planning Director. Organic material may be used in the top 12-inch layer of fills to aid plant growth.

(E) Fill Slopes. No fill shall be made which creates an exposed surface steeper in slope than two horizontal to one vertical. The Planning Director may allow a steeper slope or require a flatter slope if he finds this found to be consistent with stability and safety.

(F) Compaction of Fills. All fills shall be compacted to a minimum of 90 percent of relative maximum density as determined by ASTM D-1557-70, or CALTRANS test method number California 216or equivalent as required by the current edition of the California Building Code. Compaction tests may be required.

(G) Drainage and Terraces. Drainage facilities and terraces shall be provided as required by SCCC 16.20.170.

16.20.160 Cut and fill slope setback.

Unless otherwise recommended in the approved engineering report and shown on the approved grading plans, the tops and toes of cut and fill slopes shall be set back from property boundaries and structures, as per Table C and the riparian corridor protection ordinance (<u>SCCC_Chapter_16.30_SCCC</u>).

Table C

Н	a	b	с	d
0—10 feet	3 feet	2 feet	5 feet	5 feet
11—30 feet	(H/2) feet	3 feet	(H/2) feet	7 feet
31 feet and over	15 feet	3 feet	15 feet	10 feet





(A) General. Drainage facilities and terraces shall conform to the provisions of this section unless otherwise indicated on the approved <u>grading</u> permit and grading plan.

(B) Drainage Facilities.

(1) Existing drainage courses shall not be obstructed and alterations to them must conform to the provisions of this section.

(2) Drainage facilities shall be provided to carry surface and subsurface waters to the nearest drainage course designated for such purpose by the Planning Director or on-site dry wells. Discharge of waters onto natural ground may be allowed only if a suitable means is provided for reducing the velocity of flow to prevent erosion.

(3) Culvert sizes shall be in accordance with "County Design Criteria, Part 2, Storm Drainage." Minimum diameter shall be 12 inches. Culvert material shall be clay, cast iron, cast-in-place or pre-cast concrete, corrugated steel, aluminum, asbestos-cement or other materials approved by the Planning Director.

(4) Cuts, fills, and retaining walls shall have subsurface drainage facilities if necessary for stability.

(5) Gutters, berms and/or culverts may be required for roads and driveways to control water runoff.

(6) Berms, ditches, or swales shall be constructed at the top of cut and fill slopes for protection against water runoff.

(C) Terraces. Terraces shall be required on cut and fill slopes at not more than 30-foot vertical intervals to control surface water and debris. (See figure in Table C.)

(1) Terraces shall be at least six feet wide.

(2) All swales or ditches on drainage terraces shall be graded to provide suitable drainage and designed to prevent erosion.

(3) Swales or ditches which collect water from a tributary area exceeding one-third of an acre (measured horizontally) shall have down drains.

16.20.180 Design standards for **rural** private roads and driveways.

(A) All private road and driveway construction requiring a grading approval shall conform to the provisions of this section. These requirements may be modified for emergency access, temporary roads, or roads leading to an agricultural building or well site if approved in writing by the Planning Director.Require all new structures, including additions and Accessory Dwelling Units of more than 500 new square feet (not including Conversion ADUs), added to single-family dwellings on existing parcels of record, to provide and maintain an adequate driveway or road for fire protection in conformance with the adopted standards of State law, County Fire Code, and local fire district ordinances.

(B) Width of roadbed for a roadway shall be 16 feet minimum; width of a driveway shall be 12 feet minimum. Where it is environmentally infeasible to meet these criteria (due to excessive grading or tree removal), a 12-foot wide all weather road with 12-foot wide by 30-foot long turnouts located approximately every 500 feet may be approved with the approval of the fire department. The distance

between turnouts may be adjusted at the discretion of the Planning Director if deemed appropriate for reasons of topography, environment or emergency access.

(C) Minimum centerline radius shall be 35 feet. (Exception: Driveways which serve as access to any habitable structure and which are 150 feet or less from the main road.)

(D) The maximum grade of the road or driveway shall not exceed 15 percent; however, grades of up to 20 percent are permitted for up to 200 feet at a time.

(E) The structural section shall consist of a minimum five inches of baserock, Class II or Class IV. Class IV aggregate base should have a minimum R value of 50, and not more than 10 percent of the aggregate shall pass the number 200 sieve.

(F) Where the subgrade is designated as an expansive clayey soil, the structural section should be determined using the California Design Procedure.

(G) The aggregate base required by these design standards can be omitted if the Planning Director determines that the native material provides sufficient bearing capacity for all weather use.

(H) Road surfacing shall meet the following standards, based on road gradient: zero to 10 percent gradient two inches of drain rock compacted into a four inch sub-base of Class II baserock; 10 to 15 percent gradient oil and screenings; greater than 15 percent gradient one and one-half inches asphaltic concrete. (Exception: aggregate base and asphaltic concrete may be omitted if a structural section of four-inch concrete is used.)

(I) Asphalt or concrete berms or their equivalent may be required to control drainage. Discharge shall be at points of natural drainage courses with energy dissipaters installed where necessary to prevent erosion.

(J) Entrances from private roads or driveways into private roads shall be limited in gradient as shown by Figure 4.



Figure 4. Private Road or Drive

(K) Any roadway or driveway which is more than 300 feet long and a dead end shall have a turn-around area with a minimum of 32 feet radius, or equivalent.

(L) A horizontal clearance of 16 feet and a vertical clearance of 14 feet shall be maintained on all roadways, driveways, and turnouts.

(M) Where a private driveway will connect to a County-maintained road, an encroachment permit shall first be obtained from the Public Works Department.

Diagrammatic representations of access standards are available at the Santa Cruz County Planning Department and local fire agencies.

16.20.185 Exceptions to standards for private roads and driveways

Exceptions to these standards and requirements that apply to all new structures (except Conversion Accessory Dwelling Units or ADUs 500 square feet or less), including additions or ADUs of more than 500 new square feet to single-family dwellings on existing parcels of record, may be granted at the discretion of the fire code official for single-family dwellings on existing parcels of record as follows:

(A) When the existing access road is acceptable to the Fire Department having jurisdiction.

(B) In addition, any of the following mitigation methods may be required prior to issuance of a building permit and/or as a condition of discretionary development approval:

(1) Participation in an existing or formation of a new road maintenance group or association.

(2) Completion of certain road improvements such as fill pot holes, resurface access road, provide turnouts, cut back brush, etc. are made, as determined by the fire officials, and provided that the fire department determines that adequate fire protection can still be provided.

(3) <u>Provision of approved fire protection systems as determined by the fire code official.</u>

(C) The level of road improvement required shall bear a reasonable relationship to the magnitude of development proposed.

16.20.195 Agricultural grading.

(A) General. All <u>permits-approvals</u> for agricultural grading shall be issued by the Planning Director. Work remains subject to the coastal zone regulations of Chapter 13.20, requirements of Title 16 Environmental Regulations, and other applicable provisions of local or state regulations. Applications for grading permits for special agricultural activities as defined by this chapter shall not be processed under this agricultural grading permit section, and shall comply with standard grading permit application requirements. Applicants for an agricultural grading <u>approvalpermit</u> shall submit a plan to the Planning Director, including the following:

- (1) Existing and proposed drainage pattern.
- (2) Estimate of earth to be moved.
- (3) Property map with graded area shown.

(4) Erosion control measures to be taken on disturbed noncrop areas, including long-term maintenance.

(5) Cross-sections of the proposed grading project. Applications for grading <u>permits</u> for access roads and for building sites, except greenhouse sites, shall not be processed under this section.

(B) Water Retention. The Planning Director may require review or design by the United States Department of Agriculture Soil Conservation, the Santa Cruz County Resource Conservation District, or a soils<u>and/or</u> engineer for the following projects:

- (1) On-site water<u>and sediment</u> retention (ponds).
- (2) Grading with major erosion potential.

The conditions of the design or review shall be part of the grading permit.

(C) Special Review. The Planning Director can require review of the project proposed agricultural grading by the Agricultural Policy Advisory Commission.

(D) Design Standards for Agricultural Grading. Specifications of design for agricultural grading shall be consistent with agricultural practices and needs, and shall <u>assureensure</u> slope stability, soil conservation, and flood hazard protection. Reference to agricultural grading may be <u>required to be</u> recorded in the deed by the Planning Director as a condition of permit approval.

(E) <u>ApprovalApplication</u> Processing. Agricultural grading <u>approvalspermit applications</u> shall be processed within 30 days of receipt. Provisions should be made for emergency processing at the discretion of the Planning Director.

(F) Fees and Bonds. The fee for agricultural grading approvalspermits shall be set by resolution of the Board of Supervisors. No surety bonds are required.

16.20.200 Inspection and compliance.

The Planning Director shall conduct inspections to ensure compliance with this chapter.

(A) Inspection. The following inspections shall be performed by the Planning Director.

- (1) Pre-Site Inspection. To determine the suitability of the proposed grading project.
- (2) Grading operation progress.
- (3) Final Inspection. To determine compliance with plans and specifications.

(B) Notification. The permittee shall notify the Planning <u>DirectorDepartment</u> 24 hours prior to the start of the authorized work and also 24 hours prior to any inspection requested by <u>the permittee</u> or permittee's authorized agent.

(C) Right of Entry. The filing of an application for a grading <u>approvalpermit</u> constitutes a grant of permission for the County to enter the development area for the purpose of administering this chapter from the date of the application to the termination of the erosion control maintenance period. If necessary, the Planning Director shall be supplied with a key or lock combination or permitted to install a County lock.

(D) Final Inspection. Final inspection and approval of the <u>grading permit</u>, building permit, development permit or parcel approval shall not occur until the project is in compliance with all of the grading <u>permit</u> approval conditions and all of the provisions of this chapter.

16.20.210 Grading violations.

(A) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any grading as defined in SCCC 16.20.030 unless (1) a <u>developmentgrading</u> permit has been obtained and is in effect which authorizes the grading, or (2) the grading is exempt from the requirement for a permit by the provisions of SCCC 16.20.040 and the provisions of <u>SCCC</u> <u>Chapter 13.20</u> <u>SCCC</u>.

(B) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any diking, dredging, or filling of open coastal water above the ordinary high water line, or of wetlands, lagoons, estuaries, or lakes unless a <u>developmentgrading</u> permit has been obtained and is in effect which authorizes such activities.

(C) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any shoreline protection structures which involves the placement of rocks, blocks, or fill material in a coastal hazard zone unless a <u>developmentgrading</u> permit has been obtained and is in effect which authorizes such activities.

(D) It shall be unlawful for any person to exercise a <u>grading permit or</u> development permit which authorizes grading without complying with all of the conditions of such permit.

(E) It shall be unlawful for any person to refuse or fail to abate a hazardous condition as required by a notice of hazardous condition issued by the Planning Director under the provisions of SCCC 16.20.100.

(F) It shall be unlawful for any person to knowingly do, cause, permit, aid, abet or furnish equipment or labor for any work in violation of a stop work notice from and after the date it is posted on the site until the stop work notice is authorized to be removed by the Planning Director.

(G) If the Planning Director determines that any grading occurring in the County does not comply with the <u>developmentapproved grading</u> permit or this chapter, <u>hethe Planning Director</u> may stop all work until corrective measures have been completed. The site shall be posted with a "stop work" notice. No building, septic tank, encroachment or other permit shall be issued by the County, and the County may require that all work shall be stopped pursuant to any such permits issued, until corrections have been made to the satisfaction of the Planning Director.

(H) Whenever the Planning Director determines that grading has been done without the required gradingdevelopment permit, <u>hethe Planning Director</u> may refuse to issue a permit for the work already completed and require mitigating action.

16.20.220 Transfer of responsibility.

If the civil engineer, the soil engineer or the <u>engineeringprofessional</u> geologist of record is changed during the course of the work, the work may be stopped until <u>thea qualified licensed professional</u> replacement has agreed to accept the responsibility within the <u>required</u> area of <u>his</u> technical competence for approving the work already accomplished.

16.20.230 Completion and approval.

If a civil engineer or another professional licensed by State law prepared the grading plans, <u>heat the</u> <u>completion of the project the licensed professional</u> shall provide a written statement to the Planning Director that all grading was completed in conformance with the provisions of the permit and this chapter.

16.20.240 Recording notice of violation.

Repealed by Ord. 4392A.

16.20.250 Removal of notice of violation.

Repealed by Ord. 4392A.

16.20.260 Abatement of nuisance.

Repealed by Ord. 4392A.

16.20.270 Penalties.

Repealed by Ord. 4392A.

16.20.280 Appeals.

All appeals of actions taken pursuant to the provisions of this chapter shall be made in conformance to the <u>applicable</u> procedures ofset forth in SCCC Chapter <u>18.10</u>-SCCC.

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Chapter 16.22 EROSION CONTROL

Sections:

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16.22.010 Purpose.

The purpose of this chapter is to eliminate and prevent conditions of accelerated erosion that have led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil and vegetation <u>and tree</u> cover, disruption of water supply, and increased danger from flooding, and to implement Local Coastal Program land use policies. The regulatory standards of this Chapter shall be required and incorporated into proposed project plans prior to approval and issuance of a building or grading permit for a project. For projects that propose land clearing or winter operations as defined in this Chapter, a land clearing permit or winter operations erosion control permit shall be required, which are considered as administrative discretionary permits under Title 18 of the County Code.

16.22.020 Scope.

This chapter requires control of all existing and potential conditions of accelerated (human-induced) erosion; sets forth required provisions required of all projects for project planning, preparation of erosion control plans; and runoff control; and establishes requirements for discretionary land clearing permits; and winter operations erosion control permits; and establishes procedures for administering thoese provisions. This chapter shall apply to both private and public activities including those of the County and other such governmental agencies as are not exempted by State or Federal law.

16.22.025 Amendment.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When a chapter revision constitutes an amendment to the Local Coastal Program such revision shall be processed pursuant to the hearing and notification provisions of <u>SCCC</u><u>Chapter</u> 13.03 <u>SCCC</u> and shall be subject to approval by the California Coastal Commission.

16.22.030 Definitions.

(A) "Accelerated erosion" means erosion caused by a human-induced alteration of the vegetation, forest, land surface, topography, or runoff pattern. Evidence of accelerated erosion is often indicated by exposed soils, gullies, rills, sediment deposits, or slope failures caused by human activities.

(B) "Access envelope" means an area delineated on the site plan to which all <u>land</u> clearing and land disturbance for construction of access to a development site or parcel must be confined.

(C) "Agricultural grading" means grading on land designated for exclusive agricultural use as specified under SCCC 16.50.040.

(D) "Approved erosion control specialist" means a person who has met certain minimum qualifications established by the Planning Director which demonstrate his/her capability to prepare small-scale erosion control plans.

(E) "Building envelope" means an area delineated on the development plans to which all <u>land</u> clearing and land disturbance for construction must be confined.

(F) "Development permit" as used in this Chapter means any permit or approval issued by the County for new land use activities including but not limited to: building, grading, land clearing, subdivisions, minor land divisions, and residential, commercial, industrial and agricultural development.

(G) "Drainage course" means a natural or manmade channel which conveys runoff either year-round or intermittently.

(H) "Earth material" means rock, natural soil, or combination thereof.

(1) "Erosion" means the wearing away of the ground surface as a result of the movement of wind or water.

(J) "Erosion hazard" means the susceptibility of a site to erode, based on condition of slope, rock type, soil, and other site factors. High erosion hazard areas include areas of high and very high erosion hazard shown on maps prepared by the Planning Department. Hazard may be determined based on a site-specific investigation.

(K) "Grading" means excavating, filling, leveling, or smoothing, or combination thereof which requires a grading permit under Chapter 16.20 Grading Regulations.

(L) "Land clearing" means the removal of <u>one quarter acre or more of natural vegetation (including forest areas)</u> down to duff or bare soil, <u>for any purpose and by any method</u>.

(M) "Land clearing approval permit" means an discretionary administrative development permit, which if granted approval granted by the Planning Director which authorizes the permittee to carry out land clearing, and which may be subject to conditions of approval.

(N) "Land disturbance" means clearing, excavating, grading, or other manipulation of the terrain.

(O) "Major grading" means grading in excess of 100 cubic yards.

(P) "Major development proposals" means new commercial, industrial, or professional developments; or new residential developments of more than four units.

(Q) "Minor development proposals" means building permits, grading permits for less than 2,000 cubic yards, subdivisions of four or less lots, and any other project not identified as a major development proposal in SCCC 16.22.060(D).

(R) "Minor grading" means grading less than 100 cubic yards.

(S) "New road or driveway" means any newly constructed road or driveway or any improvement to an existing road bed which requires more than 100 cubic yards grading in any 500-foot segment in order to meet the design standards in SCCC 16.20.180. Any road, driveway, or bridge constructed pursuant to a timber harvest permit issued by the State of California shall be considered a new road for the purposes of subsequent development and shall be subject to all current design standards and applicable policies.

(T) "Onsite detention" means temporary storage of runoff on the site.

 (\underline{U}) "Onsite retention" means permanent holding of runoff on the site through percolation to the ground.

(V) "Owner" means the person or persons shown in the County Recorder's Office as owner of the property.

(W) "Permittee" means any person undertaking development activities upon a site pursuant to a <u>development, building, or grading</u> permit granted by the County.

(X) "Person" means any person, firm, association, corporation, organization, partnership, business, trust company, public agency, school district, the State of California and its political subdivisions or instrumentalities.

(Y) "Planning Director" means the Director of the Planning Department or his authorized designee charged with the administration and enforcement of this chapter. The Public Works Director or authorized designee may administer the provisions of the chapter for subdivisions.

(Z) "Responsible person" means any person who creates a condition which may lead to accelerated erosion. If a specific person cannot be identified, the owner of the land where such condition exists shall be considered the responsible person.

(AA) "Road" or "roadway" means an open way for vehicular traffic, which can also include an approved private driveway or other site access feature.

(BB) "Runoff" means the movement of water over the ground surface.

(CC) "Sediment" means eroded earth material that is carried by runoff and/or deposited in a stream, drainage course, or other area.

(DD) "Sensitive habitat" includes areas defined as sensitive habitats in General Plan and Local Coastal Program Land Use Plan Section 5.1, specifically 5.1.2 and 5.1.3.

(EE) "Site" means a parcel of land or contiguous parcels where land alterations, including grading, land clearing, or construction, are performed or proposed.

(FF) "Soil" means the unconsolidated mineral and organic material on the immediate surface of the earth.

(GG) "Stream" means any watercourse designated by a solid line or dash and three dots symbol on the largest scale of the United States Geological Survey map most recently published, or as indicated in the development permit, <u>building permit</u>, or <u>grading permit</u> when it has been field-determined that a watercourse either:

- (1) Supports fish at any time of the year; or
- (2) Has a significant water flow 30 days after the last significant storm; or
- (3) Has a well-defined channel, free of soil and debris.

(HH) "Ten-year storm" means a storm of an intensity that would be exceeded on the average only once every 10 years. The intensity for the site shall be determined according to the County Public Works Design Criteria Manual. The duration of the storm used in runoff calculation shall be equivalent to the concentration time for the area which drains through the project.

16.22.040 General provisions.

No person shall cause or allow the continued existence of a condition on any site that is causing or is likely to cause accelerated erosion as determined by the Planning Director. Such a condition shall be controlled and/or prevented by the responsible person and the property owner by using appropriate measures outlined in subsequent sections of this chapter. Additional measures shall be applied if necessary by the responsible person and the property owner <u>if initial measures are insufficient to prevent</u> <u>accelerated erosion given weather or other conditions</u>. Specific additional measures may be required by the Planning Director. Property owners will be given a reasonable amount of time, as determined by the Planning Director, to control existing problems depending on the severity of the problem, and the extent of necessary control measures. Where feasible, erosion problems shall be controlled no later than the beginning of the next rainy season (October 15th).

16.22.050 Project design.

The density and design of new development shall be planned to be consistent with the characteristics and constraints of the site:

(A) Structures on slopes that would normally require major grading shall utilize pole, step, or other foundations that do not require major grading.

(B) New lots shall not be created which will:

(1) Require new access roads and driveways to cross slopes exceeding 30 percent; or

(2) Require cuts and fills greater than 10 feet in height for distances greater than 50 feet or 10 percent of the new roadway length, whichever is greater.

(C) For any project, access roads and driveways should not cross slopes greater than 30 percent and cuts and fills should not exceed 10 feet. <u>VariancesExceptions</u> to this rule can be granted if a route across steep slopes will result in less environmental damage than all alternative routes, or if no other alternative exists.

(D) Building and access envelopes or nonbuildable areas may be required to be delineated on the development plans so as to keep disturbance out of particularly erodible areas. Envelopes shall be required in areas of high erosion hazard.

(E) Streams or drainage courses shall not be obstructed or disturbed except for approved road crossings, unless disturbance of a drainage course will improve overall site design and be consistent with the purpose of this chapter.

(F) If the project is for creation of or access to a building site, land disturbance shall not take place until a building permit has been issued. If a permit cannot be issued until a determination of adequate water source and sewage disposal or other required site investigation is made, land disturbance shall be limited to the extent necessary to allow such an investigation. This provision shall not apply to road construction or other grading activities which are specifically required as a condition of a minor land division or other permit.

(G) Erosion control measures specified in <u>a land clearing permit or a winter operations erosion control</u> <u>permit</u>, or <u>otherwise required</u> pursuant to, <u>the regulations of</u> this chapter, shall be in place and maintained at all times between October 15th and April 15th.

16.22.060 Erosion control plan.

(A) Prior to issuance of a building permit, A condition of approval of a discretionary development permit or land division, shall require that an erosion control plan be incorporated into the building and grading plans indicating proposed methods for the control of runoff, erosion, and sediment movement. shall be submitted and approved. Prior to issuance of a building, grading, land clearing or winter operations erosion control permit, erosion control measures consistent with the standards of this chapter shall be included in project plans submitted and approved. Erosion control plans may also be required by the Planning Director for other types of applications where erosion can reasonably be expected to occur. The erosion control plan may be incorporated into other required plans, provided it is identified as such. Erosion control plans shall include, as a minimum, the measures required under SCCC 16.22.070, 16.22.080, 16.22.090, and 16.22.100. Additional measures or modification of proposed measures may be required by the Planning Director prior to project approval. No grading or land clearing or winter grading operations may take place on the site prior to approval of an erosion control plan for that activity. Final certification of project completion may be delayed pending proper installation of measures identified in the approved erosion control plan.

(B) Applications for land clearing permits-approvals granted pursuant to this chapter shall be made according to <u>SCCC_Chapter 18.10-SCCC</u>, Level III_administrative permit process, and shall include two sets of plans for each application and may be processed as concurrent approvals pursuant to SCCC 18.10. Particular components may be required by the Planning Director. Plans shall be drawn to scale upon substantial material, minimum size 18 inches by 24 inches, and shall be of sufficient clarity to indicate the nature and the extent of the work proposed and show in detail that it will conform to the provisions of this chapter and all relevant laws and regulations. The minimum size for plans for land clearing permits shall be eight and one-half inches by 11 inches. The plans <u>submitted in an application for a land clearing permit</u> shall include the following information in writing and/or diagrams:

(1) General location of the proposed site.

(2) Property lines and contours of the site including finish contours to be achieved by grading, details of terrain, and area drainage; proposed construction, proposed drainage channels, and other runoff control measures.

(3) Measures for runoff control and erosion control to be constructed with, or as a part of, the proposed work. All measures required under this chapter shall be shown. Function of erosion control measures shall be consistent with the provisions of this chapter.

(4) Delineation of areas to be cleared during development activities.

(5) Revegetation proposal for all surfaces exposed or expected to be exposed during development activities, including cut and fill slopes.

(6) Name and address of the owner(s).

(7) Assessor's parcel number(s) of the property on which the work is to be done.

(8) North arrow, scale, and name and location of nearest public road intersection.

(9) Name, address, and phone number of person who prepared the plan.

(C) For minor development proposals, the erosion control plan is not required to be prepared by a registered professional (as listed in subsection (D) of this section).

(D) For major development proposals, the erosion control plans shall be prepared by a registered professional authorized to do such work under State law. For these major development projects, detailed plans of all surface and subsurface drainage devices, runoff calculations, and other calculations demonstrating adequacy of drainage structures shall be included. Inspection by the personprofessional who prepareding the approved plan and certification of proper installation of control measures may be required by the Planning Director. Major proposals include:

(1) Subdivisions of more than four lots.

(2) Grading in excess of 2,000 cubic yards.

(3) Commercial or industrial development permits for new structures; or residential development permit<u>s</u> for more than four units.

(4) Other projects of a similar nature determined by the Planning Director to cause major land disturbance.

(E) Applications for activities where the Planning Director recognizes that no land disturbance will take place shall not be required to include an erosion control plan. Such activities may include, but are not limited to:

(1) Change of use permits where there would be no expansion of land disturbing activities.

(2) Construction within an existing structure. [Ord. 4496-C § 86, 1998; Ord. 3439 § 1, 1982; Ord. 3337 § 1, 1982; Ord. 2982, 1980].

16.22.070 Runoff control.

Runoff from activities subject to a building <u>grading</u>, <u>or land clearing</u> permit, <u>or parcel map</u>, <u>subdivision</u> approval or development permit shall be properly controlled to prevent erosion. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm:

(A) On soils having high permeability (more than two inches/hour), all runoff in excess of predevelopment levels shall be retained on the site. This may be accomplished through the use of infiltration basins, percolation pits or trenches, or other suitable means. This requirement may be waived where the Planning Director determines that high groundwater, slope stability problems, etc., would

inhibit or be aggravated by onsite retention, or where retention will provide no benefits for groundwater recharge or erosion control.

(B) On projects where onsite percolation is not feasible, all runoff should be detained or dispersed over nonerodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. Any policies and regulations for any drainage zones where the project is located will also apply.

(C) Any concentrated runoff which cannot be effectively dispersed without causing erosion shall be carried in nonerodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipators shall be installed to prevent erosion at the point of discharge.

(D) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area.

(E) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.

16.22.080 Land clearing <u>permit</u> approval.

Land clearing shall be kept to a minimum. Vegetation removal shall be limited to that amount necessary for building, access, and construction as shownand shall be identified on the approved <u>development</u>, grading, building, land clearing grading and/or erosion control plan. The following provisions shall apply:

(A) When no land development permit has been issued, the following extents of land clearing require approval of <u>a land clearing permit and an erosion control plan according to the application processing and approval procedures in SCCC Chapter 18.10 SCCC</u>, Level III <u>administrative development permit</u>:

(1) Any amount of clearing in a sensitive habitat, as defined in this chapter.

(2) One-quarter acre or more of clearing in <u>any other area subject to county jurisdiction.</u> the Coastal Zone if also in a least-disturbed watershed, a water supply watershed, or an area of high erosion hazard.

(3) One <u>quarter acre or more of clearing in all areas not included in subsection (A)(1) and (2) of this section.</u>

(B) When a land development permit has been issued, land clearing may be done according to the approved development plan.

(1) For land clearing in the Coastal Zone which will be more than that shown on the approved erosion control plan, a new land-clearing <u>permitapproval</u> is required if the land is located in a least-disturbed watershed, a water supply watershed, or an area of high erosion hazard.

(2) For land clearing in any area which will include more than one-<u>quarter</u> acre in excess of that shown on the approved plan, a new land-clearing <u>permitapproval or amendment of the approved</u> <u>development permit</u> is required.

(C) <u>Approval Approvals</u> of land clearing <u>permit requests</u> shall <u>be based upon review and placing</u> <u>conditions on plans as needed to ensure that the proposed activities incorporate or meet the following</u>

<u>measures</u> conditions. All disturbed surfaces shall be prepared and maintained to control erosion and to establish native or naturalized vegetative growth compatible with the area. This control shall consist of:

(1) Effective temporary planting such as rye grass, barley, or some other fast-germinating seed, and mulching with straw and/or other slope stabilization material;

(2) Permanent planting of native or naturalized drought resistant species of shrubs, trees, etc., pursuant to the County's landscape criteria, when the project is completed;

(3) Mulching, fertilizing, watering or other methods may be required to establish new vegetation. On slopes less than 20 percent, topsoil shall be stockpiled and reapplied.

The protection required by this section shall be installed prior to calling for final approval of the project and at all times between October 15th and April 15th. Such protection shall be maintained for at least one winter until permanent protection is established.

(D) No land clearing shall take place prior to approval of <u>a land clearing permit which includes</u> the erosion control plan. Vegetation removal between October 15th and April 15th shall not precede subsequent <u>permitted</u> grading or construction activities by more than 15 days. During this period, erosion and sediment control measures shall be in place.

(E) Land clearing of more than one-quarter acre that is not a part of a permitted activity shall not take place on slopes greater than 30 percent.

16.22.090 Winter operations erosion control permit.

(A) No land clearing operations greater than one<u>-quarter</u> acre per year per site or grading operations greater than 100 cubic yards may take place between October 15th and April 15th, unless authorized by the Planning Director and found to be consistent with the purposes of this chapter. When construction will be delayed due to the limitation on winter operations, the date for expiration of the <u>land clearing and/or</u> <u>grading</u> permit shall be extended by that amount of time that work is delayed by this chapter.

(B) When winter operations are permitted, the following measures shall be taken to prevent accelerated erosion. Additional measures may be required as conditions of approval of the winter operations erosion control permit:

(1) Between October 15th and April 15th, disturbed surfaces not involved in the immediate operations shall be protected by mulching and/or other effective means of soil protection as required by the Planning Director.

(2) All roads and driveways shall have drainage facilities sufficient to prevent erosion on or adjacent to the roadway or on downhill properties. Erosion-proof surfacing may be required by the Planning Director in areas of high erosion hazard.

(3) Runoff from a site shall be detained or filtered by berms, vegetated filter strips, and/or catch basins to prevent the escape of sediment from the site. These drainage controls shall be maintained by the permittee and/or property owner as necessary to achieve their purpose throughout the life of the project.

(4) Erosion control measures shall be in place at the end of each day's work.

(5) The Planning Director shall stop operations during periods of inclement weather if <u>heit is</u> determine<u>ds</u> that erosion problems are not being controlled adequately. [Ord. 3337 § 1, 1982; Ord. 2982, 1980].

16.22.100 Overall responsibility.

It shall be the responsibility of the owner and the permittee to ensure that erosion does not occur from any activity during or after project construction. Additional measures, beyond those specified, may be required by the Planning Director as deemed necessary to control accelerated erosion.

16.22.110 Exemptions.

Conditions of accelerated erosion existing prior to adoption of this chapter are not exempted. The intent of this section is not to invalidate existing discretionary, <u>building or grading</u> permits, but rather to prevent or mitigate accelerated erosion. The following work is exempted from all provisions of this chapter except SCCC 16.22.040 and 16.22.160 through 16.22.190:

(A) Agricultural Activities. Permitted agricultural grading, routine agricultural activities such as plowing, harrowing, disking, ridging, listing, land planing, and similar operations to prepare a field for a crop, including routine clearing to maintain existing rangeland;

(B) Timber Harvesting. Work done pursuant to a valid timber harvest permit;

(C) Quarrying. Quarrying done pursuant to a valid quarry permit (Reclamation Plan);

(D) Septic Systems and Wells. Work done pursuant to a valid permit for septic system installation and repair or well drilling; however, SCCC 16.22.080(B) and 16.22.090(B) shall apply, and sediment from these activities shall not be allowed to enter any stream or body of water;

(E) Resource Management. Clearing, fuel management, reforestation, erosion control, or other resource management programs carried out under the auspices of a government agency which include appropriate erosion control measures. Agencies shall notify the Planning Director of such projects.

16.22.120 Variances Exceptions.

(A) A request for a variance<u>exception</u> from the provisions of this chapter, the permit conditions, or the plan specifications may be considered according to the application processing and approval procedures in <u>SCCCChapter 18.10</u> SCCC at the level specified in SCCC 16.22.060(B)., Level III administrative discretionary permits.

(B) A request for <u>an exception-variance</u> must state in writing the provision from which it is to be <u>variedexcepted</u>, the proposed substitute provisions, when it would apply, and its advantages. In granting the <u>exceptionvariance</u>, the Planning Director shall<u>find_be guided by the following criteria</u>:

(1) That there are special circumstances or conditions affecting the property.

(2) That the <u>exception-variance</u> is necessary for the proper design and/or function of a reasonable project for the property.

(3) That adequate measures will be taken to ensure consistency with the purpose of this chapter.

(C) As contemplated in this section, an <u>exception</u>-variance shall be granted for alternative methods of construction for projects which could be constructed under the basic standards established in this chapter, but which, if a<u>n exception</u>-variance is granted, can be better and/or more economically designed and

constructed than if a<u>n exception</u>-variance were not given. A<u>n exception</u>-variance shall not be granted if the part of a<u>n exception</u>-variance would have the effect of allowing the construction of a project which would otherwise without the <u>exception</u>-variance not be possible under the provisions of the County Code.

16.22.130 Fees.

Fees for checking, inspection, violations, variance exception requests, and for land-clearing permits, and winter operations erosion control permits shall be set by resolution of the Board of Supervisors.

16.22.140 Inspection and compliance.

The Planning Director shall conduct inspections to ensure compliance with this chapter.

(A) Inspection. The following inspections may be performed by the Planning Director:

(1) Pre-Site Inspection. To determine the potential for erosion resulting from the proposed project.

(2) Operation Progress Inspections. To determine ongoing compliance with approved land clearing, witner operations erosion control, or other development plan, permits and approvals.

(3) Final Inspection. To determine compliance with approved plans and specifications.

(B) Notification. The permittee shall notify the Planning Director at least 24 hours prior to start of the authorized work, and also <u>nine business24</u> hours prior to any inspection requested by the permittee or permittee's authorized agent. [Ord. 4392A § 6, 1996; Ord. 3337 § 1, 1982; Ord. 2982, 1980].

16.22.150 Applicable laws and regulations.

Any person doing work in conformance with this chapter must also abide by all other applicable local, State, and Federal laws and regulations. Where there is a conflict with other pre-existing County regulations, this chapter shall take priority.

16.22.160 Violations.

(A) It shall be unlawful for any person to refuse or fail to correct any condition causing or likely to cause accelerated erosion as required by a notice of violation issued under the provisions of subsection (C) of this section.

(B) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any land clearing or winter grading operations as defined in SCCC 16.22.030 unless either a development permit has been obtained and is in effect which authorizes such land clearing or winter grading operations; or the land clearing or winter grading is exempt from the requirement for a permit under the provisions of SCCC 16.22.080(A).

(C) It shall be unlawful for any person to exercise a development permit which authorizes land clearing<u>or</u> winter grading without complying with all of the conditions of such permit.

(D) It shall be unlawful for any person to knowingly do, cause, permit, abet or furnish equipment or labor for any work in violation of a stop work notice from and after the date it is posted on the site until the stop work notice is authorized to be removed by the Planning Director.

(E) It shall be unlawful for any person to cause or allow the existence of a condition on any site that is causing or is likely to cause accelerated erosion as determined by the Planning Director.

16.22.161 Right of entry.

Repealed by Ord. 4392A.

16.22.162 Stop notices.

Repealed by Ord. 4392A.

16.22.163 Notification of violations.

Repealed by Ord. 4392A.

16.22.164 Nuisance abatement of violation.

Repealed by Ord. 4392A.

16.22.165 Recording notice of violation.

Repealed by Ord. 4392A.

16.22.170 Penalties.

Repealed by Ord. 4392A.

16.22.180 Enforcement.

Repealed by Ords. 4392A.

16.22.190 Appeals.

All appeals of actions taken pursuant to the provisions of this chapter shall be made in conformance to the procedures $\frac{18.10}{10}$ SCCC.

Chapter 16.10

GEOLOGIC HAZARDS

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16.10.105	Notice of geologic hazards in cases of dangerous conditions.
16.10.110	Appeals.
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16.10.010 Purpose.

The purposes of this chapter are:

(A) Policy Implementation. To implement the policies of the National Flood Insurance Program of the Federal Insurance Administration, the State of California Alquist-Priolo Earthquake Fault Zoning Act, the Santa Cruz County General Plan, and the Land Use Plan of the Local Coastal Program; and

(B) Public Health and Safety. To minimize injury, loss of life, and damage to public and private property caused by the natural physical hazards of earthquakes, floods, landslides, and coastal processes; and

(C) Development Standards. To set forth standards for development and building activities that will reduce public costs by preventing inappropriate land uses and development in areas where natural dynamic processes present a potential threat to the public health, safety, welfare, and property; and

(D) Notice of Hazards. To <u>assureensure</u> that potential buyers are notified of property located in an area of <u>special floodgeologic and coastal</u> hazard, and to <u>assureensure</u> that those who occupy areas of <u>special floodgeologic and coastal</u> hazard assume responsibility for their actions.

(E) <u>To identify and disclose potential and known geologic hazards, and to avoid development</u> within them, including restricting development in such areas through deed restrictions, conservation easements, and other instruments.

16.10.020 Scope.

This chapter sets forth regulations and review procedures for development and construction activities including grading, septic systems installation, development permits, changes of use as specified in SCCC 16.10.040(19N)(h6), building permits, minor land divisions, and subdivisions throughout the County and particularly within mapped geologic hazards areas and areas of special flood hazard (SFHAs). These regulations and procedures shall be administered through a system of geologic hazard assessment, technical review, development and building permits.

16.10.022 Statutory authorization.

The State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local government units the authority to adopt regulations designed to promote public health, safety, and general welfare of its citizenry through the adoption of the following geologic hazard and floodplain management regulations of this chapter.

16.10.025 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA) in the flood insurance study (FIS) dated April 15, 1986, and accompanying flood insurance rate maps (FIRMs) and flood boundary and floodway maps (FBFMs), dated April 15, 1986, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of the flood regulations contained in this chapter, and may be supplemented by studies for other areas. The FIS, FIRMs, and FBFMs are on file at the County Government Center, Planning Department. [Ord. 4518 C § 2, 1999].

16.10.030 Amendment procedure.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of ChapterSCCC 13.03-SCCC and shall be subject to approval by the California Coastal Commission.

16.10.35 Conflict with existing regulations.

This chapter is not intended to repeal, nullify, or impair any existing easements, covenants, or deed restrictions. If this chapter and any other ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

16.10.36 Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by artificial or natural causes. This chapter does not imply that land outside the special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of Santa Cruz County, any officer or employee thereof, the State of California, or the Federal Insurance Administration, Federal Emergency Management Agency, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder. [Ord. 4518 C § 2, 1999].

16.10.37 Severability.

This chapter and the various parts hereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

Staff Note: Definitions shown in highlight are not part of nor subject to this LCP amendment; they will be reviewed under LCP-3-SCO-20-0066-2

16.10.040 Definitions.

For the purposes of this chapter, the following definitions apply:

(1) "Accessory use" means any use which is clearly incidental and secondary to the main use and does not change the character of the main use.

(2<u>A</u>) "Active <u>fault</u>" means a geologic feature (fault or landslide) which shows evidence of movement, that has had surface displacement, or activity within Holocene time (about the last 11,000 years).

(B) "Active landslide" means a landslide that is presently moving or has recently moved as indicated by distinct topographic slide features such as sharp, barren scarps, cracks, or tipped (jackstrawed) trees. LCP-3-SCO-20-0067-2 $(\underline{3C})$ "Addition" means improvement to an existing structure that increases <u>theits</u> area, measured in square feet. The use of breeze ways, corridors, or other non-integral connections between structures shall not cause separate buildings or structures to be considered additions to an existing structure.

(4D) "Adjacent/contiguous parcel" means a parcel touching the subject parcel and not separated from the subject parcel by a road, street or other property.

(5) "Area of special flood hazard" means an area having special flood hazard as identified by the Federal Insurance Administration, through the Federal Emergency Management Agency, and shown on an FHBM or FIRM map as Zone A, AO, A1 A30, AE, A99, V1 V30, VE or V. Also known as special flood hazard area (SFHA).

(6) "Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year. For flood insurance purposes "100 year flood" and "base flood" have the same meaning.

(7) "Basement" means, for the purposes of this chapter, any area of the building having its floor subgrade (below ground level) on all sides.

(<u>&E)</u> "Beach erosion" means temporary or permanent reduction, transport or removal of beach sand by littoral drift, tidal actions, storms or tsunamis.

(9) "Certified engineering geologist" means a registered geologist who is licensed by the State of California to practice the subspecialty of engineering geology.

(10<u>F)</u> "Coastal bluff" means a bank or cliff along the coast subject to coastal erosion processes, including historic wave erosion. "Coastal bluff" refers to the top edge, face, and base of the subject bluff.

(G) "Bluff line or edge" means the upper termination of a bluff, cliff, or seacliff. In cases where the top edge of the cliff is rounded away from the face of the cliff as a result of erosional processes related to the presence of the steep cliff face, the bluff line or edge shall be defined as that point nearest the cliff beyond which the downward gradient of the surface increases more or less continuously until it reaches the general gradient of the cliff. In a case where there is a step like feature at the top of the cliff face, the landward edge of the topmost riser shall be taken to be the cliff edge. The termini of the bluff line, or edge along the seaward face of the bluff, shall be defined as a point reached by bisecting the angle formed by a line coinciding with the general trend of the bluff line along the inland facing portion of the bluff. Five hundred feet shall be the minimum length of bluff line or edge to be used in making these determinations.

(<u>++H</u>) "Coastal dependent uses" means any development or use which would not function or operate unless sited on or adjacent to the ocean.

(12I) "Coastal erosion processes" means natural forces that cause the breakdown and transportation of earth or rock materials on or along beaches and bluffs. These forces include, but are not limited to, landsliding, surface runoff, wave action and tsunamis.

(13) "Coastal hazard areas" means areas which are subject to physical hazards as a result of coastal processes such as landsliding, erosion of a coastal bluff, and inundation or erosion of a beach by wave action.

(14) "Coastal high hazard area" means areas subject to high velocity waters, including tidal and coastal inundation. These areas and base flood elevations are identified on a Flood Insurance Rate Map (FIRM) as Zones V1 30, VE or V.

(15K) "County geologist" means a County employee who is registered as a <u>California licensed</u> <u>pProfessional gG</u>eologist <u>licensed with the State of CaliforniaCalifornia Board for Professional</u> <u>Engineers, Land Surveyors and Geologists (R.G.) and who</u> has been authorized by the Planning Director to assist in the administration of this chapter, or a <u>California licensed registered pProfessional gG</u>eologist <u>licensed with the California Board for Professional Engineers, Land Surveyors and Geologists</u> under contract by the County who has been authorized by the Planning Director to assist in the administration of this chapter.

(16L) "County geologic advisor" means an individual <u>who is a California licensed pProfessional</u> <u>gGeologist licensed with the California Board for Professional Engineers, Land Surveyors and</u> <u>Geologists</u><u>who is registered as a geologist with the State of California (R.G.)</u>, who may be employed by the County to provide geologic services.

(17<u>M</u>) "Critical structures and facilities" means structures and facilities which are subject to specified seismic safety standards because of their immediate and vital public need or because of the severe hazard presented by their structural failure. These structures include hospitals and medical facilities, fire and police stations, disaster relief and emergency operating centers, large dams and public utilities, public transportation and communications facilities, buildings with involuntary occupancy such as schools, jails, and convalescent homes, and high occupancy structures such as theaters, churches, office buildings, factories, and stores.

(18) "Cumulative improvement" means, for the purposes of calculating "substantial improvement" as defined in subsection (65) of this section, two or more instances of repair, reconstruction, alteration, addition, or improvement to a structure, over the course of five consecutive years. If the value of such activities, when added together, equals or exceeds 50 percent of the market value of the structure, the activity as a whole shall be considered to be a "substantial improvement."

(<u>19N</u>) Development/Development Activities. For the purposes of this chapter, and this chapter only, any project that includes activity in any of the following categories is considered to be development or development activity. This chapter does not supersede SCCC 13.20.040 for purposes of determining whether a certain activity or project is considered development that requires a coastal <u>development</u> permit; some activities and projects will require coastal <u>development</u> permits although they do not fall under the following specific definition:

(a<u>1</u>) The construction or placement of any habitable structure, including a manufactured home and including a non-residential structure occupied by property owners, employees and/or the public;

(b2) Modification, reconstruction or replacement of <u>6550</u> percent of the major structural components—consisting of the foundation, floor framing, exterior wall framing, and roof framing—of an existing habitable structure within any consecutive five-year period, or modification, reconstruction or replacement of 50 percent of the major structural components of an existing critical structure or facility, as defined by this chapter, within any consecutive five-year period, whether the work is done at one time or as the sum of multiple projects. For the purpose of this <u>section_chapter</u>, the following are not considered major structural components: exterior siding; nonstructural door and window replacement; roofing material; decks; chimneys; and interior elements including but not limited to interior walls and sheetrock, insulation, kitchen and bathroom fixtures, mechanical, electrical and plumbing fixtures. The extent of alterations to major structural components will be calculated in accordance with administrative guidelines adopted by resolution of the Board of Supervisors;

(e<u>3</u>) The addition of habitable square footage to any structure, where the addition increases the habitable square footage by more than 50 percent or 500 square feet, whichever is greater, over the existing habitable space within a consecutive five-year period. This allows a total increase of up to 50 percent of the original habitable space of a structure, whether the additions are constructed at one time or as the sum of multiple additions over a consecutive five-year period;

(44) An addition of any size to a structure that is located <u>on or adjacent to on a</u> coastal bluff, <u>on a</u> dune, or in the coastal hazard area, that extends the existing structure in a seaward direction;

(e<u>5)</u> A division of land or the creation of one or more new building sites, except where a land division is accomplished by the acquisition of such land by a public agency for public recreational use;

 $(f_{\underline{0}})$ Any change of use from nonhabitable to habitable, according to the definition of "habitable" found in this section, or a change of use from any noncritical structure to a critical structure;

(g7) Any repair, alteration, reconstruction, replacement or addition affecting any structure that meets either of the following criteria:

(ia) Posted "Limited Entry" or "Unsafe to Occupy" due to geologic hazards, or

(iib) Located on a site associated with slope stability concerns, such as sites affected by existing or potential debris flows;

(c) Defined as a critical structure or facility;

(h8) Grading activities of any scale in the 100-year floodplain or the coastal hazard area, and any grading activity which requires a permit pursuant to ChapterSCCC 16.20-SCCC;

(i9) Construction of roads, utilities, or other facilities;

(j<u>10</u>) Retaining walls which require a building permit, retaining walls that function as a part of a landslide repair whether or not a building permit is required, <u>shoreline and coastal bluff</u> protection structures, sea walls, rip-rap erosion protection or retaining structures, and gabion baskets;

 $(\underline{k11})$ Installation of a septic system;

(1<u>12</u>) Any human-made change to developed or undeveloped real estate in the special flood hazard area, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, drilling operations, or storage of equipment or materials. This is in addition to any activity listed in subsectionsparagraphs-(19)(a)(1) through (\pm 11) of this subsection; or

(m13) Any other project that is defined as development under SCCC 13.20.040, and that will increase the number of people exposed to geologic hazards, or that is located within a mapped geologic hazard area, or that may create or exacerbate an existing geologic hazard, shallmay be determined by the Planning Director to constitute development for the purposes of geologic review.

(200) "Development envelope" means a designation on a site plan, <u>or parcel map or grading plan</u> indicating where buildings, access roads and septic systems, <u>and other development</u> are to be located.

(21P) "Fault zones" means are areas delineated by the State Geologist, pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Section 2621 et seq.) which encompasses the traces of active faults; as well as a zone or zones of fracture designated in the General Plan or Local Coastal Program Land Use constraints maps, or other maps and source materials authorized by the Planning Director.

(Q) "Fault trace" is that line formed by the intersection of a fault and the earth' surface and is the representation of a fault as depicted on a map, including maps of earthquake fault zones.

(22R) "Fill" means the deposition of earth or any other substance or material by artificial means for any purpose, or the condition resulting from a fill taking place.

(23) "Flood boundary floodway map" means the map adopted by the Board of Supervisors and used for land use planning and permit review on which the Federal Insurance Administration has delineated the areas of special flood hazard.

(24) "Flood control structure" means any structure or material, including but not limited to a berm, levee, dam or retaining wall, placed in areas where flooding occurs, and constructed for the purpose of protecting a structure, road, utility or transmission line.

(25S) "Flood insurance rate map (FIRM)" means the map adopted by the Board of Supervisors and used for insurance purposes on which the Federal Insurance Administration has delineated the special flood hazard areas, base flood elevations and the risk premium zones applicable to the community. The FIRM became effective on April 15, 1986, for insurance purposes.

(26) "Flood insurance study" means the official report on file with the Planning Department provided by the Federal Emergency Management Agency entitled, "The Flood Insurance Study, Santa Cruz County, California" that includes flood profiles, the FIRM, the flood boundary floodway map, and the water surface elevation of the base flood.

(27) "Floodplain" means any land area susceptible to being inundated by water from any source. The 100-year floodplain is used for planning purposes by Federal agencies and the County. For many larger and more densely populated drainages, the 100-year floodplain is designated on flood boundary and floodway maps prepared by the Federal Insurance Administration. See also "area of special flood hazard."

(28) "Floodplain Administrator" means the Planning Director, or single staff member that is designated by the Director, to manage the administration and implementation of the National Flood Insurance Program regulations and the flood control provisions of this chapter.

(29) "Floodproofing" means any combination of structural and nonstructural additions, changes or adjustments to nonresidential structures which reduce or eliminate flood damage to real estate or improved property.

(30) "Floodway" means the channel of a river or other watercourse and the adjacent land area that must be reserved in order to carry and discharge the 100 year flood without cumulatively increasing the water surface elevation more than one foot at any point. Also referred to as the regulatory floodway.

(31<u>T</u>) "Geologic hazard" means a threat to life, property, or public safety caused by geologic or hydrologic processes such as flooding, wave inundation, landsliding, erosion, <u>surface fault ground</u> rupturefaulting, ground cracking, and secondary seismic effects including liquefaction, landsliding, tsunami and ground shaking.

 $(32\underline{U})$ "Geologic hazards assessment" means a summary of the possible geologic hazards present at a site conducted by the staff <u>County geologist Geologist or a California licensed pProfessional gGeologist</u>.

(<u>33V</u>) "Geologic report, full" means a complete geologic investigation conducted by a<u>n</u> certified engineering professional geologist hired by the applicant, and completed in accordance with the County geologic report guidelines, and accepted by the County.

(W) "Geotechnical investigation / report" means a report prepared by a Professional Engineer, hired by the applicant, completed in accordance with the requirements of this chapter- and County soils (geotechnical) report guidelines, and accepted by the County. This term is synonymous with the term "soils investigation-" or "soils report."

(34X) "Grading" means excavating or filling land, or a combination thereof.

 $(35\underline{Y})$ "Habitable" means, for the purposes of this chapter, any structure or portion of a structure, whether or not enclosed, that is usable for living purposes, which includes working, sleeping, eating, recreation, or any combination thereof. The purpose and use of the space, as described above, defines the habitable nature of the space. The term "habitable" also includes any space that is heated or cooled, humidified or dehumidified for the provision of human comfort, and/or is insulated and/or finished in plasterboard, and/or contains plumbing other than hose bibs.

 $(36\underline{Z})$ "Hardship" means, for the purposes of administering SCCC 16.10.100, the exceptional hardship that would result from failure to grant the requested exception. The specific hardship must be exceptional, unusual, and peculiar to the property involved. Economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, personal preferences, or the disapproval of neighbors also cannot qualify as exceptional hardship, as these problems can be resolved through means other than granting an exception, even if those alternative means are more expensive, require a property owner to build elsewhere, or put the parcel to a different use than originally intended or proposed.

(37<u>AA</u>) "High and very high liquefaction potential areas" means areas that are prone to liquefaction caused by ground_shaking during a major earthquake. These areas are designated on maps which are on file with the Planning Department, and other areas may be identified by a geotechnical report that describes the site conditions.

(38) "Historic structure" means any structure that is: (a) listed individually in the National Register of Historic Places, or preliminarily determined by the Secretary of the Interior to meet the requirements for such listing; (b) certified as or preliminarily determined by the Department of the Interior to be contributing to the historical significance of a registered historical district or a district preliminarily determined to qualify as a historic district by the Secretary of the Interior; (c) individually listed on the State Register of Historic Places which has been approved by the Secretary of the Interior; or (d) individually listed in the inventory of historic structures in a community with a historic preservation program that has been certified either by an approved State program or directly by the Secretary of the Interior.

(39<u>BB</u>) "Hydrologic investigation" means a report prepared by a <u>certified engineeringprofessional</u> geologist or civil engineer with expertise in hydrology which analyzes surface hydrology and/or groundwater conditions.

 $(40\underline{CC})$ "Littoral drift" means the movement of beach sand parallel to the coast due to wave action and currents.

(41DD) "Liquefaction" means the process whereby saturated, loose, granular materials are transformed by ground shaking during a major earthquake from a stable state into a fluid-like state.

(42) "Lowest floor" means, for flood purposes, the lowest floor of the lowest enclosed area of a structure, including any basement.

(a) An unfinished or flood resistant enclosure, below the lowest floor, that is usable solely for parking of vehicles, building access or storage in an area other than a basement area, for the purposes of this chapter, is not considered a building's lowest floor, provided it conforms to applicable nonelevation design requirements, including, but not limited to:

(i) The wet floodproofing standards in SCCC 16.10.070(F)(3)(h)(i);

(ii) The anchoring and construction materials and methods in SCCC 16.10.070(F)(3)(b);

(iii) The standards for septic systems and water supply in SCCC 16.10.070(F)(5) and (6).

(b) For residential structures, all fully enclosed subgrade areas are prohibited as they are considered to be basements. This prohibits garages and storage areas that are below grade on all sides.

(43) "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. For floodplain management purposes the term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days.

(44) "Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for sale or rent.

(45) "Mean sea level" means the National Geodetic Vertical Datum (NGVD) of 1929, or other measurement, to which base flood elevations shown on a community's flood insurance rate map are referenced.

(46EE) "Multiple-residential structure" means a single structure containing four or more individual residential units.

(47<u>FF</u>) "Natural disaster" means any situation in which the force or forces of nature causing destruction are beyond the control of people.

(48) "New construction" means, for the purposes of SCCC 16.10.070(F), (G), and (H), structures for which the start of construction commenced on or after April 15, 1986, including any subsequent improvements to such structures.

(49<u>GG</u>) "Nonessential public structures" means public structures which are not integral in providing such vital public services as fire and police protection, sewer, water, power and telephone services.

<u>(50)</u> "Obstruction" includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across, or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, snare or collect debris carried by the flow of water, or is likely to be carried downstream.

(51) "One hundred year flood" means a flood that statistically could occur once in 100 years on the average, although it could occur in any year. For flood insurance purposes, "100 year flood" and "base flood" have the same meaning. See "base flood."

(52<u>HH</u>) "Planning Director" means the Planning Director of the County of Santa Cruz or his or her<u>their</u> authorized employeedesignee.

(II) "Professional Engineer" means an engineer who is licensed by the State of California to practice engineering.

(JJ) <u>"Professional Geologist" means a geologist who is licensed by the State of California to practice geology.</u>

(53<u>KK</u>) "Public facilities" means any structure owned and/or operated by the government directly or by a private corporation under a government franchise for the use or benefit of the community.

(54LL) "Recent" means a geologic feature (fault or landslide) which shows evidence of movement or activity within Holocene time (about the last 11,000 years).

(MM) "Shoreline or coastal bluff armoring" means any structure or material, including but not limited to riprap or a seawall, placed in an area where coastal processes operate.

<u>(55)</u> "Registered geologist" means a geologist who is licensed by the State of California to practice geology.

(56) "Registered geotechnical (soils) engineer" means a civil engineer licensed in the State of California, experienced in the practice of soils and foundation engineering.

(57) Regulatory Floodway. See "floodway."

(58) "Recreational vehicle" means a vehicle which is built on a single chassis; is 400 square feet or less when measured at the largest horizontal projection; designed to be self-propelled or permanently towable by a light duty truck; and designed primarily not for uses as a permanent dwelling but a temporary living quarters for recreation, camping, travel, or seasonal use.

(NN) "Shoreline Protection Exception Area" ("SPEA") means the coastal bluffs and beaches between Soquel Point and the Capitola city limit and any other area geographic area that may be designated in an adopted Shoreline Management Plan, and describes locations where shoreline and coastal bluff protection structures are acceptable.

(5900) "Shoreline and coastal bluff protection structure" means any structure or material, including but not limited to riprap or a seawall, placed in an area where coastal processes operate with the intention of preventing erosion of shoreline and coastal bluff materials.

(60PP) "Soils investigation / report" means a report prepared by a registered soils engineerProfessional Engineer, hired by the applicant, and completed in accordance with the County soils report guidelines, and accepted by the County. This term is synonymous with the term "geotechnical investigation."

(61QQ) Special Flood Hazard Area (SFHA). See "area of special flood hazard." The land in a flood plain subject to a 1 percent or greater annual chance of flooding in any given year. Special flood hazard areas are in general shown on a FIRM as Zones A, AO, A1-A30, AE, A99, AH, V1-V30, VE and V, but can also be determined by the Floodplain Administrator to occur where not shown on the FIRM. Also known as the flood hazard area, FHA, area of special flood hazard, or area of the 1% annual chance flood.

<u>(62)</u> "Start of construction" means the date the first building permit was issued, provided actual construction, repair, reconstruction, alteration, addition, rehabilitation, placement, or other improvement was begun within the terms of the permit. "Actual construction" means either the first placement of a structure on the site, such as pouring a slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds which are not occupied as dwelling units or are not part of the main structure. For the purposes of the phrase "substantial improvement," "actual construction" means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

(63RR) "Structure" means anything constructed or erected which requires a location on the ground, including, but not limited to, a building, manufactured home, gas or liquid storage tank, or facility such as a road, retaining wall, pipe, flume, conduit, siphon, aqueduct, telephone line, electrical power transmission or distribution line.

(64) "Substantial damage" means damage of any origin, sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure as it existed before the damage occurred.

(65) "Substantial improvement" means any repair, reconstruction, rehabilitation, addition, alteration or improvement to a structure, or the cumulative total of such activities as defined in subsection (18) of this section, the cost of which equals or exceeds 50 percent of the market value of the structure either immediately prior to the issuance of the building permit. This term includes structures that have incurred "substantial damage" regardless of the actual repair work proposed or performed. This term does not

include any project or portion of a project to upgrade an existing habitable structure to comply with current State or local health, sanitary, or safety code specifications which are the minimum necessary to assure safe living conditions, any alteration of an historic structure; provided, that the alteration will not preclude the structure's continued designation as an historic structure. (See also "cumulative improvement.")

(66<u>SS</u>) "Subsurface geologic investigation" means a geologic report prepared by <u>a certifieda</u> <u>engineering</u> <u>professional</u> geologist that provides information on subsurface materials through trenching, test pits<u>, and</u> borings <u>or other methods acceptable to the County Geologist</u>.

(67) V-Zone. See "coastal high hazard area."

(68) "Violation" means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications or required permits, or other evidence of compliance required in this chapter is presumed to be in violation until such time as the required documentation has been provided.

(69) "Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. "Watercourse" includes specifically designated areas in which substantial flood damage may occur.

16.10.050 Requirements for geologic <u>and geotechnical</u> assessment.

(A) All development is required to comply with the provisions of this chapter., specifically including, but not limited to, the placement of manufactured homes in the areas designated as SFHAs in the flood insurance study.

(B) Hazard Assessment Required. A geologic hazards assessment shall be required for all development activities, and foundation replacements or upgrades, in the following designated areas: fault zones, sites with suspected instability, 100-year floodplains and floodways, and coastal hazard areas, except: as specified in subsections (C) (D) and (E) of this section, where a full geologic report will be prepared according to the County guidelines for engineering geologic reports., or where tThe County Geologist may waive the requirement for a hazard assessment based upon a determination-finds that there is adequate information on file. A geologic hazards assessment shall also be required for development located in other areas of geologic hazard, as identified by the County Geologist or designee, using available technical resources, from environmental review, or from other field review.

(C) <u>Geotechnical (Soils) Report Required. A geotechnical report shall be required when determined</u> to be necessary by County civil engineering staff, the County geologist, or the California Building Code (CBC).

(D) Geologic Report Required. A full geologic report shall be required for the following:

(1) For all proposed land divisions and critical structures and facilities in the areas defined as earthquake fault zones on the State Alquist-Priolo Earthquake Fault Zoning Act maps;

- (2) Whenever a significant potential hazard is identified by a geologic hazards assessment;
- (3) For all new reservoirs to serve major water supplies;
- (4) Prior to the construction of any critical structure or facility in designated fault zones; and

(5) When a property has been identified as "Unsafe to Occupy" due to adverse geologic conditions, no discretionary approval or building permit (except approvals and permits that are necessary solely to mitigate the geologic hazard) shall be issued prior to the review and approval of geologic reports and the completion of mitigation measures, as necessary.

(6) For all new water tanks in excess of 10,000 gallons either as a single tank or multiple tanks on a site, which are located in an area of geologic hazards as identified by the County Geologist;

 $(\underline{\mathbf{PE}})$ Potential Liquefaction Area. A site-specific <u>geotechnicalsoil</u> investigation (with input from a Professional Geologist, when required by County civil engineering staff or the County Geologist) by a certified engineering geologist and/or soil engineer shall be required for all development applications for more than four residential units, and for structures greater than one story in areas of high or very high liquefaction potential, or when required by the California Building Code. Development applications for four units or less, one story structures and nonresidential projects shall be reviewed for liquefaction hazard through environmental review and/or geologic hazards assessment. When a significant hazard may exist, a site-specific soils investigation shall be required.

(EF) Additional Report Requirements. Additional information (including but not limited to full geologic, subsurface geologic, hydrologic, geotechnical or other engineering investigations and reports) shall be required when a hazard or foundation constraint requiring further investigation is identified.

16.10.060 Assessment and report preparation and review.

(A) Timing of Geologic Review. Any required geologic, soil, or other technical report shall be completed, reviewed and accepted pursuant to the provisions of this section before any public hearing is scheduled for consideration of approval of a proposed project, and before any discretionary-or development application or building permit is approved or issued. The County Geologist may agree to defer the date for completion, review, or acceptance of any technical report where the technical information is (1) unlikely to significantly affect the size or location of the project, and (2) the project is not in the area of the Coastal Zone where decisions are appealable to the Coastal Commission. In no event shall such be deferred until after the approval or issuance of a building permit.

(1) An application for a geologic hazards assessment shall include a plot plan showing the property boundaries and location of proposed development activities. Any other information deemed necessary by the County Geologist (including but not limited to topographic map, building elevations or grading plans) shall be submitted upon request.

(2) An application for a geologic hazards assessment or a technical report review constitutes a grant of permission for the Planning Director, or agents, to enter the property for the purposes of responding to the application.

(B) <u>Report-Geologic Hazards Assessment</u> Preparation. The geologic hazards assessment shall be prepared by County staff. Alternately, the assessment may be conducted by a private <u>pP</u>rofessional <u>gG</u>eologist at the applicant's choice and expense. Such privately prepared assessments shall, however, be subject to review and <u>approvalacceptance</u> as specified in this section. <u>Application for review and acceptance of a geologic hazards assessment is not an application for a development permit.</u>

(C) Report Acceptance. All geologic, geotechnical/<u>soils</u>, engineering, and hydrologic reports or investigations submitted to the County as a part of any development application <u>shallmust</u> be found <u>by the</u> <u>County</u> to conform to <u>State and</u> County report guidelines <u>and requirements</u>. The Planning Director may

require an inspection in the field of all exploratory trenches, test pits, and borings excavated for a technical report.

(D) <u>Geologic</u> Hazard Assessment and Report Expiration. A geologic hazards assessment and all recommendations and requirements given therein shall remain valid for three years from the date of completion, <u>unless a shorter period is specified in the report by the preparer</u>. <u>A full Geotechnical and</u> geologic reports shall <u>beremain</u> valid and all recommendations therein shall remain in effect for three years from the date of completion of the report <u>unless a shorter period is specified in the report by the preparer</u>. <u>TheAn</u> exception to the three-year period of validity is where a change in site conditions, development proposal, technical information or County policy significantly affects the technical data, analysis, conclusions or requirements of the assessment or report; in which case the Planning Director may require a new or revised assessment or report.

(E) <u>Change or Cancellation of Professional In Responsible Charge. When the professional in</u> responsible charge of a report accepted by the County is changed or is no longer involved in the project, notice shall be given by the professional and the property owner to the County within 7 days of such change or cancellation.

16.10.070 **Permit conditions**Incorporation of technical recommendations into project.

The recommendations of the geologic hazards assessment, full geologic report, and/or the recommendations of other technical reports (if <u>evaluatedreviewed</u> and <u>authorizedaccepted</u> by the Planning Director), shall be <u>incorporated into the project plans or</u> included as permit conditions of any permit or approvals subsequently issued for the development. In addition, the requirements described below for specific geologic hazards shall become standard conditions for development, building and land division permits and approvals. No development, building and land division permits or approvals shall be issued, and no final maps or parcel maps shall be recorded, unless such activity is in compliance with the requirements of this section.

(A) General. If a project is not subject to geologic review because the structure is nonhabitable and is not otherwise considered to be development under this chapter, a declaration of restrictions for the nonhabitable structure shall be recorded <u>on the property deed</u> that includes an acknowledgment that any change of use to a habitable use, or physical conversion to habitable space, shall be subject to the provisions of this chapter.

(B) Notice and Acknowledgement of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required, as a condition of development approval and building permit approval, to record a Notice of Geologic/Coastal Hazards, Acceptance of Risk, Liability Release, and Indemnification with the County Recorder. The Notice shall be in a form approved by the County of Santa Cruz, and shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted, and shall include acknowledgements and agreements, as applicable to the specific project.

(**BC**) Fault Zones.

(1) Location. Development shall be located away from potentially hazardous areas as identified by the geologic hazards assessment or full geologic report.

(2) Setbacks. Habitable structures shall be set back a minimum of 50 feet from the edge of the area of fault induced offset and distortion of active and potentially active fault traces. This setback may be reduced to a minimum of 25 feet from the edge of this zone, based upon paleoseismic studies that include observation trenches. Reductions of the required setback may

only occur when both the consulting <u>engineeringProfessional gG</u>eologist 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 100 feet from the edge of the area of fault induced offset and distortion of active and potentially active fault traces.

(3) Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required, as a condition of development approval and building permit approval, to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted.

(43) Other Conditions. Other permit conditions, including but not limited to project redesign, elimination of building sites, and the delineation of development envelopes, building setbacks and foundation requirements, shall be required as deemed necessary by the Planning Director.

(CD) Groundshaking.

(1) New Dams. Dams shall be constructed according to high seismic design standards of the Dam Safety Act and as specified by structural engineering studies.

(2) Public Facilities and Critical Structures and Facilities. All new public facilities and critical structures shall be designed to withstand the expected groundshaking during the design earthquake on the San Andreas fault or San Gregorio fault.

(3) Other Conditions. Other permit conditions including but not limited to structural and foundation requirements shall be required as deemed necessary by the Planning Director.

 (\underline{PE}) Liquefaction Potential.

(1) Permit Conditions. Permit conditions including, but not limited to, project redesign, elimination of building sites, delineation of development envelopes and drainage and foundation requirements shall be required as deemed necessary by the Planning Director.

(2) Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required, as a condition of development approval and building permit approval, to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted.

 $(\underline{\mathbf{EF}})$ Slope Stability.

(1) Location. All development activities shall be located away from potentially unstable areas as identified through the geologic hazards assessment, full <u>engineering</u> geologic report, soils (geotechnical) report or other environmental or technical assessment.

(2) Creation of New Parcels. Allow the creation of new parcels in areas with potential slope instability as identified through a geologic hazards assessment, full geologic report, soils (geotechnical) report or other environmental or technical assessment only under the following circumstances:

(a) New building sites, roadways, and driveways shall not be permitted on or across slopes exceeding 30 percent grade.

(b) A full <u>engineering</u> geologic report and any other appropriate technical report shall demonstrate that each proposed parcel contains at least one building site and access which are not subject to significant slope instability hazards, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize <u>potential for</u> landslide damage and not cause a health <u>or safety</u> hazard.

(c) New building sites shall not be permitted which would require the construction of engineered protective structures such as retaining walls, diversion walls, debris walls or slough walls, or foundations designed to mitigate potential slope instability problems such as debris flows, slumps or other types of landslides.

(3) Drainage. Drainage plans designed to direct runoff away from unstable areas (as identified from the geologic hazards assessment or other technical report) shall be required. <u>New drainage improvements shall not adversely affect slope stability and not increase the danger that any other property or public improvements will be impacted by potentially unstable slopes or landsliding. Drainage plans shall be completed by a Professional Engineer and reviewed by both the Professional Geologist (if required by the County Geologist) and other Professional Engineers as part of the design team. Such plans shall be reviewed and approved accepted by the County Geologist.</u>

(4) Leach Fields. Septic leach fields shall not be permitted in areas subject to landsliding as identified through the geologic hazards assessment, environmental assessment, or full geologic report.

(5) Road <u>and Driveway</u> Reconstruction. Where washouts or landslides have occurred on public or private roads<u>and driveways</u>, road <u>and driveway</u> reconstruction shall meet the conditions of appropriate geologic, soils (geotechnical) and/or engineering reports and shall have adequate geologic, soils, and other engineering supervision<u>and permits as required by the County Code</u>.

(6) <u>New Road and Driveway Construction. New roads and driveways shall be located away</u> from potentially unstable areas as identified through the geologic hazards assessment, full engineering geologic report, soils(geotechnical) report or other environmental or technical assessment.

<u>(6)</u><u>Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic hazards shall be required to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel, and the level of geologic and/or geotechnical investigation conducted.</u>

(7) Other Conditions. Other permit conditions including but not limited to project redesign, building site elimination and the development of building and septic system envelopes, building setbacks and foundation and drainage requirements shall be required as deemed necessary by the Planning Director.

(₱G) Floodplains. The provisions of SCCC 16.13 Flood Hazards shall apply to all development, as defined in that chapter, but not including coastal-related flooding and other hazards, that is wholly within, partially within, or in contact with any flood hazard area, orother areas as identified by the Floodplain Administrator, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, replacement, repair, relocation or demolition of any building or structure; placement, installation, or replacement of manufactured homes; installation or replacement of tanks;

placement of temporary structures and temporary storage; installation of swimming pools; and miscellaneous and utility structures.

(1) Critical and Public Facilities. Critical facilities and nonessential public structures and additions shall be located outside of the 100-year floodplain unless such facilities are necessary to serve existing uses, there is no other feasible location and construction of these structures will not increase hazards to life or property within or adjacent to the floodplain.

(2) Creation of New Parcels. Allow the creation of new parcels including those created by minor land division or subdivision in the 100-year floodplain only under the following circumstances:

(a) A full hydrologic report and any other appropriate technical report must demonstrate that each proposed parcel contains at least one building site, including a septic system and leach field site, which is not subject to flood hazard, and that public utilities and facilities such as sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.

(b) A declaration indicating the limits and elevations of the 100-year floodplain certified by a registered professional engineer or surveyor must be recorded with the County Recorder.

(c) Adequate drainage to reduce exposure to flood hazards must be provided.

(d) Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood.

(3) Development Criteria and Design Requirements. All development within the 100-year floodplain shall meet the following criteria. Any addition, repair, reconstruction, rehabilitation, alteration, or improvement of structures for which building permits were issued prior to April 15, 1986, when subject to the definition of "cumulative improvement," does not meet the definition of "substantial improvement" (pursuant to SCCC 16.10.040(18) and (65)), is exempt from this section.

(a) Location of proposed structures outside of the 100-year floodplain when a buildable portion of the property exists outside the floodplain;

(b) Anchoring of foundations and the structures attached to them by a method adequate to prevent flotation, collapse and lateral movement of the structures due to the forces that may occur during the base flood, including hydrostatic and hydrodynamic loads and the effects of buoyancy.

A project involving a manufactured home shall achieve this by one of the following methods:

(i) By providing an anchoring system designed to withstand horizontal forces of 15 pounds per square foot and uplift forces of nine pounds per square foot; or

(ii) By the anchoring of the unit's system, designed to be in compliance with the Department of Housing and Development Mobile Home Construction and Safety Standards;

(c) Shall be constructed with materials and utility equipment resistant to flood damage and using construction methods and practices that minimize flood damage;

(d) Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located to prevent water from entering or accumulating within the components during conditions of flooding;

(e) In flood zones A-O and A-H, provide drainage paths adequate to guide water away from structures and reduce exposure to flood hazards;

(f) For residential structures, including manufactured homes, the lowest floor, including the basement, and the top of the highest horizontal structural member (joist or beam) which provides support directly to the lowest floor, and all elements that function as a part of the structure, such as furnace, hot water heater, etc., shall be elevated at least one foot above the 100 year flood level. Foundations shall be designed to minimize flood water displacement and flow damage. Where a piling or caisson foundation system is used the space below the lowest floor shall be free of obstruction or be enclosed with wood-constructed lattice work or screens designed to collapse or be carried away under the stress of flood waters without jeopardizing the structural support of the building. Compliance with the elevation requirement shall be cause to issue a stop work notice for a project. The Planning Director will maintain records of compliance with elevation requirements;

(g) Nonresidential structures shall be floodproofed if elevation above the 100-year flood level in accordance with subsection (F)(3)(f) of this section is not feasible. Floodproofed structures shall:

(i) Be floodproofed so that below an elevation one foot higher than the 100-year flood level, the structure is watertight with walls substantially impermeable to the passage of water based on structural designs, specifications and plans developed or reviewed by a registered professional engineer or architect;

(ii) Be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(iii) Be certified by a registered professional engineer or architect that floodproofing standards and requirements have been complied with; the certification shall be submitted to the Planning Director and shall indicate the elevation to which floodproofing was achieved prior to a final building inspection. The Planning Director shall maintain records of compliance with floodproofing requirements;

(h) In flood zone AO, residential structures shall have the lowest floor at or above the highest adjacent grade, at least as high as the depth number given on the FIRM, and nonresidential structures, where elevation is not feasible, shall have the lowest floor completely floodproofed at or above the highest adjacent grade, at least as high as the depth number given on the FIRM;

(i) Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls allowing for the entry and exit of flood waters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect, or shall provide a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices; provided, that they permit the automatic entry and exit of flood waters. Nonresidential structures that are floodproofed in compliance with subsection (F)(3)(g) of this section are an exception to this requirement.

(4) Recreational Vehicles. RVs that are placed on a site that is within the A, A1 – A30, AH, AO or AE zones as designated in the FIS, and that are not fully licensed and highway ready, shall meet the criteria given in subsections (F)(3)(b) and (3)(f) of this section, unless they are on the site for less than 180 consecutive days. For the purposes of this chapter, "highway ready" means on wheels or jacking system, attached to the site by quick disconnect type utilities and security devices, and having no attached additions.
(5) Septic Systems. New septic systems and leach fields shall not be located within the 100-year floodplain. The capacity of existing septic systems in the floodplain shall not be increased.

(6) Water Supplies and Sanitary Sewage Systems. All new and replacement water supplies and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(7) Placement of Fill. Allow the placement of fill within the 100 year floodplain in the minimum amount necessary, not to exceed 50 cubic yards. Fill shall only be allowed if it can be demonstrated that the fill will not have cumulative adverse impacts.

(8) Flood Control Structures. Flood control structures shall be permitted only to protect existing development (including agricultural operations) where no other alternative is feasible or where such protection is needed for public safety. Such structures shall not adversely affect sand supply, increase erosion or cause flooding on adjacent properties or restrict stream flows below minimums necessary to maintain fish and wildlife habitats or be placed further than necessary from the development requiring protection.

(9) Notice of Hazards. The developer and/or subdivider of a parcel or parcels in an area of geologic or flood hazards shall be required, as a condition of development approval and building permit approval, to record a declaration of geologic hazards with the County Recorder. The declaration shall include a description of the hazards on the parcel or parcels and the level of prior hydrologic or geologic investigation conducted.

(10) Other Conditions. Other permit conditions, including but not limited to project redesign, building site elimination, development of building and septic envelopes, and foundation requirements shall be required as deemed necessary by the Planning Director. When base flood elevation data are not provided in the flood insurance study, the Planning Director shall obtain, review, and reasonably utilize the best base flood data available from Federal, State or other sources, as a basis for elevating residential structures and floodproofing nonresidential structures, to at least one foot above the base flood level. Residential structures shall be elevated no less than two feet above natural grade when base flood data do not exist. Nonresidential structures may elevate or flood proof to meet this standard.

(11) Alteration or Relocation of Watercourse. Adjacent communities, the California Department of Water Resources and the Federal Emergency Management Agency shall be notified prior to any alteration or relocation of a major watercourse. The flood carrying capacity of any altered or relocated watercourses must be maintained.

(12) Permit Requirements. All other required State and Federal permits must be obtained.

(G) Permit Conditions Floodways. Located within areas of special flood hazard as established in SCCC 16.10.025, and within some areas not mapped as part of the flood insurance study, are areas designated as floodways (see also SCCC 16.10.040(30)). The floodway is an extremely hazardous area due to the quantity and velocity of flood waters, the amount of debris which may be transported, and the high potential for erosion during periods of large stream flows. In the floodway the following provisions apply:

(1) Development and Building within Floodway Prohibited. All development activity, except for the reconstruction, repair, alteration or improvement of an existing structure, is prohibited within the floodway unless exempted by State or Federal laws. Any encroachment which would cause any increase in the base flood level is prohibited.

(2) Sites Where Floodway Not Established. Where the Flood Insurance Study or other technical report has identified a flood hazard area but has not designated a floodway, the applicant must demonstrate, through hydrologic analysis, that the project will not adversely affect the carrying capacity of the area. For the purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development in the watershed, will increase the water surface elevation of the base flood more than one foot at any point. The hydrologic analysis must identify the boundaries of the floodway, and the project must comply with the provisions of subsection.

(3) Setback from Floodway. Where neither a base flood elevation nor a floodway has been identified by the flood insurance study or by a site-specific hydrologic study, a minimum setback of 20 feet from the top edge of the banks of a drainage course shall be maintained, and all activity that takes up flood storage area within this setback shall be prohibited. This floodway setback may be reduced by the Planning Director only if a full hydrologic analysis identifies the boundaries of the floodway, demonstrates that a smaller setback will not increase the susceptibility of the proposed activity to flood-related hazards, and there is no alternative location outside of the 20-foot setback. (See also Chapter <u>16.30</u> SCCC, Riparian Corridor and Wetlands Protection, for vegetation related setbacks from streams.)

(4) Location of Septic Systems. New septic systems and leach fields shall not be located in the floodway. The capacity of existing systems in the floodway shall not be increased.

(5) Alteration of Structures in Floodway. Reconstruction, repair, alteration or improvement of a structure in a floodway shall not cause any increase in the base flood elevation. Substantial improvements, regardless of cause, shall only be permitted in accordance with subsection (F) of this section. Repair, reconstruction, alteration, or replacement of a damaged structure which does not exceed the ground floor square area of the structure before the damage occurred shall not be considered an increase in the base flood elevation.

(6) Permit Requirements. All other required local, State and Federal permits must be obtained.

16.10.080 **Project density limitations.**

The following requirements shall apply to density calculations for new building sites created through minor land division, subdivision, or other development approval or permit:

(A) Fault Zones.

(1) Exclusion from Density Calculations. The portion of a property within 50 feet of the edge of the area of fault induced offset and distortion of an active or potentially active fault trace shall be excluded from density calculations.

(2) Creation of New Parcels and/or New Building Sites. The following standards shall apply to the creation of new parcels and/or building sites within State Alquist-Priolo earthquake fault zones and County seismic review zones:

(a) All new structures shall meet setbacks as specified in SCCC 16.10.070(B)(2).

(b) Outside of the urban services line and the rural services line, a 20-gross-acre minimum parcel size shall be required, and a 10-gross-acre minimum parcel size shall be required for parcels within the portions of the County seismic review zones that are not also part of a State Alquist-Priolo earthquake fault zone, and are outside the Coastal Zone, if at least 25 percent of the perimeter of the original parcel to be divided is bounded by parcels of one acre or less in size.

(B) Landslides and Steep Slopes. The portion of a property with slopes over 30 percent in urban areas and 50 percent in rural areas, and the portion of a property within recent or active landslides, shall be excluded from density calculations. Landslide areas determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report to be stable areas are determined by a geologic report

suitable for development shall be granted full density credit.

(C) <u>FloodwaysSpecial Flood Hazard Area</u>. The portion of a parcel within the <u>special flood hazard</u> <u>area100-year floodway</u> shall be excluded from any density calculations.

(D) Floodplains. The portion of a property within the 100-year floodplain shall be excluded from density calculations.

16.10.090 Project denial.

A development permit or the location of a proposed development shall be denied if the Planning Director determines that geologic hazards cannot be adequately mitigated or the project would conflict with National Flood Insurance Program regulations. Development proposals shall be approved only if the project density reflects consideration of the degree of hazard on the site, as determined from the technical information as reviewed and approvedaccepted by the Planning Director or the decision making body.

16.10.100 Exceptions.

(A) Request for Exception. A request for an exception to the provisions of this chapter <u>including but</u> not limited to an exception to the applicable geologic setback requirement, or the permit conditions, may be considered by the Planning Director, or decision making body, if the exception is necessary to mitigate a threat to public health, safety and welfare or if the exception is necessary to avoid an unconstitutional taking of private property without just compensation pursuant to Policy 6.4.10.

(B) Reason for Request. A request for an exception shall state in writing the reason why the exception is requested, the proposed substitute provisions, when the exception would apply, <u>andor</u> the threat to public health, safety, or welfare that would be mitigated.

(C) Required Findings. In granting an exception, the Planning Director <u>or decision making body</u> shall make the following findings:

(1) That hardship, as defined in SCCC 16.10.040(3627), exists; and

(2) The project is necessary to mitigate a threat to public health, safety, or welfare or to avoid an unconstitutional taking of private property without just compensation pursuant to Policy <u>6.4.10; and</u>

(3) The request is for the smallest amount of variance from the provisions of this chapter as possible; and

(4) <u>Adequate mM</u>easures will be taken to ensure consistency with the purposes of this chapter and the County General Plan to the maximum extent feasible.

(5) <u>Any approval of a geologic setback less than the applicable 75- or 100-year standard</u> expected design life is acknowledged and accepted by the property owner and properly characterized and reflected within the Notice of Geologic Hazards to be recorded on the title to the subject property.

(D) Exceptions for Projects in the Special Flood Hazard Area. For projects in the SFHAs the following additional procedures and provisions also apply:

(1) Nature of Exception. The exception criteria set forth in this section are based on the general principle of zoning law that exceptions pertain to a piece of property and are not personal in nature. An exception may be granted for a parcel of property with physical characteristics so

unusual that complying with the requirements of this chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

The interest in protecting citizens from flooding is compelling, and the cost of insuring a structure built below flood level so onerous that exceptions from the flood elevation or other health and safety requirements in the flood ordinance shall be granted in rare circumstances and only where no other alternative is available.

(2) Criteria for Exceptions.

(a) In considering requests for exceptions, technical evaluations, all other relevant information and standards specified in other sections of this chapter shall be considered, including the following:

(i) Danger that materials may be swept onto other lands to the injury of others;

(ii) Danger of life and property due to flooding or erosion damage;

(iii) Susceptibility of the proposed structure and its contents to flood damage and the effect of such damage on the existing individual owner and future owners of the property;

(iv) Importance of the services provided by the proposed structure to the community;

(v) Necessity to the structure of a waterfront location, where applicable;

(vi) Availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

(vii) Compatibility of the proposed use with existing and anticipated development;

(viii) Relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

(ix) Safety of access to the property in time of flood for ordinary and emergency vehicles;

(x) Expected heights, velocity, duration, rate of rise, and sediment transport of the floodwater expected at the site; and

(xi) Costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.

(b) Any applicant to whom an exception is granted shall be given written notice of the terms and conditions, if any, of the exception, and said notice shall also include the following:

(i) That the issuance of an exception to construct a structure below the base flood level will result in substantially increased premium rates for flood insurance up to amounts as high as \$25.00 for \$100.00 of insurance coverage; and

(ii) That such construction below the base flood level increases risks to life and property; and

(iii) That a copy of the written notice shall be recorded on the deed so that it appears in the chain of title of the affected parcel of land.

(c) The Floodplain Administrator will maintain a record of all exception actions, including justification for their issuance, and report such exceptions issued in its biennial report submitted to the Federal Insurance Administration of the Federal Emergency Management Agency.

(3) Conditions for Exception.

(a) Exceptions may be issued for new construction, substantial improvement, and other proposed new development to be erected on a lot of one half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing that the procedures of SCCC 16.10.050, 16.10.070, and 16.10.080 have been considered. As the lot size increases beyond one-half acre, the justification required for issuing the exception increases.

(b) Exceptions shall not be issued within any mapped regulatory floodway if any increase in flood levels during the base flood discharge would result from the project.

(c) Exceptions shall only be issued upon a determination that the exception is the "minimum necessary" considering the flood hazard to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this chapter. For example, in the case of exceptions to an elevation requirement, exceptions need not be granted for permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to that elevation which will both provide relief and preserve the integrity of the regulatory requirements.

(d) Exceptions shall only be issued upon:

(i) Showing of good and sufficient cause;

(ii) Determination that failure to grant the exception would result in a "hardship" (as defined in SCCC 16.10.040) to the applicant; and

(iii) Determination that the granting of an exception will not result in increased flood heights, additional threats to public safety, or extraordinary public expense; ereate a nuisance, cause fraud or victimization of the public, or conflict with existing local laws or ordinances.

(e) Exceptions may be issued for new construction, substantial improvement, and other proposed new development necessary for the conduct of a functionally dependent use (a functionally dependent use is one that would not function or operate unless sited on or adjacent to flood prone location in question); provided, that the provisions of this section are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood, does not result in additional threats to public health or safety, and does not create a public nuisance.

(f) Exceptions may be issued for the repair or rehabilitation of historic structures (as defined in SCCC 16.10.040) upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and that the exception is the minimum necessary to preserve the historic character and design of the structure.

(g) Upon consideration of the factors in subsection (D)(2)(a) of this section and the purposes of this chapter, conditions may be attached to the granting of exceptions as necessary to further the purposes of this chapter.

16.10.105 Notice of geologic hazards in cases of dangerous conditions.

(A) Whenever a site inspection, geologic hazards assessment or full geologic report identifies the presence of a geologic hazard that causes a site, building, structure, or portions thereof to be rendered unsafe or dangerous, then pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.070(L)425, the Planning Director may issue a notice of geologic hazard and order thereon, and may record a notice of geologic hazard with the County Recorder.

(B) The Planning Director may initiate abatement procedures pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.070(L)425.

16.10.110 Appeals.

Except as otherwise provided herein, appeals taken pursuant to the provisions of this chapter shall be made in conformance with the procedures of ChapterSCCC 18.10-SCCC, including appeal of the requirement for geologic hazard assessment or technical report. All appeals taken concerning the decision to issue and record a notice of geologic hazard pursuant to the provisions of SCCC 16.10.105 shall be governed by the procedures commencing with Section 501 of the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10. $\frac{425070(\Lambda)(10)}{\Lambda}$ through (14).

16.10.120 Violations.

(A) Compliance. No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with all the provisions of this chapter and other applicable regulations. Nothing herein shall prevent the taking of lawful action as necessary to prevent or remedy any violation.

(B) Actions Constituting Violation. In the event of a violation of this chapter or of the provisions of permit conditions as specified in this chapter, or if the permit has been exercised in a manner which creates a nuisance or is otherwise detrimental to the public health, safety and welfare, the permittee shall be given notice of such violation, and a reasonable time shall be specified for its correction.

16.10.130 Fees.

Fees for the geologic hazards assessment, other field reviews, applications for exceptions, and the review of technical reports shall be set by resolution by the Board of Supervisors.



19.a

ORDINANCE NO. 5350

ORDINANCE ADDING CHAPTER 16.13 TO THE SANTA CRUZ COUNTY CODE REGARDING FLOODPLAIN REGULATIONS AND AMENDING SECTION 13.03 OF THE SANTA CRUZ COUNTY CODE ADDING CHAPTER 16.13 TO THE SANTA CRUZ COUNTY LOCAL COASTAL PROGRAM

The Board of Supervisors of the County of Santa Cruz hereby ordains as follows:

SECTION I

Title 16 of the Santa Cruz County Code is hereby amended by adding Chapter 16.13 thereto, said new Chapter to read:

Chapter 16.13

FLOODPLAIN MANAGEMENT REGULATIONS

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PART I. GENERAL AND APPLICABILITY

<u>16.13.010</u> Statutory authorization.

The Legislature of the State of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local governments the authority to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the County of Santa Cruz does hereby adopt the following floodplain management regulations.

16.13.020 Findings of fact.

(A) Flood hazard areas in the County of Santa Cruz are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

(B) <u>These flood losses are caused by uses that are inadequately elevated, floodproofed, or protected</u> from flood damage. The cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities also contributes to flood losses.

16.13.030 Statement of purpose.

It is the purpose of this chapter to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the County of Santa Cruz to all publicly and privately owned land within flood prone, mudslide [i.e. mudflow] or flood-related erosion areas. These regulations are designed to:

(A) <u>Protect human life and health and property from the dangers of flooding;</u>

(B) <u>Minimize the need for publicly funded and hazardous rescue efforts to save those who are isolated by flood waters;</u>

(C) <u>Minimize expenditure of public money for costly flood damage repair and flood control projects;</u>

(D) <u>Minimize disruption of commerce and governmental services;</u>

(E) <u>Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone</u> and sewer lines; and streets and bridges located in areas of special flood hazard;

(F) <u>Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;</u>

(G) <u>Maintain the County of Santa Cruz's participation in the National Flood Insurance Program,</u> thereby giving citizens and businesses the opportunity to purchase flood insurance;

(H) <u>Retain the natural channel, shoreline, and floodplain creation process and other natural floodplain</u> functions that protect, create, and maintain habitat for threatened and endangered species;

(I) <u>Prevent or minimize loss of hydraulic, geomorphic, and ecological functions of floodplains and stream channels;</u>

(J) Encourage that those who occupy the areas of special flood hazard assume responsibility for their actions;

(K) <u>Exceed the minimum standards for participation in the National Flood Insurance Program,</u> thereby giving citizens and businesses the opportunity to purchase flood insurance at reduced rates.

<u>16.13.040 Scope.</u>

The provisions of this chapter shall apply to all development that is wholly within, partially within, or in contact with any flood hazard area, or other areas as identified by the Floodplain Administrator, including but not limited to the subdivision of land; filling, grading, and other site improvements and utility installations; construction, alteration, remodeling, enlargement, replacement, repair, relocation or

demolition of any building or structure; placement, installation, or replacement of manufactured homes; installation or replacement of tanks; placement of temporary structures and temporary storage; installation of swimming pools; and placement of miscellaneous and utility structures. Coastal-related flooding and other hazards are addressed in SCCC 16.10 Geologic Hazards.

16.13.050 Methods of reducing flood losses.

In order to accomplish its purposes, this chapter includes regulations to:

(A) <u>Restrict or prohibit uses and developments which are dangerous to health, safety, and property</u> due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

(B) <u>Require that uses and developments vulnerable to floods, including facilities which serve such</u> uses, be protected against flood damage at the time of initial construction;

(C) <u>Control the alteration of natural floodplains, stream channels, and natural protective barriers,</u> which help accommodate or channel floodwaters;

(D) Control filling, grading, dredging, and other development which may increase flood damage; and

(E) <u>Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.</u>

16.13.060 Basis for establishing flood hazard areas.

(A) <u>The Flood Insurance Study for Santa Cruz County dated April 15, 1986 and all subsequent</u> amendments and revisions, the accompanying Flood Insurance Rate Maps (FIRM), and all subsequent amendments and revisions to such maps, are adopted by reference as a part of this chapter and serve as the basis for establishing flood hazard areas.

(B) <u>The Flood Insurance Study and attendant mapping is the minimum area of applicability of the</u> flood regulations contained in this chapter, and may be supplemented by studies for other areas.

(C) <u>Pursuant to Part V of this chapter, the Floodplain Administrator may require submission of additional data to establish flood hazard areas. This shall apply to areas adjacent to a mapped or unmapped watercourse.</u>

(D) In addition, where field surveyed topography indicates that ground elevations are below the closest applicable base flood elevation, even in areas not delineated as a flood hazard area on a FIRM, the area shall be considered a flood hazard area and subject to the requirements of this chapter and, as applicable, the requirements of the building codes.

(E) <u>When a draft or preliminary Flood Insurance Study indicates an increase in the base flood</u> elevation or an expansion of the flood hazard area, this information shall be considered as available data, however projects are not required to design to the draft or preliminary standards and may be issued building permits based on the existing adopted FIRM. However, no building permit shall be issued that is not in compliance with the applicable adopted FIRM, and projects that have received discretionary permit approvals may need to be revised in order to be issued a building permit, if the FIRM maps have changed between the date of the discretionary permit and the time that the building permit is approved and ready for issuance.

(F) <u>Maps and studies that establish flood hazard areas are on file at the Santa Cruz County Planning</u> Department, 701 Ocean Street, Room 400, Santa Cruz, CA 95060.

16.13.070 Amendment procedure.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When a chapter revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of SCCC 13.03 and shall be subject to approval by the California Coastal Commission.

16.13.080 Abrogation and greater restrictions.

This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. If this chapter and any other ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

16.13.090 Warning.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur. Flood heights may be increased by man-made or natural causes. This chapter does not imply that land outside the special flood hazard areas, or that uses permitted within such flood hazard areas, will be free from flooding or flood damage.

16.13.100 Liability.

This chapter shall not create liability on the part of the County of Santa Cruz, any officer or employee thereof, the State of California, or the Federal Insurance & Mitigation Administration, Federal Emergency Management Agency for any flood damages that may result from reliance on this chapter or any administrative decision lawfully made hereunder. The Floodplain Administrator or any employee charged with the enforcement of this chapter, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this chapter or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this chapter shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The Floodplain Administrator and any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this chapter.

16.13.110 Severability.

If any section, subsection, sentence, clause or phrase of this chapter is, for any reason, declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any part thereof, other than the part so declared.

16.13.120 Coordination with building codes.

Pursuant to the requirement established in State statute that the County of Santa Cruz administer and enforce the State building codes, the Board of Supervisors of Santa Cruz County does hereby acknowledge that the State building codes contain certain provisions that apply to the design and construction of buildings and structures in flood hazard areas. Therefore, this chapter is intended to be administered and enforced in conjunction with the State building codes, which are adopted as SCCC 12.10, Building Regulations, with local amendments as adopted by the County Board of Supervisors.

Where, in any specific case, requirements of this chapter conflict with the requirements of the building codes, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

16.13.130 Areas to which this ordinance applies.

This ordinance shall apply to all mapped and unmapped flood hazard areas within the jurisdiction of the County of Santa Cruz, as established in SCCC 16.13.060.

<u>16.13.140 Other laws.</u>

The provisions of this chapter shall not be deemed to nullify any provisions of local, state or federal law.

16.13.150 Interpretation.

In the interpretation and application of this chapter, all provisions shall be:

- (A) <u>Considered as minimum requirements;</u>
- (B) <u>Construed in favor of protecting floodplain functions over development allowances; and</u>
- (C) <u>Deemed neither to limit nor repeal any other powers granted under State statutes.</u>

PART II. DEFINITIONS

<u>16.13.160 Definitions.</u>

For the purpose of this chapter, the definitions in SCCC 16.13.160-A through 16.13.160-Z apply.

<u>16.13.160-A "A" Definitions.</u>

"Accessory structure" means a structure that is located on the same parcel of property as a principal structure and the use of which is incidental to the use of the principal structure.

"Addition" means an improvement to an existing structure that increases the area, measured in square feet. The use of breezeways, corridors, or other non-integral connections between structures shall not cause separate buildings or structures to be considered additions to an existing structure.

"Area of shallow flooding" means a designated AO or AH Zone on the County of Santa Cruz Flood Insurance Rate Map (FIRM). In these zones, the base flood elevations and depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by sheet flow or ponding.

"Area of special flood hazard" means special flood hazard area. See definition of special flood hazard area.

"Alteration of a watercourse" means an alteration of a watercourse including, but not limited to, any dam, impoundment, levee, channel realignment, conversion to pipe conveyance, bank hardening, refuse dumping, backfilling, excavating, grading, alteration of vegetation, diversion, dewatering or change in cross-sectional area or capacity, which may alter, impede, retard, accelerate, or change the direction and/or velocity of the riverine flow of water and its natural materials transport during conditions of the base flood.

<u>16.13.160-B "B" Definitions.</u>

"Base flood" means a flood which has a one percent chance of being equaled or exceeded in any given year. The base flood is commonly referred to as the "100-year flood" or the "1-percent-annual-chance flood".

"Base flood elevation (BFE)" means the water surface elevation of the base flood in relation to the datum specified on the FIRM, or as established in a hydraulic investigation.

"Base flood height" means the water surface height of the base flood in relation to existing grade elevations.

"Basement" means any area of a building having its floor subgrade (below ground level) on all sides.

"Breakaway wall" means a wall that is not part of the structural support of the building and is designed and constructed to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

"Building Official" means the officer or other designated authority charged with the administration and enforcement of the building codes, or a duly authorized representative.

"Building permit" means an official document issued by the Building Division of the Planning Department which authorizes performance of specific activities that are determined to be compliant with the building codes.

<u>16.13.160-C "C" Definitions.</u>

<u>"Coastal high hazard area" means a special flood hazard area extending from offshore to the inland limit</u> of a primary frontal dune along an open coast and any other area subject to high velocity wave action from storms or seismic sources. Coastal high hazard areas are also referred to as "V Zones" or "flood hazard areas subject to high velocity wave action" and are designated on Flood Insurance Rate Maps (FIRM) as Zone V1 V30, VE, V, or A (when located in a coastal area).

"County Geologist" means a County employee who is a professional geologist registered with the California Board for Professional Engineers, Land Surveyors and Geologists or a professional geologist under contract by the County, who has been authorized by the Planning Director to assist in the administration of this chapter.

"Critical structure or facility" means a facility necessary to protect health, safety, and welfare during a flood. Critical facilities include, but are not limited to, hospitals and medical facilities; fire and police stations; disaster relief and emergency operating centers; large dams and public utilities; public transportation and communications facilities; buildings with involuntary occupancy such as schools, jails, and convalescent nursing homes; high occupancy structures such as theaters, churches, office buildings, factories, and stores; and installations which produce, use or store hazardous materials or hazardous waste.

"Cumulative improvement" means a substantial improvement that involves two or more instances of repair, reconstruction, alteration, addition, or improvement to a structure, over the course of five consecutive years. For example, any improvement permit that is applied for within five years of the permit final of another instance of repair, reconstruction, alteration, addition, or improvement of the same structure, where, if the value of such activities, when added together, equals or exceeds fifty (50) percent of the market value of the structure prior to issuance of the first permit, the activity as a whole shall be considered to be a "substantial improvement."

<u>16.13.160-D</u> "D" Definitions.

"Detailed cost estimate" means a form provided by the Planning Department and completed by a licensed contractor titled "Cost Breakdown" which includes a breakdown of the costs to perform the improvement, the costs to repair a damaged building to its pre-damaged condition, or the combined costs of improvements and repairs to a building or structure. If acceptable to the Floodplain Administrator, a detailed cost estimate may also be an estimate prepared by a licensed contractor. "Development" means any man-made change to improved or unimproved real estate within the special flood hazard area, including but not limited to, buildings or other structures, tanks, temporary structures, temporary or permanent storage of equipment or materials, mining, dredging, filling, grading, paving, excavations, removal of more than 5% of the vegetation on the property, or any other land disturbing activities.

<u>16.13.160-E "E" Definitions.</u>

"Encroachment" means activities or construction within the floodway including fill, new construction, substantial improvements, and other development. These activities are prohibited within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses that the proposed encroachment would not result in any increase in flood levels. The County of Santa Cruz is responsible to review and maintain record of the documentation demonstrating that any permitted floodway encroachment meets National Flood Insurance Program (NFIP) requirements. A "no-rise certification" for floodways is required to document the analyses.

"Exception" means a grant of relief from the requirements of this chapter, or the flood resistant provisions of the building codes, which permits construction in a manner that would otherwise be prohibited by this chapter.

"Existing construction or structure" means structures for which the "start of construction" commenced before April 15, 1986, which is the date of the County of Santa Cruz's first map showing flood hazard areas.

"Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before April 15, 1986.

"Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

<u>16.13.160-F "F" Definitions.</u>

"Federal Emergency Management Agency (FEMA)" means the Federal agency that, in addition to carrying out other functions, administers the National Flood Insurance Program.

"Fill" means the deposition of earth or any other substance or material by artificial means for any purpose, or the condition resulting from a fill taking place.

"Flood or flooding" means a general and temporary condition of partial or complete inundation of normally dry land from:

- (1) The overflow of inland or tidal waters; or
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

"Flood control structure" means any structure or material, including but not limited to a berm, levee, dam or retaining wall, placed in areas where flooding occurs, and constructed for the purpose of protecting a structure, road, driveway, utility or transmission line. "Flood damage-resistant materials" means any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair.

"Flood fringe" means the area that is subject to the base flood outside of the floodway boundary.

"Flood hazard area" means special flood hazard area. See definition of special flood hazard area.

"Flood Insurance Rate Map (FIRM)" means the official map of the County on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to the jurisdiction. For insurance purposes, the original FIRM date for Santa Cruz County is April 15, 1986.

"Flood Insurance Study (FIS)" means the official report provided by the Federal Emergency Management Agency that contains the Flood Insurance Rate Map, the water surface elevations of the base flood, and supporting technical data.

"Floodplain" means any land area susceptible to being inundated by water from any source. The base flood is used to define the floodplain by Federal agencies and the County of Santa Cruz.

"Floodplain Administrator" means the Planning Director or designee, who manages the administration and implementation of the National Flood Insurance Program regulations and the provisions of this chapter.

"Floodplain development permit" means a permit or document issued by the jurisdiction which authorizes performance of specific development activities located in a flood hazard area that are determined to be compliant with this chapter.

"Floodproofing" means any combination of structural and non-structural additions, changes or adjustments to non-residential structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

"Floodway" means regulatory floodway. See definition of regulatory floodway.

"Floodway encroachment analysis" means the hydrologic and hydraulic analyses of the impact a proposed development is expected to have on the floodway boundaries and base flood elevations. The analyses shall be prepared by a registered professional civil engineer using standard engineering methods and models.

"Freeboard" means a factor of safety usually expressed in feet above a base flood elevation or height for purposes of floodplain management. "Freeboard" is required to compensate for the many unknown factors that could contribute to flood heights or elevations greater than the height or elevation calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, climate change, sea level rise, and the hydrological effect of urbanization of the watershed. Unless otherwise noted, freeboard shall be three feet in coastal high hazards areas and two feet in all other flood hazard areas.

<u>16.13.160-G</u> "G" Definitions. <u>Reserved</u>

<u>16.13.160-H "H" Definitions.</u>

"Hardship" means, for the purpose of administering this chapter, the exceptional hardship that would result from failure to grant the requested exception. The specific exception must be an exceptional, unusual, and peculiar issue specific to the property involved. Economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, personal preferences, or the disapproval of neighbors also cannot qualify as exceptional hardship, as these problems can be resolved through means other than granting an exception, even if those means are more expensive, require the property owner to build elsewhere, or put the parcel to a different use than originally intended or proposed.

"Highest adjacent grade (HAG)" means the highest natural elevation of the ground surface prior to construction next to the existing or proposed walls or foundation of a structure.

"Historic structure" means any structure that is:

(1) <u>Listed individually in the National Register of Historic Places (a listing maintained by the</u> U.S. Department of the Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(2) <u>Certified or preliminarily determined by the Secretary of the Interior as contributing to</u> the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(3) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or

(4) <u>Individually listed on a local inventory of historic places in communities with historic</u> preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or directly by the Secretary of the Interior in states without approved programs.

"Hydrologic investigation" means a report prepared by a registered professional civil engineer with expertise in hydrology and hydraulics which analyzes surface hydrology and hydraulics.

16.13.160-I "I" Definitions. Reserved

16.13.160-J"J" Definitions.Reserved

16.13.160-K "K" Definitions. Reserved

<u>16.13.160-L "L" Definitions.</u>

"Lowest adjacent grade (LAG)" means the lowest natural elevation of the ground surface prior to construction next to the existing or proposed walls or foundation of a structure.

"Lowest floor" means the lowest floor of the lowest enclosed area, including basement (see "Basement" definition in this chapter), but excluding an enclosure below the lowest floor that is used solely for parking of vehicles, building access, or storage and provided the enclosure is built in accordance with the applicable design requirements of the building codes for flood openings, anchoring, construction materials and methods, and utilities in flood zones.

<u>16.13.160-M "M" Definitions.</u>

"Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

"Manufactured home park or subdivision" means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

"Market value" means the price at which a property will change hands between a willing buyer and a willing seller, neither party being under compulsion to buy or sell and both having reasonable knowledge of relevant facts. As used in this chapter, the term refers to the market value of structures (not including the land or any value associated with the location; other site improvements or accessory structures; or indirect costs such as financing, construction loan interest or consultant costs).

<u>16.13.160-N "N" Definitions.</u>

"New construction" means structures for which the "start of construction" commenced on or after April 15, 1986 and includes any subsequent improvements to such structures.

"New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after April 15, 1986.

"Nonresidential" means any building or structure or portion thereof that is not classified Residential Group R or Institutional Group I in accordance with the building code.

<u>16.13.160-O "O" Definitions.</u>

Reserved

<u>16.13.160-P "P" Definitions.</u>

"Planning Director" means the Planning Director of the County of Santa Cruz or their authorized designee.

"Preliminary cost estimate" means an estimate required from a licensed contractor based upon preliminary plans, such as those submitted with a discretionary application, which details the costs to perform the improvement, the costs to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs to the building or structure.

<u>"Primary frontal dune" means a continuous or nearly continuous mound or ridge of sand with relatively</u> <u>steep seaward and landward slopes immediately landward and adjacent to the beach and subject to</u> <u>erosion and overtopping from high tides and waves during major coastal storms. The inland limit of the</u> <u>primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a</u> <u>relatively mild slope and is determined or accepted by the County Geologist.</u>

"Recreational vehicle" means a vehicle which is:

- (1) <u>Built on a single chassis;</u>
- (2) <u>400 square feet or less when measured at the largest horizontal projection;</u>
- (3) <u>Designed to be self-propelled or permanently towable by a light-duty truck; and</u>

(4) <u>Designed primarily not for use as a permanent dwelling but as temporary living quarters</u> for recreational, camping, travel, or seasonal use.

<u>16.13.160-Q "Q" Definitions.</u>

Reserved

<u>16.13.160-R "R" Definitions.</u>

"Regulatory floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to carry and discharge the base flood without cumulatively increasing the water surface elevation more than one foot at any point. Also referred to as the Floodway.

"Repetitive loss" means flood-related damages sustained by a structure on two separate occasions during a 10-year period ending on the date of the event for which the second claim is made, for which the cost of repairs at the time of each such flood event, on the average, equaled or exceeded 25% of the market value of the structure before the damages occurred.

"Road / roadway" means an open way for vehicular traffic. For the purpose of this chapter, a driveway is considered a road or roadway.

<u>16.13.160-S</u> "S" Definitions.

"Sand dunes" means naturally occurring accumulations of sand in ridges or mounds landward of the beach.

"Special flood hazard area (SFHA)" means the land in a flood plain subject to a 1 percent or greater annual chance of flooding in any given year. Special flood hazard areas are in general shown on a FIRM as Zones A, AO, A1-A30, AE, A99, AH, V1-V30, VE and V, but can also be determined by the Floodplain Administrator to occur where not shown on the FIRM. Also known as the flood hazard area, FHA, area of special flood hazard, or area of the 1% annual chance flood.

"Start of construction" means the date the building permit was issued, whether for new construction or substantial improvement of a building or structure, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the date of the permit. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation.

"Structure" means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

"Substantial damage" means damage of any origin sustained by a building or structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

"Substantial improvement" means any reconstruction, rehabilitation, addition, or other improvement of a building or structure, or the cumulative total of such activities as defined in this section, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include:

(1) <u>Any project for improvement of an existing building or structure to correct existing</u> violations of state or local health, sanitary, or safety code specifications which have been

identified in writing by the local code enforcement official prior to a permit application and which are the minimum necessary to ensure safe living conditions; or

(2) Any alteration of a "historic structure," provided the alteration will not preclude the structure's continued designation as a "historic structure".

<u>16.13.160-T "T" Definitions.</u>

Reserved

<u>16.13.160-U</u> "U" Definitions. Reserved

<u>16.13.160-V "V" Definitions.</u>

"V Zone" means coastal high hazard area. See definition of coastal high hazard area.

<u>"V Zone certificate" means a certification prepared by a registered professional engineer and/or architect,</u> in a form prepared by the Planning Department, that certifies that the design and planned methods of construction meet the requirements of the NFIP and this chapter for construction in a V Zone.

<u>"V Zone certificate, final" means a certification prepared by a registered professional engineer, architect</u> and/or surveyor in a form prepared by the Planning Department, which is submitted prior to final inspection of a structure that certifies that the construction met the requirements of the NFIP and this chapter for construction in a V Zone.

"Violation" means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications or required permits, or other evidence of compliance required in this chapter is presumed to be in violation until such time as the required documentation has been provided.

<u>16.13.160-W</u> "W" Definitions.

"Watercourse" means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature in, on, through, or over which water flows at least periodically.

"Watercourse crossing" means a road, driveway, bridge, culvert, low-water crossing or similar mean for vehicles, pedestrians or utilities to travel from one side of a watercourse to the other side.

16.13.160-X "X" Definitions. Reserved

16.13.160-Y "Y" Definitions. Reserved

16.13.160-Z "Z" Definitions. Reserved

16.13.170 Terms defined in other codes.

Where terms are not defined in this chapter and are defined in the building codes, such terms shall have the meanings ascribed to them as in the building codes.

16.13.180 Terms not defined.

Where terms are not defined in this chapter or the building codes, such terms shall have ordinarily accepted meanings such as the context implies.

Part III. ADMINISTRATION

16.13.190 Designations.

The Planning Director, or designee, is the Floodplain Administrator. The Floodplain Administrator may delegate performance of certain duties to other employees, such as plans examiners and inspectors.

16.13.200 Duties and powers of the Floodplain Administrator.

The Floodplain Administrator is authorized and directed to administer and enforce the provisions of this chapter. The Floodplain Administrator shall have the authority to render interpretations of this chapter and to establish policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be consistent with the intent and purpose of this chapter. Such interpretations, policies and procedures shall not have the effect of waiving requirements specifically provided for in this chapter without the granting of an exception pursuant to Part IX of this chapter.

16.13.210 Applications and permits.

The Floodplain Administrator, or their designee in coordination with other pertinent offices of the jurisdiction, shall:

(A) <u>Review applications to determine whether proposed new development will be located in flood</u> <u>hazard areas;</u>

(B) <u>Review applications for modification of any existing development in flood hazard areas for</u> compliance with the application requirements of this chapter;

(C) Interpret flood hazard area boundaries, provide available flood elevation and flood hazard information;

(D) Determine whether additional flood hazard data shall be obtained or developed;

(E) <u>Review applications to determine whether proposed development will be reasonably safe from</u> <u>flooding;</u>

(F) <u>Issue floodplain development permits when the provisions of this chapter have been met, or</u> <u>disapprove the same in the event of noncompliance;</u>

(G) <u>Coordinate with the Building Official to ensure that applications for building permits for buildings and structures comply with the requirements of this chapter;</u>

(H) <u>When a damaging event has occurred, regardless of the cause of damage, coordinate with the</u> <u>Building Official to inspect areas where buildings and structures in flood hazard areas have been damaged</u> and notify owners of damaged buildings and structures in these flood hazard areas that (a) permits may be required prior to repair, rehabilitate, demolish, relocate, or reconstruct; and (b) buildings and structures that are determined to have sustained substantial damage are subject to the requirements of the building</u> <u>codes and this chapter.</u>

16.13.220 Determinations for existing structures.

For applications for permits to modify existing structures in the special flood hazard area, including additions, repairs, renovations, and alterations, the Floodplain Administrator, in coordination with the Building Official, shall:

(A) Estimate the market value, or require the applicant to obtain a professional appraisal of the market value, of the structure before the proposed work is performed and / or before any unpermitted improvements. When repair of damage is proposed, the market value estimate or appraisal shall be of the structure's value before the damage occurred;

(B) <u>Require, during review of discretionary applications, a preliminary cost estimate. If the</u> preliminary cost estimate exceeds 40% of the market value or if the Floodplain Administrator determines that a more detailed estimate is needed, require a detailed cost estimate and detailed plans with the discretionary application;

(C) <u>Require, prior to issuance of a building permit, a detailed cost estimate from the licensed</u> <u>contractor who is contracted by the owner of the property to perform the work, or a qualified licensed</u> <u>contractor who has submitted a proposal to perform the work. If the work will be performed by someone</u> <u>other than a licensed contractor, the detailed cost estimate will still be required to be completed by a</u> <u>licensed contractor. Alternatively the Floodplain Administrator may estimate the costs;</u>

(D) <u>Require the contractor to certify that the detailed cost estimate includes all costs associated with</u> the work as shown on the referenced plans, or described in the permit description if plans are not required by the Building Department;

(E) <u>Require the property owner to certify that the contractor's estimate includes all project costs</u> associated with the work shown on the referenced plans, or described in the permit description if plans are not required;

(F) <u>Compare the cost to perform the proposed improvements, the cost to repair the damaged building to its pre-damaged condition, or the combined costs of improvements and repairs, as applicable, to the market value of the building or structure as established in SCCC 16.13.220(A);</u>

(G) <u>Determine and document whether the proposed work constitutes substantial improvement or repair of substantial damage;</u>

(H) Determine and document whether the proposed work constitutes a cumulative improvement and/or repair of damage;

(I) Notify the applicant of the results of the determination and whether compliance with the requirements for new construction is required; and

(J) <u>Maintain a record of the value of all permitted improvements and repairs to existing structures to facilitate the determination of cumulative improvement.</u>

16.13.230Modifications of the strict application of the provisions of the building codes.The Floodplain Administrator shall review requests submitted to the Building Official that seek approval
to modify the strict application of the flood load and flood-resistant construction requirements of the
building codes to determine whether such requests can be considered for an exception pursuant to Part IX
of this chapter.

16.13.240 Notices and orders.

The Building Official shall issue all necessary notices or orders pursuant to the County's adoption of the Uniform Code for the Abatement of Dangerous Buildings to ensure compliance with this chapter.

<u>16.13.250 Inspections.</u>

The Floodplain Administrator or designee shall make the required inspections specified in Part VII and VIII of this chapter. The Building Official shall make the required inspections of buildings and structures specified in Part VII and VIII of this chapter.

16.13.260 Other duties of the Floodplain Administrator.

The Floodplain Administrator shall have other duties, including but not limited to:

(A) Establish, in coordination with the Building Official, written procedures for administering and documenting determinations of substantial improvement and substantial damage made pursuant to SCCC 16.13.220, including cumulative substantial improvement;

(B) <u>Require that applicants proposing an alteration of a watercourse in a mapped FEMA flood hazard</u> area notify adjacent communities, the California Department of Water Resources, and the Federal <u>Emergency Management Agency (FEMA)</u>;

(C) Require applicants who submit a hydrologic investigation or a floodway encroachment analysis to support permit applications to submit to FEMA, the data and information necessary to maintain the Flood Insurance Rate Maps if the analyses propose to change base flood elevations, flood hazard area boundaries, or floodway designations; such submissions shall be made within 6 months of such data becoming available; and

(D) <u>Notify the Federal Emergency Management Agency when the corporate boundaries of the County of Santa Cruz have been modified.</u>

16.13.270 Department records.

Regardless of any limitation on the period required for retention of public records, the Floodplain Administrator shall maintain and permanently keep and make available for public inspection all records that are necessary for the administration of this chapter and the flood provisions of the building codes, including Flood Insurance Rate Maps; Letters of Map Amendment and Letters of Map Revision; records of issuance of permits and denial of permits; determinations of whether proposed work constitutes substantial improvement or repair of substantial damage; required certifications and documentation specified by the building codes and this chapter, including but not limited to Elevation Certificates, Floodproofing Certificates, and V Zone Certificates; notifications to adjacent communities, FEMA, and the state related to alterations of watercourses; assurance that the flood carrying capacity of altered watercourses will be maintained; documentation related to exceptions, including justification for their issuance; and records of enforcement actions taken pursuant to this chapter and the flood resistant provisions of the building codes.

Part IV. PERMITS

16.13.280 Permits required.

Anyone who intends to undertake any development activities within the scope of this chapter which is wholly within or partially within any reasonably suspected flood hazard area shall first make application to the Planning Department and obtain any required permit(s). No such permit shall be issued until compliance with the requirements of this chapter and all other applicable codes and regulations has been satisfied.

16.13.290 Floodplain development permit.

Floodplain permits shall be issued for all development activities including those which are not subject to the requirements of the building codes and those which do not constitute a substantial improvement.

16.13.300 Buildings and structures exempt from a building permit are subject to the <u>requirements of this chapter.</u>

Floodplain permits are required for buildings and structures that are explicitly exempt from requirements to obtain a building permit under the building codes, including but not limited to:

(A) <u>One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses of any size;</u>

- (B) <u>Fences of any height;</u>
- (C) <u>Retaining walls of any height;</u>
- (D) <u>Water tanks of any size; and</u>
- (E) <u>Fill placement of any scale.</u>

16.13.310 Application for a permit.

Anyone who proposes development within a flood hazard area shall file an application with the Planning Department. The information provided shall:

(A) <u>Identify and describe the development to be covered by the permit;</u>

(B) <u>Describe the land on which the proposed development is to be conducted by legal description</u>, street address or similar description that will readily identify and definitely locate the site;

(C) <u>Indicate the use and occupancy for which the proposed development is intended;</u>

(D) <u>Be accompanied by a site plan and/or construction documents as specified in Part V of this chapter, if required;</u>

(E) State the valuation of the proposed work, based upon a preliminary or detailed cost estimate, as required by the Floodplain Administrator and this chapter. The cost estimate shall include a list of all plan sheets used to develop the estimate, including title, latest revision date and plan preparer, as well as the signature and license number of the contractor who prepared the cost estimate; and

(F) <u>Be signed by the applicant or the applicant's authorized agent.</u>

16.13.320 Validity of permit.

The issuance of a permit pursuant to this chapter shall not be construed to be a permit for, or approval of, any violation of this chapter, the building codes, or any other local law. The issuance of a permit based on submitted documents and information shall not prevent the Floodplain Administrator from requiring the correction of errors. The Planning Director or the Building Official is authorized to prevent occupancy or use of a building or structure which is in violation of the permit, the building codes or of any other laws of this jurisdiction.

16.13.330 Notice of hazards.

The developer and/or subdivider of a parcel or parcels in an area of flood hazards shall be required, as a condition of development or building permit approval, to record a Declaration of Flood Hazards, Acceptance of Risk, liability Release, and Indemnification with the County Recorder. The Declaration shall be in a form approved by the County of Santa Cruz and shall include acknowledgements and agreements, as applicable to the specific project, including but not limited to, description of the hazards on the parcel or parcels, the level of hydrologic analysis conducted, and an acknowledgement and assumption of risks posed by flood hazards.

16.13.340 Permit requirements.

All other required state and federal permits shall be obtained by the applicant as a condition of floodplain permit approval.

16.13.350 Other conditions.

Other permit conditions, including but not limited to, project redesign, building site elimination, development of building and septic envelopes, and foundation requirements shall be required as deemed necessary by the Floodplain Administrator.

16.30.360 Determination of the base flood elevation.

When base flood elevation data are not provided in the Flood Insurance Study, the Floodplain Administrator shall obtain, review, and reasonably utilize the best base flood data available from Federal, State or other sources, as a basis for elevating new and substantially improved residential structures and elevating or floodproofing new and substantially improved non-residential structures, to at least two feet above the base flood level. If data are not available, the applicant shall provide an analysis to estimate the base flood elevation, in compliance with SCCC 16.13.400(B), (C), and (D).

16.13.370 Expiration and extension.

A floodplain development permit shall become invalid pursuant to expiration limits of Building Permits pursuant to SCCC 12.10. If a building permit has been issued then the validity of the floodplain development permit shall be linked to the life and validity of the associated building permit and if the building permit is valid then the floodplain development permit remains valid. Extensions to floodplain development permits shall be granted pursuant to the provisions for extensions to building permits established in SCCC 12.10.

16.13.380 Suspension or revocation.

The Floodplain Administrator is authorized to suspend or revoke a floodplain development permit wherever the permit is issued in error or on the basis of incorrect, inaccurate or incomplete information, or in violation of this chapter or any applicable local law.

Part V. CONSTRUCTION DOCUMENTS

16.13.390 Information for all construction and development in flood hazard areas.

The Floodplain Administrator is authorized to waive the submission of construction documents and other data if it is found that the nature of the work applied for is such that the review of such submissions is not necessary to ascertain compliance with this chapter.

The site plan or construction documents for any development subject to the requirements of this chapter shall be drawn to scale and shall include, as applicable to the proposed development:

(A) <u>A site plan prepared by a licensed surveyor;</u>

(B) <u>Delineation of flood hazard areas, floodway boundaries and flood zones, and the base flood elevation, as appropriate;</u>

(C) If base flood elevations are not included on the FIRM or in the Flood Insurance Study (FIS), delineation of any flood hazard area, flood elevation and floodway data that may be available from Federal, State, or other sources that the Floodplain Administrator determines are applicable pursuant to SCCC 16.13.400;

(D) Location of the proposed activity and proposed structures, and locations of existing buildings and structures;

(E) Location, extent, amount, and proposed final grades of filling, grading, or excavation, and location and extent of any proposed alteration of sand dunes;

(F) If the placement of fill is proposed: the amount, type, and source of fill material; a description of the intended purpose of the fill areas; evidence that the proposed fill areas are mitigated with compensatory storage; and compaction specifications; and

(G) <u>Existing and proposed alignment of any watercourses proposed to be altered.</u>

16.13.400 Information in flood hazard areas without base flood elevations.

Where flood hazard areas are delineated on the FIRM and base flood elevation data have not been provided (approximate A Zones) or in un-mapped areas identified by the Floodplain Administrator as susceptible to flooding, the Floodplain Administrator shall:

(A) <u>Obtain, review, and reasonably use, or require the applicant to obtain and use, available data from a Federal or state agency or other source; or</u>

(B) <u>Require that a registered professional engineer develop base flood data prepared in accordance</u> with currently accepted engineering practices; and

(C) <u>Require a 25 percent factor of safety be added to the hydrologic analysis when USGS Regional</u> Regression equations are used to calculate the 100-year (one percent chance) peak discharge.

If the base flood data are to be used to support a Letter of Map Change from FEMA, the Floodplain Administrator shall advise the applicant that the analyses shall be prepared in a format required by FEMA, and that it shall be the responsibility of the applicant to satisfy the submittal requirements.

16.13.410 Additional analyses and certifications.

As applicable to the location and nature of the proposed development, and in addition to the requirements of this section, the applicant shall have the following analyses prepared and sealed by a registered design professional for submission with the site plan or construction documents:

(A) For activities proposed to be located in a floodway, a floodway encroachment analysis that demonstrates that the proposed development will not cause any increase in the base flood elevation. Any encroachment which would cause any increase in the base flood elevation is prohibited.

(B) For activities proposed to be located in a riverine flood hazard area for which floodways have not been designated, a hydrologic investigation, prepared by a registered professional engineer, that determines the base flood elevation and identifies the boundaries of the floodway. If the activities are proposed to be located within the floodway, compliance with SCCC 16.13.470 is required.

(C) For alteration of a watercourse, an engineering analysis prepared in accordance with standard engineering practices which demonstrates that the flood-carrying capacity of the altered or relocated portion of the watercourse will not be decreased, and certification that the altered watercourse shall be maintained in a manner which preserves the channel's flood-carrying capacity; the applicant shall submit such analysis to FEMA as specified in SCCC 16.13.420.

(D) For activities that propose to alter sand dunes in coastal high hazard areas, an engineering analysis that demonstrates that the proposed alteration will not increase the potential for flood damage.

(E) For new structures and substantial improvement/damage projects in the coastal high hazard area, a V-Zone Certificate, provided by the Floodplain Administrator, signed by the project architect or registered professional engineer, stating that the plans comply with all FEMA and County regulations for V-Zone construction.

16.13.420 Submission of additional data to FEMA.

If additional hydrologic, hydraulic or other engineering data and studies are submitted to support an application, the applicant has the right to seek a Letter of Map Change from FEMA to change the base flood elevations, change floodway boundaries, or change boundaries of flood hazard areas shown on the FIRM, and to submit new technical data to FEMA for such purposes. The analyses shall be prepared by a licensed professional engineer in a format required by FEMA. Submittal requirements and processing fees shall be the responsibility of the applicant. The applicant shall notify the Floodplain Administrator of such submittal.

16.13.430 Additional information for buildings and structures in flood hazard areas.

In addition to other requirements of this chapter, the site plan or construction documents for buildings and structures located in whole or in part in flood hazard areas shall include:

(A) <u>In flood hazard areas other than coastal high hazard areas, the elevation of the proposed lowest</u> floor of structures proposed to be elevated.

(B) <u>In flood hazard areas other than coastal high hazard areas, the elevation below which</u> nonresidential buildings and structures, if not proposed to be elevated, will be dry floodproofed.

(C) In areas of shallow flooding shown on FIRMs as AO zones, the height of the proposed lowest floor, including basement, above the highest adjacent grade as established by a licensed surveyor.

(D) <u>In coastal high hazard areas, the elevation of the bottom of the lowest horizontal structural</u> member of the lowest floor.

(E) In coastal high hazard areas, the location of any proposed building, which shall be landward of the reach of mean high tide.

Part VI. DEVELOPMENT STANDARDS

16.13.440 Permit conditions.

The recommendations of technical reports (if evaluated and accepted by the Floodplain Administrator) shall be included as permit conditions of any permit or approvals subsequently issued for the development. In addition, the requirements described below shall become standard conditions for development, building and land division permits and approvals. No development, building and land division permits or approvals shall be issued, and no final maps or parcel maps shall be recorded, unless such activity is in compliance with the requirements of this part.

Article 1. Structures

16.13.450 Design and construction of new and substantially improved structures.

(A) <u>New structures within the scope of the California Residential Code (CRC), and substantial</u> improvement of existing structures within the scope of the CRC, shall be designed and constructed in accordance with the flood-resistant construction provisions of the California Residential Code.

(B) <u>New structures within the scope of the California Building Codes, and substantial improvement</u> of existing structures within the scope of the CBC, shall be designed and constructed in accordance with the flood-resistant construction provisions of the California Building Codes.

16.13.460 General standards – floodplains.

All development within any flood hazard area other than a coastal high hazard area shall meet the following criteria. Structures for which building permits were issued prior to April 15, 1986 are exempt from this section if any addition, repair, reconstruction, rehabilitation, alteration, or improvement does not meet the definition of "substantial improvement", including when subject to the definition of "cumulative improvement" (pursuant to SCCC 16.13.160).

(A) <u>Structures shall be located outside of the flood hazard area when a buildable portion of the property exists outside of the flood hazard area.</u>

(B) <u>Structures and the foundations attached to them shall be anchored by a method adequate to</u> prevent flotation, collapse and lateral movement of the structures due to the forces that may occur during the base flood, including hydrostatic and hydrodynamic loads and the effects of buoyancy.

(C) <u>Structures shall be constructed with materials and utility equipment resistant to flood damage and using construction methods and practices that minimize flood damage below two feet above the base flood elevation.</u>

(D) Structures shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are elevated at least two feet above the base flood elevation. Minimum electric service required to address life safety and electric code requirements for parking of vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating within components.

(E) In flood zones A-O and A-H, drainage paths adequate to guide water away from structures and reduce exposure to flood hazards shall be provided.

(F) For residential structures, including manufactured homes, the lowest floor, including the basement, and the top of the highest horizontal structural member (joist or beam) which provides support directly to the lowest floor, and all elements that function as a part of the structure, such as furnace, hot water heater, etc., shall be elevated at least two feet above the one-hundred year flood level. Compliance with the elevation requirement shall be certified by a registered professional engineer, architect, or surveyor and submitted to the Floodplain Administrator prior to a subfloor building inspection.

(G) <u>Non-residential structures shall be elevated in accordance with SCCC 16.13.460(F) or</u> floodproofed if elevation is not feasible. Floodproofed structures shall:

(1) <u>Be floodproofed so that below an elevation two feet higher than the one-hundred year</u> flood level, the structure is watertight with walls substantially impermeable to the passage of

water based on structural designs, specifications and plans developed or reviewed by a registered professional engineer or architect;

(2) <u>Be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and,</u>

(3) <u>Be certified by a registered professional engineer or architect that floodproofing</u> standards and requirements have been complied with; the certification shall be submitted to the Floodplain Administrator and shall indicate the elevation to which floodproofing was achieved prior to a final building inspection.

(H) <u>In flood zone AO, residential structures and elevated non-residential structures shall have the</u> <u>lowest floor elevated above the highest adjacent grade at least two feet higher than the depth number</u> given on the FIRM. Non-residential structures, where elevation is not feasible, shall have the lowest floor completely floodproofed above the highest adjacent grade at least two feet higher than the depth number given on the FIRM.

(I) <u>Fully enclosed areas below the lowest floor that are subject to flooding shall be designed to</u> <u>automatically equalize hydrostatic flood forces on exterior walls allowing for the entry and exit of flood</u> <u>water. Designs for meeting this requirement must either be certified by a registered professional engineer</u> <u>or architect, or shall provide a minimum of two openings having a total net area of not less than one</u> <u>square inch for every square foot of enclosed area subject to flooding. The bottom of all openings shall be</u> <u>no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other</u> <u>coverings or devices provided that they permit the automatic entry and exit of flood waters. Non-</u> <u>residential structures that are floodproofed in compliance with SCCC 16.13.460(G)(1) are exempt from</u> <u>this requirement.</u>

16.13.470 General standards – floodways.

Located within special flood hazard areas as established in SCCC 16.13.060, and within some areas not mapped as part of the Flood Insurance Study, are areas designated as floodways (see also SCCC 16.13.160). The floodway is an extremely hazardous area due to the quantity and velocity of flood waters, the amount of debris which may be transported, and the high potential for erosion during periods of large stream flows. In the floodway, and in flood hazard areas for which a floodway has not been designated, the following provisions apply:

(A) Encroachment Within Floodway Prohibited: Any encroachment, including fill, new construction, or other development activity is prohibited within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels during the base flood. Reconstruction, repair, alteration, or improvement of an existing structure, provided no additional encroachment is proposed, is exempt from the hydrologic and hydraulic engineering analysis requirement.

(B) <u>Sites Where Floodway Not Established. Where the Flood Insurance Study or other technical</u> report has identified a flood hazard area but has not designated a floodway, the applicant must demonstrate, through hydrologic and hydraulic analyses, that the project will not adversely affect the carrying capacity of the area. For the purposes of this chapter, "adversely affects" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development in the watershed, will increase the water surface elevation of the base flood more than one foot at any point. The hydrologic analysis must identify the boundaries of the floodway, and the project must comply with the provisions of SCCC 16.13.470(A), above. (C) <u>Setback from Floodway: Where neither a Base Flood Elevation nor a floodway has been</u> identified by the Flood Insurance Study or if a site specific hydrologic study to determine the floodway has not been required, a minimum setback of 20 feet for an ephemeral stream, 30 feet for an intermittent stream and 50 feet for a perennial stream, as measured from the top edge of the banks of the drainage course, shall be maintained, and all activity that takes up flood storage area within this setback shall be prohibited. This floodway setback may be reduced by the Planning Director only if a full hydrologic analysis identifies the boundaries of the floodway, demonstrates that a smaller setback will not increase the susceptibility of the proposed activity to flood related hazards, and there is no alternative location outside of the setback. (See also SCCC 16.30, Riparian Protection, for other regulations regarding setbacks from streams.)

(D) <u>Alteration of Structures in Floodway: Reconstruction, repair, alteration or improvement of a structure in a floodway shall not cause any increase in the base flood elevation. Substantial improvements, regardless of cause, shall only be permitted in accordance with SCCC 16.13.460 (Floodplain General Standards), 16.13.490 (Manufactured Homes), and 16.13.500 (Non-habitable Accessory Structures), as applicable. Repair, reconstruction, alteration, or replacement of a damaged structure which does not exceed the ground floor square footage area of the structure before the damage occurred shall not be considered an encroachment.</u>

(E) <u>Permit Requirements: All other required local, State and Federal permits must be obtained.</u>

16.13.480 General standards - coastal high hazard area.

<u>All development, specifically including the placement of and construction of manufactured homes, shall</u> meet the following criteria. Structures for which building permits were issued prior to April 15, 1986 are exempt from this section if any addition, repair, reconstruction, rehabilitation, alteration, or improvement does not meet the definition of "substantial improvement", including when subject to the definition of "cumulative improvement".

(A) <u>Demonstration that the potential hazards on the site can be mitigated, over the 100-year lifetime</u> of the structure, as determined by the geologic hazards assessment or full geologic report and any other appropriate technical reports. Mitigations can include but are not limited to building setbacks, elevation of the proposed structure and foundation design.

(B) Location of the proposed structure landward of the reach of mean high tide.

(C) Location of the structure outside of the area of storm wave inundation where a buildable portion of the property is outside of the area of storm wave inundation.

(D) <u>Elevation of all structures (including manufactured homes) on pilings and columns so that the</u> <u>bottom of the lowest portion of the lowest structural member of the lowest floor (excluding the pilings or</u> <u>columns) and elements that function as part of the structure, such as furnace, hot water heater, etc., are</u> <u>elevated at least three feet above the base flood elevation. Compliance with the elevation requirementshall be certified by a registered professional engineer, architect, or surveyor and submitted to the</u> <u>Building Official and Floodplain Administrator prior to a subfloor building inspection.</u>

(E) <u>Anchoring of the pile or column foundation and structure attached thereto to prevent flotation,</u> collapse and lateral movement due to the effect of wind and water loads acting simultaneously on all building components. Wind and water loading values shall each have a one percent chance of being equaled or exceeded in any given year (100-year mean recurrence interval). (F) <u>Structures shall be constructed with materials and utility equipment resistant to flood damage and</u> using construction methods and practices that minimize flood damage below three feet above the base flood elevation.

(G) <u>Structures shall be constructed with electrical, heating, ventilation, plumbing and air conditioning</u> equipment and other service facilities that are elevated at least three feet above the base flood elevation. <u>Minimum electric service required to address life safety and electric code requirements for parking of</u> <u>vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering</u> <u>or accumulating within components.</u>

(II) The space below the lowest floor shall either be free of obstruction or constructed with nonsupporting breakaway walls, open wood lattice-work or insect screening intended to collapse under windand water loads without causing collapse, displacement or other structural damage to the elevated portion of the building or supporting foundation system. The total space below the lowest floor that is enclosed with non-supporting breakaway walls shall be less than 300 square feet. For the purposes of this section, a breakaway wall shall be of non-masonry construction and have a design safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Use of breakaway walls which do not meet the above material and strength criteria may be permitted only if a registered professional engineer or architect certifies that the designs proposed will permit the breakaway wall to collapse under a waterload less than that which would occur during the base flood and that the elevated portion of the building or supporting foundation system shall not be subject to collapse, displacement or other structural damage due to the effects of wind and water loads acting simultaneously on all building components. Suchenclosed space shall be useable solely for vehicle parking, building access or storage, and shall not be a finished area or habitable area.

(I) <u>A registered professional engineer or architect shall develop or review the structural design</u>, specifications and plans for the construction, and shall certify on a "V-Zone Certificate" that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of paragraphs (D), (E), (F), (G) and (H) of this section prior to permit issuance.

- (J) The use of fill for structural support of buildings is prohibited.
- (K) The alteration of sand dunes which would increase potential flood damage is prohibited.
- (L) Pavement and flat work (such as sidewalks and patios, etc.) shall be frangible (easily broken).
- (M) <u>Detached garages are prohibited.</u>

(N) <u>For purposes of this subsection and this subsection only repetitive loss properties shall be as</u> defined in SCCC 16.10.070(H)(13) and shall be subject to SCCC 16.10.070(H)(1)(1).

16.13.490 Manufactured homes.

All manufactured homes installed in flood hazard areas shall be installed by an installer that is licensed as a General Manufactured Housing Contractor by the California Department of Consumer Affairs and shall comply with the requirements of that agency and the requirements of this section.

(A) <u>All new manufactured homes and replacement manufactured homes shall be installed on</u> permanent, reinforced foundations that:

(1) <u>In flood hazards areas other than coastal high hazard areas, are designed in accordance</u> with the California Residential Code (CRC); (2) In floodways, are designed in accordance with ASCE 24 (American Society of Civil Engineers); and

(3) In coastal high hazard areas, are designed in accordance with the CRC.

(B) <u>All new manufactured homes and replacement manufactured homes shall be installed using</u> methods and practices which minimize flood damage and shall be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement. Methods of anchoring include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

(C) <u>All new, replacement, and substantially improved manufactured homes shall be installed per the requirements of the residential code, ASCE 24 and SCCC 16.13.460, 16.13.470, and 16.13.480, as applicable.</u>

16.13.500 Non-habitable accessory structures.

Non-habitable accessory structures, when proposed to be located within any flood hazard area, including substantial improvement of such accessory structures shall:

(A) <u>Be located outside of the flood hazards area when a buildable portion of the property exists</u> outside of the flood hazard area.

(B) <u>Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads,</u> including the effects of buoyancy, during conditions of the base flood.

(C) <u>Have electric service and / or mechanical equipment elevated two feet above the base flood</u> <u>elevation</u> or three feet above the base flood elevation if located in the coastal high hazard area. Minimum electric service required to address life safety and electric code requirements for parking of vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating within components.

(D) <u>Be constructed with flood damage-resistant materials below two feet above the base flood</u> <u>elevation</u> or below three feet above the base flood elevation in coastal high hazard areas.

(E) <u>Be used only for parking of vehicles or storage.</u>

(F) If built in flood hazard areas other than coastal high hazard areas, have flood openings in compliance with the residential code to allow for the automatic entry and exit of flood waters.

(G) If built in coastal high hazard areas, be less than 100 square feet in area and constructed with breakaway walls.

16.13.510 Underground and above ground tanks.

(A) <u>Underground tanks in flood hazard areas shall be anchored to prevent flotation, collapse or lateral</u> movement resulting from hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the base flood.

(B) <u>Above-ground tanks in flood hazard areas shall be anchored or otherwise designed and</u> <u>constructed to prevent flotation, collapse or lateral movement resulting from hydrodynamic and</u> <u>hydrostatic loads, including the effects of buoyancy assuming the tank is empty, during conditions of the</u> <u>base flood.</u> (C) <u>Tank inlets, fill openings, outlets and vents shall be at or above the base flood elevation or fitted</u> with covers designed to prevent the inflow of floodwater or outflow of the contents of the tanks during conditions of the base flood.

16.13.520 Temporary structures and storage.

(A) <u>Temporary structures shall be located outside of the flood hazards area when a buildable portion</u> of the property exists outside of the flood hazard area.

(B) <u>Temporary structures shall be allowed in the special flood hazard area during the period April</u> 15th through October 15th.

(C) <u>Temporary storage includes storage of goods and materials for a period of less than 180 days.</u> Stored materials shall not include hazardous materials.

16.13.530 Swimming pools.

(A) <u>Pools shall be located outside of the flood hazard area when a buildable portion of the property</u> exists outside of the flood hazard area.

(B) Where pools are proposed in a flood hazard area and the location of the pool is=

(1) In a flood hazard area for which a floodway has not been designated and the pool is above natural grade, the requirements of SCCC 16.13.470(B) and (C) shall apply.

(2) In a coastal high hazard area, the pool shall be designed and constructed in conformance with ASCE 24.

16.13.540 Critical and public facilities.

Critical facilities and nonessential public structures and additions shall be located outside of the flood hazard area unless such facilities are necessary to serve existing uses, there is no other feasible location, and construction of these structures will not increase hazards to life on property within or adjacent to the floodplain or coastal inundation areas.

16.13.550 Utility and miscellaneous Group U.

Utility and Miscellaneous Group U, as defined in the Building Code, includes buildings and structures that are accessory in character and miscellaneous structures not classified in any specific occupancy in the Building Code, including, but not limited to, agricultural buildings, aircraft hangars (accessory to a oneor two-family residence), barns, carports, fences more than 6 feet high, grain silos (accessory to a residential occupancy), greenhouses, livestock shelters, private garages, retaining walls, sheds, stables, and towers.

(A) <u>Utility and Miscellaneous Group U structures, when proposed to be located within any flood</u> hazard area, including substantial improvement of such accessory structures, shall:

(1) <u>Be located outside of the flood hazards area when a buildable portion of the property</u> exists outside of the flood hazard area.

(2) <u>Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic</u> loads, including the effects of buoyancy, during conditions of the base flood.

(3) <u>Have electric service and or mechanical equipment two feet above the base flood</u> elevation, except that minimum electric service required to address life safety and electric code requirements for parking of vehicles and storage is allowed below the base flood elevation if designed to prevent water from entering or accumulating.

(4) <u>Use flood damage-resistant materials below the base flood elevation.</u>

(5) If built in flood hazard areas other than coastal high hazard areas, have flood openings in compliance with the residential code to allow for the automatic entry and exit of flood waters.

(6) If built in coastal high hazard areas, be less than 100 square feet in area and constructed with breakaway walls.

Article 2. Creation of New Parcels

16.13.560 Creation of new parcels.

Allow the creation of new parcels including those created by minor land division or subdivision on parcels which include a flood hazard area only under the following circumstances:

(A) <u>Subdivision proposals, including proposals for manufactured home parks and subdivisions, shall</u> <u>be reviewed to determine that:</u>

(1) <u>Such proposals are consistent with the need to minimize flood damage and will be</u> reasonably safe from flooding;

(2) All public utilities and facilities such as sewer, gas, electric and water systems are located and constructed to minimize or eliminate flood damage;

(3) Adequate drainage is provided to reduce exposure to flood hazards; and

(4) <u>Development of structures on newly created parcels will not be dependent on coastal</u> protection structures.

(B) <u>A full hydrologic report and any other appropriate technical report must demonstrate that each proposed parcel contains at least one building site, including a septic system and leach field site, which is located outside of the flood hazard area, and that public utilities and facilities such as roadways, stormwater management facilities, sewer, gas, electrical and water systems can be located and constructed to minimize flood damage and not cause a health hazard.</u>

(C) If any portion of proposed subdivisions, including manufactured home parks and manufactured home subdivisions, lies within a flood hazard area, the following shall be required:

(1) <u>Preliminary land division proposals shall identify all flood hazard areas and the elevation of the base flood.</u>

(2) <u>Delineation of flood hazard areas, floodway boundaries and flood zones, and base flood</u> elevations, as appropriate, shall be shown on preliminary maps and final maps and certified by a registered professional engineer;

16.13.570 Project density limitations.

The following requirements shall apply to density calculations for new building sites created through minor land division, subdivision, or other development approval or permit:

(A) The portion of a property within the flood hazard area shall be excluded from density calculations.

(B) <u>Coastal Hazards. The portions of a property subject to coastal inundation, as determined by a</u> geologic hazards assessment, geologic report, or adopted Flood Insurance Rate Map (FIRM), shall be excluded from density calculations.

Article 3. Site Improvements, Utilities and Limitations

16.13.580 General requirements.

All proposed new and replacement development shall meet the following criteria:

(A) Such proposals are consistent with the need to minimize flood damage, will be reasonably safe from flooding, and shall meet the minimum requirements of the County design criteria;

(B) <u>All public utilities and facilities such as sewer, gas, electric, communication, and water systems are located or designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.</u>

(C) <u>Adequate drainage is provided to reduce exposure to flood hazards.</u>

16.13.590 Sanitary sewage facilities.

(A) <u>Replacement. All replacement sanitary sewage facilities, private sewage treatment plants</u> (including all pumping stations and collector systems), and on-site waste disposal systems shall be designed in accordance with current building code standards as well as SCCC 7.38, to minimize or eliminate infiltration of flood waters into the facilities and discharge from the facilities into flood waters, or impairment of the facilities and systems. The capacity of existing septic systems in the floodplain and floodway shall not be increased.

(B) <u>New septic systems and leach fields prohibited. New septic systems and leach fields shall not be</u> <u>located within the flood hazard area.</u>

16.13.600 Water supply facilities.

All new and replacement water supply facilities shall be designed in accordance with the provisions of current building code standards, to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into flood waters.

16.13.610 Grading and placement of fill.

(A) <u>No net increase in fill shall be allowed in flood hazard areas.</u>

(B) <u>Grading and the placement of fill is allowed within the flood hazard area in the minimum amount</u> necessary, only when shown through analysis that compensatory storage is being provided by the project that proposes fill. Compensatory storage shall provide equivalent volume at equivalent elevations to that being displaced. For this purpose, "equivalent elevation" means having similar relationship to ordinary high water and the best available 10-year, 50-year and 100-year water surface profiles.

(C) <u>Subject to the limitations of this chapter, fill shall be designed to be stable under conditions of flooding, including rapid rise and rapid drawdown of floodwaters, prolonged inundation, and flood-related erosion and scour. In addition to these requirements, if intended to support buildings and structures, fill shall comply with the requirements of the building codes.</u>
(D) <u>All excavations in flood hazard areas shall be constructed to drain freely to the watercourse and not be subject to ponding when not inundated by flood waters.</u>

(E) Any grading or fill is prohibited within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels during the base flood.

(F) The applicant shall provide to the Floodplain Administrator a certified survey of the excavation and fill sites demonstrating the fill and excavation comply with this article.

16.13.620 Limitations on sites in coastal high hazard areas.

In coastal high hazard areas, alteration of sand dunes shall be permitted only if it has been demonstrated by engineering analysis that the alteration will not increase potential flood damage consistent with SCCC-16.13.410(D). Construction or restoration of dunes under or around elevated buildings and structures shall comply with SCCC 16.13.710.

Article 4. Recreational Vehicles

16.13.630 Temporary placement.

Recreational vehicles placed temporarily in flood hazard areas shall:

(A) Be on the site for fewer than 180 consecutive days; and

(B) <u>Be fully licensed and ready for highway use (on wheels or jacking system and attached to the site only by quick-disconnect type utilities and security devices and with no permanent attachments such as additions, stairs, decks and porches).</u>

16.13.640 Permanent placement.

Recreational vehicles that do not meet the requirements in SCCC 16.13.630 for temporary placement shall meet the requirements of SCCC 16.13.490 for manufactured homes.

Article 5. Other Development

16.13.650 General requirements for other development.

All development, including man-made changes to improved or unimproved real estate for which specific provisions are not specified in this chapter, shall:

(A) <u>Be located and constructed to minimize flood damage;</u>

(B) If development is proposed in a floodway, it shall not be authorized unless a floodway encroachment analysis demonstrates that the proposed development or land disturbing activity will not result in any increase to the level of the base flood;

(C) <u>Be anchored to prevent flotation, collapse or lateral movement resulting from hydrostatic loads, including the effects of buoyancy, during conditions of the base flood;</u>

(D) <u>Be constructed of flood damage-resistant materials; and</u>

(E) <u>Have electric service and or mechanical equipment two feet above the base flood elevation in A</u> Zones and three feet in coastal high hazard areas, except that minimum electric service required to address life safety and electric code requirements is allowed below the base flood elevation.

16.13.660 Fences in floodways.

Fences in floodways shall not block the passage of floodwaters and shall be designed to break away if debris is caught during a flood event.

16.13.670 Flood control structures.

Flood control structures shall be permitted only to protect existing development (including agricultural operations) where no other alternative is feasible or where such protection is needed for public safety. Such structures shall not adversely affect sand supply, increase erosion or cause flooding on adjacent properties or restrict stream flows below minimums necessary to maintain fish and wildlife habitats or be placed further than necessary from the development requiring protection. An appropriate hydrologic investigation shall be required as determined by the Floodplain Administrator.

16.13.680 Roads and watercourse crossings in floodways.

Roads and watercourse crossings in floodways shall not cause any increase in the base flood, as demonstrated through a floodway encroachment analysis. For bridges serving as watercourse crossings, hydraulic calculations shall be submitted (based upon the 100 year storm) which indicate that there is no increase in the base flood elevation.

16.13.690 Decks and patios in coastal high hazard areas.

In addition to the requirements of the building codes, in coastal high hazard areas, decks and patios shall be located, designed, and constructed in compliance with the following:

(A) <u>A deck that is structurally attached to a building or structure shall have the bottom of the lowest</u> horizontal structural member located three feet above the base flood elevation and any supporting members that extend below the base flood elevation shall comply with the foundation requirements that apply to the building or structure, which shall be designed to accommodate any increased loads resulting from the attached deck.

(B) <u>A deek or patio that is located below the base flood elevation shall be structurally independent</u> from buildings and structures and their foundation systems, and shall be designed and constructed either to remain intact and in place during base flood conditions or to break apart into small pieces that will not cause structural damage to adjacent elevated buildings and structures.

(C) <u>A deek or patio that has a vertical thickness of more than 12 inches or that is constructed with</u> more than the minimum amount of fill that is necessary for site drainage shall not be approved unless an analysis demonstrates that no harmful diversion of floodwaters or wave runup and wave reflection would increase damage to adjacent elevated buildings and structures.

(D) <u>A deek or patio that has a vertical thickness of 12 inches or less and that is at natural grade or on</u> fill material that is similar to and compatible with local soils and is the minimum amount necessary forsite drainage may be approved without requiring analysis of the impact on diversion of floodwaters or wave runup and wave reflection.

16.13.700 Other development in coastal high hazard areas.

<u>In coastal high hazard areas, other development activities may be permitted only if located outside the</u> <u>footprint of, and not structurally attached to, buildings and structures, and only if an analysis</u> <u>demonstrates no harmful diversion of floodwaters or wave runup and wave reflection on adjacent elevated</u> <u>buildings and structure. These activities include but are not limited to:</u>

(A) <u>Bulkheads, seawalls, retaining walls, revetments, and similar erosion control structures;</u>

(B) Solid fences and privacy walls, and fences prone to trapping debris, unless designed and constructed to fail under design flood conditions; and

(C) Mounded septie systems.

16.13.710 Nonstructural fill in coastal high hazard areas. In coastal high hazard areas:

(A) <u>Nonstructural fill with finished slopes that are steeper than one unit vertical to five units</u> horizontal may be permitted only if an analysis demonstrates no harmful diversion of floodwaters or wave runup and wave reflection on elevated adjacent buildings and structures.

(B) <u>Sand dune construction and restoration of sand dunes under or around elevated buildings may be</u> permitted without engineering analysis or certification of the diversion of floodwater or wave runup and wave reflection if the scale and location of the dune work is consistent with local beach-dune morphology and the vertical elearance is maintained between the top of the sand dune and the lowest horizontal structural member of the building.

Part VII. INSPECTIONS

<u>16.13.720 General.</u>

Development for which a permit is required shall be subject to inspection.

16.13.730 Buildings and structures.

The Building Official and Floodplain Administrator or designees shall inspect buildings and structures to determine compliance with the flood load and flood-resistance construction requirements of the building codes. Upon placement of the lowest floor, including the basement, and prior to further vertical construction, the documentation of the elevation requirements required by this code shall be submitted to the Building Official.

16.13.740 Development other than buildings and structures.

The Floodplain Administrator or designee shall inspect development other than buildings and structures that are within the scope of the building codes to determine compliance with the requirements of this chapter and the conditions of the issued permit.

<u>16.13.750</u> Right of entry.

The filing of an application for development in a floodplain constitutes a grant of permission for the County to enter the development area for the purpose of administering this chapter from the date of the application to the termination of the permit. The Planning Director shall be supplied with a key or lock combination or permitted to install a County lock.

Part VIII. BUILDING PERMIT FINAL INSPECTION REQUIREMENTS

16.13.760 Use and occupancy of buildings and structures.

Prior to the final inspection the owner or authorized agent shall submit the following documentation that has been prepared and sealed by a registered professional surveyor, engineer or architect, as required:

(A) For elevated buildings and structures in flood hazard areas other than coastal high hazard areas, the elevation of the lowest floor, including basement, and all other required information on an Elevation Certificate, provided by FEMA, and based on final construction.

(B) For buildings and structures in coastal high hazard areas, the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor, and all other required information on an Elevation Certificate, provided by FEMA, and based on final construction.

(C) For buildings and structures in coastal high hazard areas, a completed Final V Zone Certificate, available from the Planning Department.

(D) <u>Flood Hazards Declaration. The developer and/or the subdivider of a parcel or parcels in an area</u> subject to flood hazards shall be required, as a condition of development approval and building permit approval, to record a Declaration of Flood Hazards with the County Recorder. The Declaration shall include a description of the hazards on the parcel and the level of technical investigation, if any, conducted, and include an acknowledgement and assumption of risk.

Part IX. EXCEPTIONS

<u>16.13.770 General.</u>

A request for an exception to the provisions of this chapter or the permit conditions may be considered by the Planning Director if the exception is necessary to mitigate a threat to public health, safety and welfare.

16.13.780 Limitations on authority.

The Planning Director shall base their decisions on technical justifications submitted by applicants, the considerations for issuance in SCCC 16.13.820, and the conditions of issuance set forth in SCCC 16.13.830, and has the right to attach such conditions as they deem necessary to further the purposes and objectives of this chapter.

16.13.790 Restrictions in floodways.

An exception shall not be issued for any proposed development in a floodway if any increase in base flood elevations would result, as evidenced by the applicable analyses and certifications required in SCCC 16.13.410.

16.13.800 Reason for request.

A request for an exception shall state in writing the reason why the exception is requested, the proposed substitute provisions, when the exception would apply, and the threat to public health, safety, or welfare that would be mitigated.

16.13.810 Nature of exception.

The exceptions set forth in this part are based on the general principle of zoning law that exceptions pertain to a piece of property and are not personal in nature. An exception may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this chapter would create an exceptional hardship to the applicant or the surrounding property owners. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not to the structure, its inhabitants, or the property owners.

The interest in protecting citizens from flooding is compelling, and the cost of insuring a structure built below flood level so onerous that exceptions from the flood elevation or other health and safety requirements in the flood regulations of this chapter shall be granted in rare circumstances and only where no other alternative is available.

16.13.820 Criteria for issuance of exceptions.

In reviewing applications for exceptions, the Planning Director shall consider all technical evaluations, all relevant factors, all other applicable provisions of the building codes, this chapter, and all of the following:

(A) <u>The danger that materials and debris may be swept onto other lands resulting in further injury or damage;</u>

(B) <u>The danger to life and property due to flooding or erosion damage;</u>

(C) The susceptibility of the proposed development, including contents, to flood damage and the effect of such damage on current and future owners;

(D) <u>The importance of the services provided by the proposed development to the County of Santa</u> <u>Cruz;</u>

(E) <u>The necessity to the structure of a waterfront location, where applicable;</u>

(F) <u>The availability of alternate locations for the proposed development that are not subject to flooding or erosion;</u>

(G) <u>The compatibility of the proposed development with existing and anticipated development;</u>

(H) <u>The relationship of the proposed development to the comprehensive plan and floodplain</u> <u>management program for that area;</u>

(I) The safety of access to the property in times of flood for ordinary and emergency vehicles;

(J) <u>The expected heights, velocity, duration, rate of rise and debris and sediment transport of the</u> floodwaters and the effects of wave action, if applicable, expected at the site, and;

(K) <u>The costs of providing governmental services during and after flood conditions including</u> maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, streets and bridges.

16.13.830 Conditions for issuance of exceptions.

Exceptions shall be issued only upon:

(A) <u>Submission by the applicant of technical information showing good and sufficient cause that the unique characteristics of the size, configuration, or topography of the site renders the elevation standards inappropriate;</u>

(B) <u>A determination by the Floodplain Administrator that failure to grant the exception would result</u> in exceptional hardship by rendering the lot undevelopable;

(C) <u>A determination by the Floodplain Administrator that the granting of an exception will not result</u> in any increase to flood heights, additional threats to public safety, extraordinary public expense, nor create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws;

(D) <u>A determination by the Floodplain Administrator that the exception is the minimum necessary, considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this chapter. For example, in the case of exceptions to an elevation requirement, exceptions need not be granted for permission for the applicant to build at grade,</u>

or even to whatever elevation the applicant proposes, but only to that elevation which will both provide relief and preserve the integrity of the regulatory requirements.

Upon consideration of the factors in SCCC 16.13.820 and the purposes of this chapter, conditions may be attached to the granting of exceptions as necessary to further the purposes of this chapter.

16.13.840 Required findings.

In granting an exception, the Planning Director shall make the following findings:

(A) <u>That the project is necessary to mitigate a threat to public health, safety, or welfare;</u>

(B) <u>That hardship exists;</u>

(C) That the request is for the smallest amount of variance from the provisions of this chapter as possible; and

(D) That adequate measures will be taken to ensure consistency with the purposes of this chapter and the County General Plan.

16.13.850 Notice.

Any applicant to whom an exception is granted shall be given written notice of the terms and conditions, if any, of the exception, and said notice shall also include the following:

(A) <u>That the issuance of an exception to construct a structure below the base flood level, or not meet the standards prescribed in this chapter will result in substantially increased premium rates for flood insurance;</u>

(B) That such construction below the base level or construction that does not meet the standards prescribed in this chapter increases risks to life and property;

(C) <u>The County of Santa Cruz shall be exempt from liability for any personal or property damage</u> caused by construction below the base flood level or construction that does not meet the standards prescribed by this chapter; and

(D) That a copy of the written notice shall be recorded on the deed so that it appears in the chain of title of the affected parcel of land.

<u>16.13.860 Records.</u>

The Floodplain Administrator will maintain a record of all exception actions, including justification for their issuance, and report such exceptions issued in its biennial report submitted to the Federal Insurance Administration of the Federal Emergency Management Agency.

Part X. VIOLATIONS

16.13.870 Compliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with all the provisions of this chapter and other applicable regulations. Nothing herein shall prevent the taking of lawful action as necessary to prevent or remedy any violation.

16.13.880 Actions constituting a violation.

(A) <u>It shall be unlawful for any person to do, cause, permit, aid, abet, suffer, or furnish equipment or labor for any development in a flood hazard area as defined in 16.13.160(18) unless</u>

- 1) <u>A floodplain permit has been obtained and is in effect which authorizes the development;</u> or
- 2) <u>The development is exempt from the requirement for a floodplain permit approval.</u>

(B) It shall be unlawful for any person to exercise a development permit which authorizes development in a flood hazard area without complying with all of the conditions of such permit.

(C) In the event of a violation of this chapter or of the provisions of permit conditions as specified in this chapter, or if the permit has been exercised in a manner which creates a nuisance or is otherwise detrimental to the public health, safety or welfare, the permittee shall be given notice of such violation, and a reasonable time shall be specified for its correction. It shall be unlawful for any person to refuse or fail to abate a condition as spelled out in such notice.

(D) <u>It shall be unlawful for any person to knowingly do, cause, permit, aid, abet, or furnish any</u> equipment or labor for any work in violation of a Stop Work Notice from and after it is posted on the site until the Stop Work Notice is authorized to be removed by the Planning Director.

(E) If the Planning Director determines that any floodplain development occurring in the County does not comply with the approved floodplain permit or this chapter, they may stop all work until corrective measures have been completed. The site shall be posted with a "Stop Work" notice. No other permits shall be issued by the County on the site, and the County may require that all work shall be stopped pursuant to any such permits issued, until corrections have been made to the satisfaction of the Planning Director.

(F) <u>Whenever the Planning Director determines that floodplain development has been done without</u> the required floodplain development permit, they may refuse to issue a permit for the work already completed and require mitigating action.

Part XI. PROJECT DENIAL

16.13.890 Project denial.

A floodplain permit or the location of a proposed development shall be denied if the Planning Director determines that development is not in compliance with this chapter or the project would conflict with National Flood Insurance Program regulations.

Part XII. NOTICES OF GEOLOGIC HAZARDS IN CASES OF DANGEROUS CONDITIONS

16.13.900 Issuance and recordation of notices of geologic and / or flood hazards.

Whenever a site inspection, flood study, geologic hazards assessment or full geologic report identifies the presence of a geologic or flood hazard that causes a site, building, structure, or portions thereof to be rendered unsafe or dangerous, then pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10, the Planning Director may issue a notice of geologic hazard and order thereon, and may record a notice of geologic hazard with the County Recorder.

16.13.910 Abatement procedures.

The Planning Director may initiate abatement procedures pursuant to the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.

Part XIII. APPEALS

<u>16.13.920 Appeals.</u>

Except as otherwise provided herein, appeals taken pursuant to the provisions of this chapter shall be made in conformance with the procedures of SCCC 18.10, including appeal of the requirement for geologic hazard assessment or technical report. All appeals taken concerning the decision to issue and record a Notice of Geologic Hazard pursuant to the provisions of SCCC 16.13.900 and 16.13.910 shall be governed by the procedures commencing with Section 501 of the Uniform Code for the Abatement of Structural and Geologic Hazards as amended by SCCC 12.10.425.

Part XIV. FEES

16.13.930 Fees.

Fees for processing, checking, reviewing, reviewing technical reports, inspection, violations, and exception requests related to floodplain management shall be set by resolution by the Board of Supervisors.

SECTION III

Paragraph (2) of Subsection (B) of Section 13.03.050 of the Santa Cruz County Code is hereby amended to read:

(2) The implementing ordinances consisting of the following County Code chapters:

Chapter 7.38 SCCC	Sewage Disposal
Chapter 7.70 SCCC	Water Wells
Chapter 7.73 SCCC	Individual Water Systems
Chapter 7.78 SCCC	Preservation of Monterey Bay and Coastal Water Quality: Regulation of Wastewater Discharge
Chapter 12.01 SCCC	Building Permit Regulations
Chapter 12.06 SCCC	Demolition or Conversion of Residential Structures
Chapter 13.01 SCCC	General Plan Administration
Chapter 13.02 SCCC	Specific Plan Administration
Chapter 13.03 SCCC	Local Coastal Program Administration
Chapter 13.10 SCCC	Zoning Regulations
Chapter 13.11 SCCC	Site, Architectural and Landscape Design Review
Chapter 13.14 SCCC	Rural Residential Density Determinations
Chapter 13.20 SCCC	Coastal Zone Regulations
Chapter 13.36 SCCC	Development Agreement
Chapter 14.02 SCCC	Condominium and Townhouse Conversion Regulations
Chapter 15.01 SCCC	Park Dedication and Public Access Requirements
Chapter 15.10 SCCC	Roadway and Roadside Improvements
Chapter 16.10 SCCC	Geologic Hazards
Chapter 16.13 SCCC	Floodplain Management Regulations

Chapter 16.20 SCCC	Grading Regulations
Chapter 16.22 SCCC	Erosion Control
Chapter 16.30 SCCC	Riparian Corridor and Wetlands Protection
Chapter 16.32 SCCC	Sensitive Habitat Protection
Chapter 16.34 SCCC	Significant Trees Protection
Chapter 16.40 SCCC	Native American Cultural Sites
Chapter 16.44 SCCC	Paleontological Resource Protection
Chapter 16.50 SCCC	Agricultural Land Preservation and Protection
Chapter 16.52 SCCC	Timber Harvesting Regulations
Chapter 16.54 SCCC	Mining Regulations
Chapter 17.02 SCCC	Urban Services Line and Rural Services Line
Chapter 17.04 SCCC	Annual Population Growth Goal for Santa Cruz County
Chapter 18.10 SCCC	Permit and Approval Procedures

SECTION III

This Ordinance shall take effect on the 31st day following adoption outside the Coastal Zone and shall take effect on the 31st day following adoption or upon certification by the California Coastal Commission, whichever is later, inside the Coastal Zone.

PASSED AND ADOPTED this <u>6th</u> day of <u>October</u>, 2020 by the Board of Supervisors and the County of Santa Cruz by the following vote:

AYES:	S
NOES:	S
ABSENT:	S
ABSTAIN:	S

SUPERVISORSLeopold, McPherson, Friend, Coonerty, CaputSUPERVISORSNoneSUPERVISORSNoneSUPERVISORSNone

GREG CAPUT

8/29/2020 (AMS# 9507)

CHAIRPERSON, BOARD OF SUPERVISORS

ATTEST:

SUSAN GALLOWAY Clerk of the Board

APPROVED AS TO FORM:

21/20

Office of the County Counsel

DISTRIBUTION:

County Counsel Planning Department

Chapter 16.20 GRADING REGULATIONS

Sections:

16.20.010	Purpose.
16.20.020	Scope.
16.20.025	Amendment.
16.20.030	Definitions.
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16.20.050	Exemptions.
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	flooding.
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16.20.080	Approval limitations and conditions.
16.20.090	Environmental review.
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16.20.110	Diking, dredging and filling.
16.20.115	Shoreline protection structures.
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16.20.120	Fees.
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16.20.140	Design standards for excavations.
16.20.150	Design standards for fills.
16.20.160	Cut and fill slope setback.
16.20.170	Design standards for drainage facilities and terraces.
16.20.180	Design standards for rural private roads and driveways.
16.20.185	Exceptions to road standards
16.20.195	Agricultural grading.
16.20.200	Inspection and compliance.
16.20.210	Grading violations.
16.20.220	Transfer of responsibility.
16.20.230	Completion and approval.
16.20.240	Repealed.
16.20.250	Repealed.
16.20.260	Repealed.
16.20.270	Repealed.
16.20.280	Appeals.

16.20.010 Purpose.

The purpose of this chapter is to safeguard health, safety, and the public welfare; to minimize erosion and the extent of grading; to protect fish and wildlife; to protect the watersheds; to ensure the natural appearance of grading projects; and to otherwise protect the natural environment of Santa Cruz County.

16.20.020 Scope.

This chapter sets forth rules and regulations to control all grading, including excavations, earthwork, road construction, dredging, diking, fills and embankments; establishes the administrative procedure for issuance of grading permits; and provides for approval of plans and inspections. This chapter shall apply to both private and public activities including those of the County and other such governmental agencies as are not exempted by State or Federal law.

16.20.025 Amendment.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program, such revision shall be processed pursuant to the hearing and notification provisions of ChapterSCCC 13.03 SCCC, and shall be subject to approval by the California Coastal Commission.

16.20.030 Definitions.

<u>All definitionsWords</u> shall be as defined in the General Plan or Local Coastal Program Land Use Plan glossaries, and as follows for the purposes of this chapter, the following definitions apply:

(A) "Agricultural grading" means any grading which takes place on land designated on the County's agricultural resource maps for exclusive agricultural use as specified in SCCC 16.50.040 and for vineyards and associated terracing; provided, however, that agricultural grading does not include any grading on such lands connected with the construction of access roads or building sites; except greenhouse sites. Agricultural grading also does not include the movement of earth for purposes defined in the Chapter as agricultural work and, with the exception of vineyards, does not include grading on hillsides or slopes of twenty percent or greater or grading for specialized agricultural activities as defined in SCCC 16.20.030. in SCCC 16.20.050(I).

(B) "Bedrock" means the in-place solid, undisturbed material either at the ground surface or beneath superficial deposits of gravel, sand or soil.

(C) "Bench" means a relatively level step excavated into earth material.

(D) "Civil engineer" means a professional engineer registered in California to practice civil engineering.

(E) "Clearing" means the removal of vegetation down to bare soil, whether by hand, machine or any other method.

(F) "Compaction" means the densification of earthen solids.

(G) "Contractor" means any person licensed in the State of California to do grading as defined by State law.

(H) "Diking" means construction of an earthen dam to control or confine water.

(1) "Drainage course" means a natural or manmade channel which conveys storm runoff either year-round or intermittently.

(J) "Dredging" means scooping or digging of earth material from the bed of a body of water.

(K) "Driveway" means any private road leading from the street to two or fewer habitable structures or parcels. (See "roadway.")

(L) "Earth material" means rock, natural soil, sand or combination thereof.

(M) <u>"Emergency" means a sudden, unexpected occurrence involving a clear and present danger that</u> demands immediate action to prevent loss of or damage to life, health, property or essential public services. "Engineering geologist" means a professional geologist registered in the State of California to practice engineering geology.

 (\underline{N}) "Erosion" means the wearing away of the ground surface as a result of movement of wind, water or ice.

(O) "Excavation" means the mechanical removal of earth material, or a cavity formed by cutting, digging or scooping.

(P) "Existing grade" means the grade prior to grading.

(Q) "Fill" means the deposition of earth or other material by artificial means for any purpose, for any length of time, including the stockpiling of material, or the conditions resulting therefrom.

(R) "Finish grade" means the final grade of the site which conforms to the approved plan.

(S) "Grade" means the vertical location of the ground surface, or the degree of rise or descent of a slope.

(T) "Grading" means excavating, or filling, dredging, diking, prospecting, exploratory mining operation or combination thereof.

(U) "Key" means a designed compacted fill placed in a trench excavated in undisturbed earth material or rock beneath the toe of a proposed fill slope for the purpose of developing a shearing resistance (see Figure 1).



Figure 1

(V) "Land disturbance" means clearing, excavating, grading or other manipulation of the terrain.

(W) "Littoral cell" means a continuous section of shoreline within which sand moves in a prevailing direction in response to seasonal current.

(X) "Permittee" means the property owner, or any contractor or other person undertaking grading upon the property of the property owner, pursuant to a <u>grading</u> permit granted according to the provisions of this chapter.

(Y) "Planning Director" means the Director of the Planning Department or a designated employeetheir designee.

(Z) <u>"Professional geologist" means a geologist who is licensed by the State of California to practice geology</u>

(AA) "Riparian corridor" means any of the following:

(1) Lands within a stream channel, including the stream and the area between the mean rainy season (bankfull) flowlines;

(2) Lands extending 50 feet (measured horizontally) out from each side of a perennial stream. Distance shall be measured from the mean rainy season (bankfull) flowline;

(3) Lands extending 30 feet (measured horizontally) out from each side of an intermittent stream. Distance shall be measured from the mean rainy season (bankfull) flowline;

(4) Lands extending 100 feet (measured horizontally) from the high water mark of a lake, wetland, estuary, lagoon or natural body of standing water;

- (5) Lands containing a riparian woodland;
- (6) Lands within an arroyo located within the urban services line, or the rural services line.

(BB) "Road gradient (percent)" means a vertical rise multiplied by 100 and divided by horizontal run.

(CC) "Road" or "roadway" means an open way for vehicular traffic serving more than two habitable structures or parcels. (See "driveway.")

(DD) "Security" means a cash deposit, time certificate of deposit or equivalent security acceptable to the County.

(EE) "Site" means a parcel of land or contiguous combination thereof, where grading is performed or proposed.

(FF) "Slope" means an inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance. (See Table A and Figure 2.)

Ratio	Percent	Degrees	
1:1 =	100% =	45	
2:1 =	50% =	22	
3:1 =	33% =	15	
4:1 =	25% =	11	
5:1 =	20% =	9	

Table A



Figure 2

(GG) "Soil" means naturally occurring superficial deposits of earth material overlying bedrock.

(HH) "Soil engineer" <u>or "geotechnical engineer</u>" means a <u>professional</u> civil engineer, <u>registeredlicensed</u> in the State of California, experienced and knowledgeable in the practice of soil <u>and foundation</u> engineering.

(II) <u>"Specialized agricultural activities" means any agricultural activities involving greenhouses, growing in indoor structures, aquaculture and cannabis activities.</u>

(JJ) "Stream" means any watercourse as designated by a solid line or dash and three dots symbol shown on the largest scale of the United States Geological Survey map most recently published, or as indicated in the grading permit when it has been field determined that a watercourse either:

- (1) Supports fish at any time of the year; or
- (2) Has a significant water flow 30 days after the last significant storm; or
- (3) Has a channel, free of soil and debris.

(KK) "Terrace" means a relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.

(LL) "Waterbreak" means a ditch, dike, dip or combination thereof, constructed to effectively divert water as an aid to erosion control.

(MM) "Winter season" means October 15th through April 15th. [Ord. 4346 § 67, 1994; Ord. 3599 § 2, 1984; Ord. 3321 § 1, 1982; Ord. 2972, 1980; Ord. 2500, 1977].

16.20.040 Approval required.

Except as exempted by SCCC 16.20.050, no person shall do, cause, permit, aid, abet, suffer or furnish equipment or labor for any grading until a grading approvalpermit has been obtained for the project. A separate approvalgrading permit shall be required for each site and shall be obtained as follows:

(A) Planning Commission. All approvals applications for grading permits involving in excess of 8,000 cubic yards, or for which an environmental impact report was prepared, or for grading in excess of 1,000 cubic yards on a site which is visible from a scenic corridor roadway, as designated in the Local Coastal Program Land Use Plan, shall be processed according to <u>ChapterSCCC</u> <u>18.10</u> <u>SCCC</u>, Level VI as a

discretionary permit application that is the subject of a noticed public hearing and acted upon by the Planning Commission.

(B) Planning Director. Applications for grading permits involving less than 1,000 cubic yards of earth material on less than 50 percent slopes shall be processed as ministerial building permits and comply with standards of applicable county codes and recommendations of a soils or geotechnical report in order to be approved and issued. Applications for grading permits involving any amount of grading on greater than 50 percent slopes, or grading between 1,000 and 8,000 cubic yards of earth material on a site and which is not located in a designated scenic area or visible from a scenic road All other permits shall be processed according to <u>SCCC 18.10</u> <u>SCCC</u>, Level III. Concurrent approvals shall be processed according to <u>SCCC 18.10.123</u>.

(C) Subdivisions. The <u>Public Works</u> Director <u>of the Department of Public Works</u> is hereby authorized and directed to enforce the provisions of this chapter for grading done within parcel map subdivisions for which improvement plans have been signed by the Public Works Director or within subdivisions for which a final map has been recorded or for property on which a tentative subdivision map has been approved and grading is permitted prior to recording of a final map. Grading permits are not issued by the Planning Director for subdivision work administered by the <u>Director of</u> Public Works <u>Director</u>.

(D) <u>Ministerial Permits. Applications for grading permits involving less than 1,000 cubic yards of</u> earth material on less than 50 percent slopes or grading that is part of a consolidated coastal development permit process shall be processed as ministerial building permits and comply with standards of applicable county codes and recommendations of a soils or geotechnical report in order to be approved and issued.

16.20.045 Coastal Zone Review Standards.

Unless otherwise exempted or excluded, all grading in the Coastal Zone shall require a Coastal Development Permit. Such grading shall be the minimum amount necessary, shall minimize the alteration of natural landforms and protect views to and along the ocean and scenic coastal areas, shall not degrade water quality, and shall otherwise protect coastal resources, including in conformance with the requirements specified below. In addition to any other applicable standards of this chapter, all grading shall adhere to the following:

(A) Deny any grading where a potentially significant danger to soil or water resources has been identified and adequate mitigation measures cannot be undertaken

(B) Require approval of an Erosion Control Plan for all development in conformance with 16.22.060

(C) 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 adequate mitigation measures are identified.

(D) <u>Through runoff and erosion control measures, runoff shall not exceed pre-development levels.</u>

(E) Deny any permit for work which would be hazardous by reason of flood, geologic hazard, or unstable soils; be liable to endanger other properties or result in the deposition of debris on any public way, property, or drainage course, or otherwise create hazard.

(F) Deny any permit for grading which would create unavoidable environmental impacts.

(G) Deny any permit for grading that is not in conformance with the LCP's Provisions governing development within coastal streams, wetlands, and environmentally sensitive habitats and their corresponding buffers.

(H) <u>All development, including access roads and driveways, shall not cross slopes greater than 30</u> percent. A single-family dwelling and associated development on an existing lot of record may be excepted from the prohibition where siting on greater slopes would result in less land disturbance (e.g.,

doing so would avoid ESHA or other sensitive habitats) and siting on lesser slopes is infeasible (i.e., there are no other buildable spots on lesser than 30% slope).

16.20.050 Exemptions.

The following work is exempt from the provisions of this chapter; however, it remains subject to the <u>coastal zone regulations (SCCC 13.20) and requirements for coastal development permits</u>, riparian corridor protection ordinance (<u>SCCC Chapter 16.30 SCCC</u>), the County environmental review-regulations (<u>SCCC Chapter 16.01 SCCC</u>), the erosion control-ordinance (<u>SCCC Chapter 16.22 SCCC</u>), the geological hazards<u>-ordinance (SCCC Chapter 16.10 SCCC</u>), the sensitive habitat protection-ordinance (<u>SCCC Chapter 16.32 SCCC</u>), and the County Native American cultural sites ordinance (<u>SCCC Chapter 16.40 SCCC</u>). The following work may also be subject to other requirements imposed in County and State law.

(A) Excavations. An excavation which does not exceed 100 cubic yards and which does not create a cut slope greater than five feet in depth.

(B) Fills. A fill containing earth material only which is less than two feet in depth, is placed on natural terrain which has a slope flatter than five horizontal to one vertical, does not exceed 100 cubic yards on any one site, does not alter or obstruct a drainage course, and will not be used for structural support.

(C) Basements, Footings. An excavation below finished grade for basements and footings of a building, retaining wall or other structure authorized by a valid building permit. This shall not exempt any fill as provided under subsection (B) of this section made with the material from such excavation, nor exempt any excavation having an unsupported height greater than five feet after the completion of such structure.

(D) Cemeteries. Cemetery graves.

(E) Refuse Disposal. Refuse disposal sites which are permitted and <u>aetuallyactively</u> being controlled pursuant to other County regulations, and excavations for individual and community sewage disposal systems, made pursuant to permit.

(F) Wells and Utilities. Excavations for wells or utilities.

(G) Mining and Quarrying. Mining, quarrying, excavating, processing, stockpiling of rock, sand, gravel, aggregate or clay materials, pursuant to a County permit.

(H) Soil Testing. Exploratory excavations under the direction of a soils engineer or engineeringprofessional geologist where such excavation is to be returned to the original condition under the direction of such engineer or geologist within 45 days after the start of work.

(I) Agricultural Work. Routine plowing, harrowing, disking, ridging, listing, land planing, and similar operations necessary to prepare a field or growing area on land with less than twenty percent slopes, for a crop for continued agricultural use, and not including grading for specialized agricultural activities as defined in this chapter. (All other non-exempt agricultural grading shall require either an agricultural grading permit or a regular grading permit in compliance with this chapter). be subject to the procedures of SCCC 16.20.195.)

(J) Timber Harvesting. Work done pursuant to a valid timber harvesting permit.

(K) County Public Works. Routine maintenance and other work undertaken by the County Department of Public Works that does not impact an environmental resource of hazardous or critical concern where designated, mapped and officially adopted pursuant to law by Federal or State agencies, or by the Santa Cruz County Board of Supervisors, or where identified through field or technical investigation.

16.20.055 Special exemption for prevention or mitigation of Pajaro River/Salsipuedes Creek flooding.

(A) In areas outside of the Coastal Zone, the operation, repair and maintenance of the Pajaro River and Salsipuedes Creek levees and the areas within the levees, for the purpose of restoring flood conveyance capacity, including bench excavation, sediment removal, and similar projects shall be exempt from the provisions of this chapter if all of the following conditions are met:

(1) The work is conducted by or under the direction of the Department of Public Works;

(2) The work is in accordance with a streambed alteration agreement approved by the California Department of Fish and <u>GameWildlife</u>, to the extent that such an agreement is required; and

(3) The project has been subjected to environmental review with the County of Santa Cruz serving as the lead agency.

16.20.060 Application.

Applications for approvals grading permits and, in the coastal zone, coastal development permitsgranted pursuant to this chapter shall be made in accordance with the requirements of <u>SCCC</u>Chapter <u>18.10</u> SCCC and shall include the following:

(A) General. An application for a grading approval permit shall be submitted by the owner(s) of the property or agent when authorized in writing. The application shall be signed by the owner(s) of each site or their designated representative, as defined under SCCC 16.20.030. A civil engineer or other licensed

professional authorized by State law shall prepare and sign the plans and specifications if grading will be in excess of 2,000 cubic yards. Special design requirements for dredging and diking shall be determined by the Planning Director.

(B) The application shall be accompanied by all fees required by SCCC 16.20.120.

(C) Plans and Specifications. Two sets of plans shall be <u>submitted with the application</u>required by the <u>Planning Director</u>. Plans shall be drawn to scale upon substantial material, minimum size 18 inches by 24 inches, and shall be of sufficient clarity to indicate the nature and the extent of the work proposed and show in detail that it will conform to the provisions of this chapter and all relevant laws and regulations. The plans shall include but not be limited to the following information, in writing and/or diagrams as required by the Planning Director:

(1) A statement as to the specific intentions or ultimate purpose for which the grading is being done.

(2) General location of the proposed site.

(3) Property lines and contours of the existing ground and details of terrain and area drainage, and delineation of hillsides or slope areas of twenty percent or more.

(4) Limiting dimensions, elevations or finish contours to be achieved by the grading, and proposed drainage channels and related construction.

(5) Detailed plans of all surface and subsurface drainage devices, walls, cribbing, dams and other protective devices to be constructed with, or as a part of, the proposed work, together with a map showing the drainage area and the estimated runoff of the area served by any drains. The location of any ravines and drainage courses and the pathway of offsite drainage shall be indicated.

(6) Location of buildings or structures on the property where the work is to be performed and the approximate location of buildings or structures on adjacent land owned by other owners which is within 15 feet of the property line or which may be affected by the proposed operations.

(7) A statement of the quantity of excavation and fill.

(8) Specifications, if required, shall contain information covering construction and material requirements.

(9) <u>An erosionA storm water pollution</u> control plan and erosion prevention measures for all surfaces exposed or expected to be exposed during grading activities, in accordance with the requirements of the erosion control ordinance (<u>SCCC Chapter 16.22 SCCC</u>) and runoff and pollution control ordinance (<u>SCCC 7.79</u>) shall accompany every proposed grading plan; including information about whether a Land Clearing Permit or a Winter Grading Operations Permit is also being requested for the grading activity pursuant to the provisions of SCCC 16.22.

(10) Revegetation proposal for all surfaces exposed or expected to be exposed during grading activities.

(11) Name and address of the owner(s).

- (12) Assessor's parcel number(s) of the property on which the work is to be done.
- (13) Location of on-site trees.

(14) When required by the Planning Director, each application for a grading approvalpermit shall be accompanied by supporting data consisting of a soil engineering report and/or engineering geology report. The soil engineering report shall include data regarding the nature, distribution and strength of existing soils; conclusions and recommendations for grading procedures; design criteria for corrective measures when necessary; and opinions and recommendations covering adequacy of sites to be developed by the proposed grading. The engineering geology report shall include an adequate description of the geology of the site, conclusions and recommendations regarding the effect of geologic conditions on the proposed development, and opinions and recommendations covering the adequacy of sites to be developed by the proposed grading. Recommendations included in the reports and approvedaccepted by the Planning Director shall be incorporated in the grading plans and specifications.

(15) When required by the Planning Director because it appears that the location of the property line may be in question in connection with the proposed grading, a parcel survey or other boundary evidence deemed necessary by the Planning Director shall be provided.

(D) Starting and Completion Dates. Each application for a grading permit shall state estimated starting and completion dates <u>and whether phasing of activity is anticipated</u>.

16.20.070 **Variances**<u>Exceptions</u>.

(A) A request for an <u>varianceexception</u> from the provisions of this chapter, the approval conditions, or the plan specifications, may be approved, conditionally approved, or denied according to <u>SCCC 18.10</u> at the level specified in SCCC 16.20.040(A) and (B). A request for a <u>varianceexception</u> must state in writing the provision from which it is to be varied, the proposed substitute provision, when it would apply and its advantages. The following findings shall be required for approval of an exception:

(1) That there are special circumstances or conditions affecting the property; and

(2) That the <u>varianceexception</u> is necessary for the proper design and/or function of the project.

(B) No variance exception shall be granted unless the project, with such variance exception, is consistent with the purpose of this chapter.

(C) As contemplated in this section, an <u>varianceexception</u> shall be granted for alternative methods of construction for projects which could be constructed under the basic standards established in this chapter, but which, if an <u>varianceexception</u> is granted, can be better and/or more economically designed and constructed than if an <u>varianceexception</u> were not given. An <u>varianceexception</u> shall not be granted if the <u>partresult</u> of an <u>varianceexception</u> would have the effect of allowing the construction of a project which would otherwise, without the <u>varianceexception</u>, not be possible under the provisions of the County Code.

(D) Fees for <u>variance_exception</u>s shall be set by resolution of the Board of Supervisors.

16.20.080 Approval limitations and conditions.

Requirements under this section apply to both grading permits and, for any grading in the coastal zone not otherwise exempted or excluded, coastal development permits. Permits for grading must adhere to the following:

(A) Issuance. The issuance of a grading approval permit shall constitute an authorization to do only that work which is described or illustrated on the application for the approval permit or on the approved plans and specifications.

(B) Plan Checking. The application, plans, and specifications filed by an applicant for an approval grading permit shall be checked by the Planning Director within 30 days after receipt of all information required for submittal of the application issuance of the approval. The Planning Director shall notify the applicant in writing within 30 days of the time the application is filed, of any deficiencies that must be corrected in order to allow for approval of the grading permit. The Planning Director or Planning Commission shall approve an application for approvala grading permit if the plans filed therewith conform to the requirements of this chapter, zoning ordinances, any use permit and/or design review conditions and other applicable laws. The Planning Commission shall take its action after carrying out a noticed public hearing on the application and shall approve, conditionally approve or deny the application, based upon whether or not the proposal is consistent with the General Plan, Local Coastal Program, and applicable provisions of the County Code including but not limited to permit approval findings within SCCC 18.10.

(C) Denial of <u>Approval Grading Permit Application</u>.

(1) An application for a grading, dredging, or <u>coastal development</u> <u>approvalpermit</u> shall be denied if the Planning Director or Planning Commission makes any of the following findings:

(a) That the design of the proposed site is not consistent with the applicable general and specific plans adopted pursuant to <u>SCCC Chapters 13.01</u> and <u>-13.03</u> SCCC.;

(b) That the proposed grading plan for the development contemplated does not comply with the requirements of the Santa Cruz County $Code_{\frac{1}{2}}$

(c) If the project is for the creation of a building site, that adequate sewage facilities and water supplies cannot be provided:

(d) If the project as proposed will cause excessive and unnecessary disturbance of the site particularly as defined in the geologic hazard assessment or other geotechnical or geology report prepared for the application, or as addressed by the slope stability provisions of SCCC 16.10.0570(E).; or

(e) If the project is for the purpose of a new, extended or widened road providing access to enable a specialized agricultural activity or to an agricultural growing area on slopes of twenty percent or more, and the road work will involve a degree or nature of grading that involves significant grading which may not be wholly consistent with existing natural topography or grades of the subject area, and which does not provide off-setting public safety, neighborhood or community benefits to a degree that provides reason to support the proposed degree or nature of grading, as specified in findings for approval of the grading permit.

(2) An application for a grading approval permit shall be denied if the work proposed would be hazardous by reason of flood, geological hazard, or unstable soils; be liable to endanger other properties or result in the deposition of debris on any public way, property, or drainage course; or otherwise create a hazard.

(3) An application for a <u>grading approval permit</u> which would create unavoidable adverse environmental impact shall be denied.

(4) An application for grading in a riparian corridor shall be denied if it is not in conformance with other chapters of the County Code which regulate development activity in riparian corridors.

(5) An application for a grading approval permit to place fill within a 100-year floodplain<u>flood hazard area</u> shall be denied, unless the fill-is the minimum amount necessary, not to exceed 50 cubic yards, and it can be demonstrated through environmental review that the fill will not cause significant cumulative impacts is in conformation with the Floodplain Management Regulations (SCCC 16.13).

(6) The Planning Director shall notify the applicant in writing of a denial or conditional denial and shall state the reasons therefor.

(D) Restriction on Certain Grading Approval Permits. If the project is for the creation of, or access to, a building site, land disturbance shall not take place until a building permit has been issued. If an approval grading permit cannot be issued until a determination of adequate water source and sewage disposal or other required site investigation is made, land disturbance shall be limited to the extent necessary to allow such an investigation. This provision shall not apply to improvements or road construction required as a condition of approval of a minor land division or other permit.

(E) Conditions of Approval. In grantingacting to approve any approvalgrading permit under this chapter, the Planning Director or Planning Commission shall attach such conditions as necessary to prevent creation of a nuisance or hazard to public or private property. Such conditions may include, but shall not be limited to:

(1) Improvement of any existing grading project to bring it up to the standards of this chapter.

(2) Requirements for fencing of excavations or fills which would otherwise be hazardous.

(3) Haul routes for materials.

(4) Conditions recommended by the Environmental Coordinator.

(5) Conditions recommended by a geological hazard review.

(6) Check dams, cribbing, riprap or other devices which may be required to prevent erosion: and a requirement that a Winter Operations Erosion Control permit be obtained if grading will occur between October 15th and April 15th, pursuant to the requirements of SCCC 16.22.

(7) Mulching, fertilizing, watering or other methods may be required to establish new vegetation. On slopes less than 20 percent, stockpiling and reapplication of topsoil shall be required, unless it can be shown that adequate erosion control measures, as per the erosion control ordinance (<u>SCCC Chapter 16.22-SCCC</u>), can be implemented.

(8) Dust from grading operations shall be controlled.

(9) No earth or organic material shall be deposited or placed where it may be deposited into a stream, marsh, slough, lagoon or body of standing water in a quantity deleterious to wildlife, aquatic life, or other beneficial uses of the water.

(10) <u>Requirement that a Land Clearing Permit be approved either in conjunction with the</u> subject grading permit, or prior to grading operations involving land clearing taking place, if land clearing is subject to the requirements of SCCC 16.22.

(F) Approved <u>Grading</u> Plans. When the Planning Director issues the <u>grading</u> permit <u>that has been</u> approved by the Director or the Planning Commission, all of the plans and specifications shall be endorsed "approved." Such approved plans and specifications shall not be changed, modified, or altered without written authorization by the Planning Director, and all work shall be done in accordance with the approved plans and this chapter.

(G) Amendment. Amendments to <u>grading permits approvals</u> granted pursuant to this chapter whether for <u>minor or major</u> change of project, conditions, or expiration date or other time limits, shall be processed in accordance with the <u>applicable</u> provisions of <u>SCCCChapter 18.10-SCCC</u>, as a minor administrative permit (Level III) for minor changes of project, changes of conditions for administratively issued grading permits, and extensions of time limits for any grading permit; and as a major amendment (Level VI) for major changes of project and changes of conditions of approval for grading permits approved the the Planning Commission.

(H) Retention of Plans. One set of plans and specifications shall be retained by the Planning Director for a period of not less than two years from the date of completion of work covered therein. Plans which have been submitted for checking and for which no <u>grading</u> permit is issued may be <u>considered</u> <u>abandoned and</u> destroyed by the Planning Director if not picked up by the applicant within <u>90180</u> days of <u>issuance of the latest staff review comments</u>.

(I) Posting of Permit. At the time a grading permit is issued which has been the subject of a Planning Commission public hearing, the County shall also publish a copy of the permit issue the permittee a notice of permit form or forms. The permittee shall cause such form or forms to be posted on the property at a place at which such form or forms can easily be seen from any public or private road or from adjacent properties during any time that grading is taking place on the property. A copy of the plans shall be attached to the notice of permit or, in lieu thereof, a brief description in writing and diagrams of the permitted grading on the planning department website, and retain it on the website until the activity is final, so that members of the public may assess information about the approved grading activity. All other grading permits shall retain the job copy of the approved grading plans on site.

(J) Work Time Limits. The permittee shall fully perform and complete all of the work required to be done within the time limit specified. If no time limit is specified, the permittee shall complete <u>all of</u> the work <u>or the first phase of work</u> within <u>180 daysone year</u> after the date of the issuance of the grading permit, and the remaining phase(s) of the work within the following year or in accordance with the timeline for a development permit that is associated with the project.

If the permittee is unable to complete the work within the specified time, <u>hethey</u> shall, prior to the expiration of the permit, present in writing a request for an extension of time, setting forth the reasons for the requested extension. If, in the opinion of the Planning Director, an extension is warranted, additional time may be granted for the completion of the work.

(K) Working Hours. Hours of grading operation shall be between 7:00 a.m. and 6:00 p.m. on weekdays. No grading shall be permitted on Saturdays, Sundays, and holidays, unless specifically authorized <u>in advance and in writing part of a variance approved</u> by the Planning Director <u>or Building Official</u>.

(L) Expiration. Unless otherwise specified, <u>grading permit</u> approvals issued pursuant to this chapter shall expire one year from the date of issuance if not exercised. Where <u>approvalsgrading permits</u> are issued in conjunction with a development permit granted pursuant to <u>SCCCChapter 18.10</u> <u>SCCC</u> the <u>grading permit</u> approval shall expire in accordance with the provisions of <u>SCCCChapter 18.10</u> <u>SCCC</u>.

(M) Safety Precautions. The permittee shall take all appropriate and necessary precautions to protect adjacent public and private property from damage that may result from the operations.

(N) Property Lines. Whenever the location of a property line is in question as the result of or during operations, the Planning Director may require any boundary evidence which the Planning Director deems necessary. The Planning Director may require the applicant to furnish a parcel survey.

(O) Inclement Weather and Winter Grading. The Planning Director shall stop grading during periods of inclement weather when weather-generated problems are not being controlled adequately. No grading shall occur during the winter season (October 15th through April 15th), unless <u>a Winter Operations</u> <u>Erosion Control Permit authorized in advance by the Planning Director with reference to the erosion control ordinance has been approved and issued</u>.

(P) Validity. The issuance or granting of approval of <u>a grading permit and its</u> plans and specifications shall not be construed to be approval of any violation of any of the provisions of this chapter or of any other law.

The issuance of an approval grading permit based on plans and specifications shall not prevent the Planning Director from thereafter requiring the correction of errors in plans and specifications or from preventing operations from being carried on when in violation of this chapter or of any other law.

(Q) Suspension or Revocation of <u>Grading Permit</u> Approval. The Planning Director may, in writing, suspend or revoke an <u>grading permit</u> approval issued under <u>the</u> provisions of this chapter whenever the <u>approvalgrading permit</u> is issued in error or on the basis of incorrect information supplied, or in violation of any law or regulation or any of the provisions of this chapter.

16.20.090 Environmental review.

Applications for grading approvalspermits shall be subject to environmental review consistent with the California Environmental Quality Act (CEQA) and the most current version of the CEQA <u>Guidelines.submitted to the Environmental Coordinator pursuant to Santa Cruz County environmental impact regulations.</u>

16.20.100 Hazardous conditions.

Whenever the Planning Director determines that an excavation, embankment, or fill has become a hazard to life and limb, endangers property, or adversely affects the safety, use, or stability of a public way or drainage channel, he shall notify in writing the owner(s) of the property or other person or agent in control of the property on which the hazard exists shall be notified. On receipt of the notice, the owner(s) shall within the period specified eliminate the hazard and bring the property into conformance with the requirements of this chapter. [Ord. 3321 § 1, 1982; Ord. 2500, 1977].

16.20.110 Diking, dredging and filling.

(A) A grading <u>approval permit</u> is required for diking, dredging, and filling of open coastal waters above the ordinary high water line, wetlands, lagoons, estuaries and lakes. A<u>n approval grading permit</u> shall be issued only for the following purpose and only where there is no other feasible, less environmentally damaging alternative:

- (1) Restoration purposes, including the protection and enhancement of existing harbors.
- (2) Nature study, aquaculture, or similar resource-dependent activities.

(B) Diking, filling, and dredging in existing estuaries and wetlands is permitted only if it is determined that such activities will maintain or enhance the functional capacity of the wetland or estuary, as determined by the <u>County Environmental CoordinatorPlanning Director</u>.

(C) The dredged material shall be redistributed into the same littoral cell from which it was taken. The deposition of such dredged materials must be timed and located so as not to interfere with shoreline processes, longshore current systems, and public use.

16.20.115 Shoreline and coastal bluff protection structures.

A grading <u>permit</u> approval shall be required for all shoreline <u>and coastal bluff</u> protection structures which involve the placement of rocks, blocks, or fill material in the coastal hazard zone, including the placement of less than 100 cubic yards of material and maintenance and repair <u>activities</u>, <u>even if the activities are being carried out in conformance with an approved Monitoring, Maintenance and Repair Program and do not require a coastal development permit. The design of the proposed structure shall conform to the County's geologic hazard ordinance, <u>SCCCChapter 16.10</u> SCCC, as determined by the Planning Director. Information including, but not limited to, geologic reports, engineered plans, beach sand profiles and structural profiles shall be required as deemed necessary by the Planning Director, <u>County Geologist, or designees</u>.</u>

16.20.116 Emergency <u>permit</u> approvals.

(A) Emergency grading <u>permit</u> approvals may be granted at the discretion of the Planning Director when a sudden, unexpected occurrence involving a clear and present danger demands immediate action to prevent loss of or damage to life, health, property or essential public services. The emergency <u>grading</u> permit shall conform to the objectives of this chapter and the geologic hazards ordinance, <u>SCCCChapter 16.10</u> SCCC; compliance with requirements of coastal zone regulations (SCCC 13.20) shall also be required, if applicable. The Planning Director may request, at the applicant's expense, verification by a qualified professional of the nature of and solutions to the emergency situation.

(B) Applications for an emergency grading permit shall include the following:

(1) Letter from the project civil and/or geotechnical engineer describing the nature of and recommended measures necessary to address the emergency situation, along with monitoring and testing requirements to be fulfilled by the engineering professional or their designee during construction; and

(2) Approximate construction schedule and phasing, along with corresponding best management practices to prevent erosion and sediment from leaving the construction site.

(BC) The emergency work authorized under this the emergency permit approval shall be limited to necessary activities to protect the endangered structure or essential public structure. The emergency approval grading permit shall be voided if the approval permit is not exercised within 15 days of issuance. The emergency grading permit approval expires 30 days after commencement of work. Any work completed outside of these time periods requires a regular grading permit approval unless an extension is granted by the Planning Director.

(CD) At the time of application for an emergency <u>grading permit</u> approval or within 60 days of issuance of the emergency <u>grading permit</u> the applicant shall submit a completed application and the appropriate fees for a regular <u>grading permit</u> approval.

 $(\underline{\mathbf{PE}})$ Within 90 days of the issuance of an emergency <u>approval grading permit</u>, the owner of the property shall submit <u>an as-built plan showing completed emergency grading</u>, along with all construction <u>monitoring and testing reports from the responsible engineer</u>, and all required technical reports and <u>final</u> project plans, unless a time extension is granted by the Planning Director. If the information described above is not submitted within the specified time, the emergency <u>approval grading permit</u> shall be voided and the emergency work shall be considered a violation of this chapter.

 (\underline{EF}) If the emergency work is required during nonbusiness hours, the property owner shall submit an emergency grading permit application on the following business day.

16.20.120 Fees.

Fees for processing grading <u>permitapproval</u> applications and requests for <u>varianceexception</u>s shall be set by resolution of the Board of Supervisors.

(A) Grading <u>ApprovalPermit Application</u> Fees—Subdivision. No plan-checking or grading <u>approvalpermit application</u> fees shall be charged for a grading <u>approvalpermit</u> for property for which a final subdivision map has been recorded (or a tentative subdivision map has been approved subject to a specific condition that grading will be permitted prior to recording of the final map); provided, that all of the contemplated grading is shown on approved improvement plans pursuant to <u>SCCC</u> <u>Chapter 14.01 SCCC</u>. Costs for plan checking and construction inspection for compliance with this chapter shall be determined in the same manner as fees <u>provided set forth</u> in SCCC 14.01.506.

16.20.130 Securities.

Approvals for of grading <u>permits</u> shall not be valid and work shall not be started until the required securities have been provided <u>as determined by the Planning Director</u>. Securities shall remain in effect one winter after final inspection and approval <u>of completed work</u>. All expenditures by the County for corrective work necessary because of the permittee's failure to comply with the provisions of the <u>approvalgrading permit</u> and this chapter shall be charged against the security.

(A) If a grading is in excess of 2,000 cubic yards the permittee shall provide a cash deposit, time certificate of deposit, or equivalent security, acceptable to the County, payable to the County to insure compliance with the provisions of the <u>grading permit</u> approval and this chapter.

(B) If deemed necessary by the Planning Director, a similar security, acceptable to the County, may be required for grading operations of less than 2,000 cubic yards.

(C) The amount of security for grading shall be based on the number of cubic yards of material of either excavation or fill, whichever is larger, plus the cost of drainage or other protective devices. The minimum amount required shall be computed as indicated in the following schedule:

(1) Two thousand to 10,000 cubic yards: $\frac{0.501.00}{0.00}$ per cubic yard, plus the cost of drainage or other protective devices.

(2) Ten thousand and one cubic yards or more: 5,000 plus 0.250 per cubic yard for each additional cubic yard in excess of 10,000, plus the cost of drainage or other protective devices.

(D) No separate grading security except for security required for winter grading operations shall be required for work on which a final subdivision map has been recorded (or a tentative subdivision map has been approved subject to a specific condition that grading will be permitted prior to recording of the final map); provided, that all of the contemplated grading is shown on approved improvement plans pursuant to <u>SCCC Chapter 14.01 SCCC</u> and the amount of the subdivision improvement, performance, labor and material securities is sufficient to cover all grading.

(E) A separate security for any grading operations authorized during the winter, between October 15th and April 15th, may be required if deemed necessary by the Planning Director. [Ord. 3599 § 7, 1984; Ord. 3438 § 1, 1983; Ord. 3321 § 1, 1982; Ord. 2500, 1977].

16.20.140 Design standards for excavations.

(A) Slope. Cut slopes shall be no steeper than one and one-half horizontal to one vertical. Steeper slopes may be allowed if the Planning Director determines they will be stable or if a civil engineer or <u>professional engineering</u> geologist provides a written statement that the site has been investigated and that in <u>histhe engineer's</u> opinion the proposed deviation will be and remain structurally stable. The tops of cut slopes shall be rounded off so as to blend in with the natural terrain. (See Figure 3.)

(B) Drainage and Terraces. Drainage and terraces shall be provided as required by SCCC 16.20.170.

(C) Vegetation Removal. No vegetation removal or grading pursuant to a permit will be allowed which will result in erosion. Vegetation removal shall conform to SCCC 16.22.080.

16.20.150 Design standards for fills.

(A) General. Unless otherwise recommended in the soil engineering report approved by the Planning Director, fills shall conform to the provisions of this section.

(B) Fill Location. Fills shall not be constructed on natural slopes steeper than two to one unless a civil engineer devises a method of placement which will <u>assureensure</u> the fill will remain in place. The toe of a fill shall be no closer than 12 feet horizontally to the top of existing or planned cut slopes (See Figure 3).



Figure 3

(C) Preparation of Ground for Fill. The ground surface shall be prepared to receive fill by the removal of topsoil and other unsuitable materials and by keying into sound bedrock or other suitable material.

(D) Material Permitted. Earth material free from tree stumps, organic matter, trash, sod, peat and similar material shall be used in fills. Rock, cobbles, and similar material shall be distributed and not nested or piled together, and pieces larger than 12 inches in greatest dimension shall not be used unless a method of placement is approved by the Planning Director. Organic material may be used in the top 12-inch layer of fills to aid plant growth.

(E) Fill Slopes. No fill shall be made which creates an exposed surface steeper in slope than two horizontal to one vertical. The Planning Director may allow a steeper slope or require a flatter slope if he finds this found to be consistent with stability and safety.

(F) Compaction of Fills. All fills shall be compacted to a minimum of 90 percent of relative maximum density as determined by ASTM D-1557-70, or CALTRANS test method number California 216or equivalent as required by the current edition of the California Building Code. Compaction tests may be required.

(G) Drainage and Terraces. Drainage facilities and terraces shall be provided as required by SCCC 16.20.170.

16.20.160 Cut and fill slope setback.

Unless otherwise recommended in the approved engineering report and shown on the approved grading plans, the tops and toes of cut and fill slopes shall be set back from property boundaries and structures, as per Table C and the riparian corridor protection ordinance (<u>SCCC_Chapter_16.30_SCCC</u>).

Table C

Н	а	b	с	d
0—10 feet	3 feet	2 feet	5 feet	5 feet
11—30 feet	(H/2) feet	3 feet	(H/2) feet	7 feet
31 feet and over	15 feet	3 feet	15 feet	10 feet





(A) General. Drainage facilities and terraces shall conform to the provisions of this section unless otherwise indicated on the approved <u>grading</u> permit and grading plan.

(B) Drainage Facilities.

(1) Existing drainage courses shall not be obstructed and alterations to them must conform to the provisions of this section.

(2) Drainage facilities shall be provided to carry surface and subsurface waters to the nearest drainage course designated for such purpose by the Planning Director or on-site dry wells. Discharge of waters onto natural ground may be allowed only if a suitable means is provided for reducing the velocity of flow to prevent erosion.

(3) Culvert sizes shall be in accordance with "County Design Criteria, Part 2, Storm Drainage." Minimum diameter shall be 12 inches. Culvert material shall be clay, cast iron, cast-in-place or pre-cast concrete, corrugated steel, aluminum, asbestos-cement or other materials approved by the Planning Director.

(4) Cuts, fills, and retaining walls shall have subsurface drainage facilities if necessary for stability.

(5) Gutters, berms and/or culverts may be required for roads and driveways to control water runoff.

(6) Berms, ditches, or swales shall be constructed at the top of cut and fill slopes for protection against water runoff.

(C) Terraces. Terraces shall be required on cut and fill slopes at not more than 30-foot vertical intervals to control surface water and debris. (See figure in Table C.)

(1) Terraces shall be at least six feet wide.

(2) All swales or ditches on drainage terraces shall be graded to provide suitable drainage and designed to prevent erosion.

(3) Swales or ditches which collect water from a tributary area exceeding one-third of an acre (measured horizontally) shall have down drains.

16.20.180 Design standards for **rural** private roads and driveways.

(A) All private road and driveway construction requiring a grading approval shall conform to the provisions of this section. These requirements may be modified for emergency access, temporary roads, or roads leading to an agricultural building or well site if approved in writing by the Planning Director.Require all new structures, including additions and Accessory Dwelling Units of more than 500 new square feet (not including Conversion ADUs), added to single-family dwellings on existing parcels of record, to provide and maintain an adequate driveway or road for fire protection in conformance with the adopted standards of State law, County Fire Code, and local fire district ordinances.

(B) Width of roadbed for a roadway shall be 16 feet minimum; width of a driveway shall be 12 feet minimum. Where it is environmentally infeasible to meet these criteria (due to excessive grading or tree removal), a 12-foot wide all weather road with 12-foot wide by 30-foot long turnouts located approximately every 500 feet may be approved with the approval of the fire department. The distance

between turnouts may be adjusted at the discretion of the Planning Director if deemed appropriate for reasons of topography, environment or emergency access.

(C) Minimum centerline radius shall be 35 feet. (Exception: Driveways which serve as access to any habitable structure and which are 150 feet or less from the main road.)

(D) The maximum grade of the road or driveway shall not exceed 15 percent; however, grades of up to 20 percent are permitted for up to 200 feet at a time.

(E) The structural section shall consist of a minimum five inches of baserock, Class II or Class IV. Class IV aggregate base should have a minimum R value of 50, and not more than 10 percent of the aggregate shall pass the number 200 sieve.

(F) Where the subgrade is designated as an expansive clayey soil, the structural section should be determined using the California Design Procedure.

(G) The aggregate base required by these design standards can be omitted if the Planning Director determines that the native material provides sufficient bearing capacity for all weather use.

(H) Road surfacing shall meet the following standards, based on road gradient: zero to 10 percent gradient two inches of drain rock compacted into a four inch sub-base of Class II baserock; 10 to 15 percent gradient oil and screenings; greater than 15 percent gradient one and one-half inches asphaltic concrete. (Exception: aggregate base and asphaltic concrete may be omitted if a structural section of four-inch concrete is used.)

(I) Asphalt or concrete berms or their equivalent may be required to control drainage. Discharge shall be at points of natural drainage courses with energy dissipaters installed where necessary to prevent erosion.

(J) Entrances from private roads or driveways into private roads shall be limited in gradient as shown by Figure 4.



Figure 4. Private Road or Drive

(K) Any roadway or driveway which is more than 300 feet long and a dead end shall have a turn-around area with a minimum of 32 feet radius, or equivalent.

(L) A horizontal clearance of 16 feet and a vertical clearance of 14 feet shall be maintained on all roadways, driveways, and turnouts.

(M) Where a private driveway will connect to a County-maintained road, an encroachment permit shall first be obtained from the Public Works Department.

Diagrammatic representations of access standards are available at the Santa Cruz County Planning Department and local fire agencies.

16.20.185 Exceptions to standards for private roads and driveways

Exceptions to these standards and requirements that apply to all new structures (except Conversion Accessory Dwelling Units or ADUs 500 square feet or less), including additions or ADUs of more than 500 new square feet to single-family dwellings on existing parcels of record, may be granted at the discretion of the fire code official for single-family dwellings on existing parcels of record as follows:

(A) When the existing access road is acceptable to the Fire Department having jurisdiction.

(B) In addition, any of the following mitigation methods may be required prior to issuance of a building permit and/or as a condition of discretionary development approval:

(1) Participation in an existing or formation of a new road maintenance group or association.

(2) Completion of certain road improvements such as fill pot holes, resurface access road, provide turnouts, cut back brush, etc. are made, as determined by the fire officials, and provided that the fire department determines that adequate fire protection can still be provided.

(3) <u>Provision of approved fire protection systems as determined by the fire code official.</u>

(C) The level of road improvement required shall bear a reasonable relationship to the magnitude of development proposed.

16.20.195 Agricultural grading.

(A) General. All <u>permits-approvals</u> for agricultural grading shall be issued by the Planning Director. Work remains subject to the coastal zone regulations of Chapter 13.20, requirements of Title 16 Environmental Regulations, and other applicable provisions of local or state regulations. Applications for grading permits for special agricultural activities as defined by this chapter shall not be processed under this agricultural grading permit section, and shall comply with standard grading permit application requirements. Applicants for an agricultural grading <u>approvalpermit</u> shall submit a plan to the Planning Director, including the following:

- (1) Existing and proposed drainage pattern.
- (2) Estimate of earth to be moved.
- (3) Property map with graded area shown.

(4) Erosion control measures to be taken on disturbed noncrop areas, including long-term maintenance.

(5) Cross-sections of the proposed grading project. Applications for grading <u>permits</u> for access roads and for building sites, except greenhouse sites, shall not be processed under this section.

(B) Water Retention. The Planning Director may require review or design by the United States Department of Agriculture Soil Conservation, the Santa Cruz County Resource Conservation District, or a soils<u>and/or</u> engineer for the following projects:

- (1) On-site water<u>and sediment</u> retention (ponds).
- (2) Grading with major erosion potential.

The conditions of the design or review shall be part of the grading permit.

(C) Special Review. The Planning Director can require review of the project proposed agricultural grading by the Agricultural Policy Advisory Commission.

(D) Design Standards for Agricultural Grading. Specifications of design for agricultural grading shall be consistent with agricultural practices and needs, and shall <u>assureensure</u> slope stability, soil conservation, and flood hazard protection. Reference to agricultural grading may be <u>required to be</u> recorded in the deed by the Planning Director as a condition of permit approval.

(E) <u>ApprovalApplication</u> Processing. Agricultural grading <u>approvalspermit applications</u> shall be processed within 30 days of receipt. Provisions should be made for emergency processing at the discretion of the Planning Director.

(F) Fees and Bonds. The fee for agricultural grading approvalspermits shall be set by resolution of the Board of Supervisors. No surety bonds are required.

16.20.200 Inspection and compliance.

The Planning Director shall conduct inspections to ensure compliance with this chapter.

(A) Inspection. The following inspections shall be performed by the Planning Director.

- (1) Pre-Site Inspection. To determine the suitability of the proposed grading project.
- (2) Grading operation progress.
- (3) Final Inspection. To determine compliance with plans and specifications.

(B) Notification. The permittee shall notify the Planning <u>DirectorDepartment</u> 24 hours prior to the start of the authorized work and also 24 hours prior to any inspection requested by <u>the permittee</u> or permittee's authorized agent.

(C) Right of Entry. The filing of an application for a grading <u>approvalpermit</u> constitutes a grant of permission for the County to enter the development area for the purpose of administering this chapter from the date of the application to the termination of the erosion control maintenance period. If necessary, the Planning Director shall be supplied with a key or lock combination or permitted to install a County lock.

(D) Final Inspection. Final inspection and approval of the <u>grading permit</u>, building permit, development permit or parcel approval shall not occur until the project is in compliance with all of the grading <u>permit</u> approval conditions and all of the provisions of this chapter.

16.20.210 Grading violations.

(A) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any grading as defined in SCCC 16.20.030 unless (1) a <u>developmentgrading</u> permit has been obtained and is in effect which authorizes the grading, or (2) the grading is exempt from the requirement for a permit by the provisions of SCCC 16.20.040 and the provisions of <u>SCCC</u> <u>Chapter 13.20</u> <u>SCCC</u>.

(B) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any diking, dredging, or filling of open coastal water above the ordinary high water line, or of wetlands, lagoons, estuaries, or lakes unless a <u>developmentgrading</u> permit has been obtained and is in effect which authorizes such activities.

(C) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any shoreline protection structures which involves the placement of rocks, blocks, or fill material in a coastal hazard zone unless a <u>developmentgrading</u> permit has been obtained and is in effect which authorizes such activities.

(D) It shall be unlawful for any person to exercise a <u>grading permit or</u> development permit which authorizes grading without complying with all of the conditions of such permit.

(E) It shall be unlawful for any person to refuse or fail to abate a hazardous condition as required by a notice of hazardous condition issued by the Planning Director under the provisions of SCCC 16.20.100.

(F) It shall be unlawful for any person to knowingly do, cause, permit, aid, abet or furnish equipment or labor for any work in violation of a stop work notice from and after the date it is posted on the site until the stop work notice is authorized to be removed by the Planning Director.

(G) If the Planning Director determines that any grading occurring in the County does not comply with the <u>developmentapproved grading</u> permit or this chapter, <u>hethe Planning Director</u> may stop all work until corrective measures have been completed. The site shall be posted with a "stop work" notice. No building, septic tank, encroachment or other permit shall be issued by the County, and the County may require that all work shall be stopped pursuant to any such permits issued, until corrections have been made to the satisfaction of the Planning Director.

(H) Whenever the Planning Director determines that grading has been done without the required gradingdevelopment permit, <u>hethe Planning Director</u> may refuse to issue a permit for the work already completed and require mitigating action.

16.20.220 Transfer of responsibility.

If the civil engineer, the soil engineer or the <u>engineeringprofessional</u> geologist of record is changed during the course of the work, the work may be stopped until <u>thea qualified licensed professional</u> replacement has agreed to accept the responsibility within the <u>required</u> area of <u>his</u> technical competence for approving the work already accomplished.

16.20.230 Completion and approval.

If a civil engineer or another professional licensed by State law prepared the grading plans, <u>heat the</u> <u>completion of the project the licensed professional</u> shall provide a written statement to the Planning Director that all grading was completed in conformance with the provisions of the permit and this chapter.

16.20.240 Recording notice of violation.

Repealed by Ord. 4392A.

16.20.250 Removal of notice of violation.

Repealed by Ord. 4392A.

16.20.260 Abatement of nuisance.

Repealed by Ord. 4392A.

16.20.270 Penalties.

Repealed by Ord. 4392A.

16.20.280 Appeals.

All appeals of actions taken pursuant to the provisions of this chapter shall be made in conformance to the <u>applicable</u> procedures ofset forth in SCCC Chapter 18.10 SCCC.

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Chapter 16.22 EROSION CONTROL

Sections:

Purpose.
Scope.
Amendment.
Definitions.
General provisions.
Project design.
Erosion control plan.
Runoff control.
Land clearing <mark>approval</mark> permit.
Winter operations erosion control permit.
Overall responsibility.
Exemptions.
Variances. Exceptions.
Fees.
Inspection and compliance.
Applicable laws and regulations.
Violations.
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16.22.010 Purpose.

The purpose of this chapter is to eliminate and prevent conditions of accelerated erosion that have led to, or could lead to, degradation of water quality, loss of fish habitat, damage to property, loss of topsoil and vegetation <u>and tree</u> cover, disruption of water supply, and increased danger from flooding, and to implement Local Coastal Program land use policies. The regulatory standards of this Chapter shall be required and incorporated into proposed project plans prior to approval and issuance of a building or grading permit for a project. For projects that propose land clearing or winter operations as defined in this Chapter, a land clearing permit or winter operations erosion control permit shall be required, which are considered as administrative discretionary permits under Title 18 of the County Code.

16.22.020 Scope.

This chapter requires control of all existing and potential conditions of accelerated (human-induced) erosion; sets forth required provisions required of all projects for project planning, preparation of erosion control plans; and runoff control; and establishes requirements for discretionary land clearing permits; and winter operations erosion control permits; and establishes procedures for administering thoese provisions. This chapter shall apply to both private and public activities including those of the County and other such governmental agencies as are not exempted by State or Federal law.

16.22.025 Amendment.

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When a chapter revision constitutes an amendment to the Local Coastal Program such revision shall be processed pursuant to the hearing and notification provisions of <u>SCCC</u><u>Chapter</u> 13.03 <u>SCCC</u> and shall be subject to approval by the California Coastal Commission.

16.22.030 Definitions.

(A) "Accelerated erosion" means erosion caused by a human-induced alteration of the vegetation, forest, land surface, topography, or runoff pattern. Evidence of accelerated erosion is often indicated by exposed soils, gullies, rills, sediment deposits, or slope failures caused by human activities.

(B) "Access envelope" means an area delineated on the site plan to which all <u>land</u> clearing and land disturbance for construction of access to a development site or parcel must be confined.

(C) "Agricultural grading" means grading on land designated for exclusive agricultural use as specified under SCCC 16.50.040.

(D) "Approved erosion control specialist" means a person who has met certain minimum qualifications established by the Planning Director which demonstrate his/her capability to prepare small-scale erosion control plans.

(E) "Building envelope" means an area delineated on the development plans to which all <u>land</u> clearing and land disturbance for construction must be confined.

(F) "Development permit" as used in this Chapter means any permit or approval issued by the County for new land use activities including but not limited to: building, <u>coastal development permits</u>, grading, land clearing, subdivisions, minor land divisions, and residential, commercial, industrial and agricultural development.

(G) "Drainage course" means a natural or manmade channel which conveys runoff either year-round or intermittently.

(H) "Earth material" means rock, natural soil, or combination thereof.

(I) "Erosion" means the wearing away of the ground surface as a result of the movement of wind or water.

(J) "Erosion hazard" means the susceptibility of a site to erode, based on condition of slope, rock type, soil, and other site factors. High erosion hazard areas include areas of high and very high erosion hazard shown on maps prepared by the Planning Department. Hazard may be determined based on a site-specific investigation.

(K) "Grading" means excavating, filling, leveling, or smoothing, or combination thereof which requires a grading and/or coastal development permit under Chapter 16.20 Grading Regulations.

(L) "Land clearing" means the removal of <u>one quarter acre or more of natural vegetation (including forest areas)</u> down to duff or bare soil, <u>for any purpose and by any method</u>.

(M) "Land clearing approval permit" means an discretionary administrative development permit, which if granted approval granted by the Planning Director which authorizes the permittee to carry out land clearing, and which may be subject to conditions of approval.

(N) "Land disturbance" means clearing, excavating, grading, or other manipulation of the terrain.

(O) "Major grading" means grading in excess of 100 cubic yards.

(P) "Major development proposals" means new commercial, industrial, or professional developments; or new residential developments of more than four units.
(Q) "Minor development proposals" means building permits, grading permits for less than 2,000 cubic yards, subdivisions of four or less lots, and any other project not identified as a major development proposal in SCCC 16.22.060(D).

(R) "Minor grading" means grading less than 100 cubic yards.

(S) "New road or driveway" means any newly constructed road or driveway or any improvement to an existing road bed which requires more than 100 cubic yards grading in any 500-foot segment in order to meet the design standards in SCCC 16.20.180. Any road, driveway, or bridge constructed pursuant to a timber harvest permit issued by the State of California shall be considered a new road for the purposes of subsequent development and shall be subject to all current design standards and applicable policies.

(T) "Onsite detention" means temporary storage of runoff on the site.

 (\underline{U}) "Onsite retention" means permanent holding of runoff on the site through percolation to the ground.

(V) "Owner" means the person or persons shown in the County Recorder's Office as owner of the property.

(W) "Permittee" means any person undertaking development activities upon a site pursuant to a <u>development, building, or grading</u> permit granted by the County.

(X) "Person" means any person, firm, association, corporation, organization, partnership, business, trust company, public agency, school district, the State of California and its political subdivisions or instrumentalities.

(Y) "Planning Director" means the Director of the Planning Department or his authorized designee charged with the administration and enforcement of this chapter. The Public Works Director or authorized designee may administer the provisions of the chapter for subdivisions.

(Z) "Responsible person" means any person who creates a condition which may lead to accelerated erosion. If a specific person cannot be identified, the owner of the land where such condition exists shall be considered the responsible person.

(AA) "Road" or "roadway" means an open way for vehicular traffic, which can also include an approved private driveway or other site access feature.

(BB) "Runoff" means the movement of water over the ground surface.

(CC) "Sediment" means eroded earth material that is carried by runoff and/or deposited in a stream, drainage course, or other area.

(DD) "Sensitive habitat" includes areas defined as sensitive habitats in General Plan and Local Coastal Program Land Use Plan Section 5.1, specifically 5.1.2 and 5.1.3.

(EE) "Site" means a parcel of land or contiguous parcels where land alterations, including grading, land clearing, or construction, are performed or proposed.

(FF) "Soil" means the unconsolidated mineral and organic material on the immediate surface of the earth.

(GG) "Stream" means any watercourse designated by a solid line or dash and three dots symbol on the largest scale of the United States Geological Survey map most recently published, or as indicated in the development permit, <u>building permit</u>, or <u>grading permit</u> when it has been field-determined that a watercourse either:

- (1) Supports fish at any time of the year; or
- (2) Has a significant water flow 30 days after the last significant storm; or
- (3) Has a well-defined channel, free of soil and debris.

(HH) "Ten-year storm" means a storm of an intensity that would be exceeded on the average only once every 10 years. The intensity for the site shall be determined according to the County Public Works Design Criteria Manual. The duration of the storm used in runoff calculation shall be equivalent to the concentration time for the area which drains through the project.

16.22.040 General provisions.

No person shall cause or allow the continued existence of a condition on any site that is causing or is likely to cause accelerated erosion as determined by the Planning Director. Such a condition shall be controlled and/or prevented by the responsible person and the property owner by using appropriate measures outlined in subsequent sections of this chapter. Additional measures shall be applied if necessary by the responsible person and the property owner <u>if initial measures are insufficient to prevent</u> <u>accelerated erosion given weather or other conditions</u>. Specific additional measures may be required by the Planning Director. Property owners will be given a reasonable amount of time, as determined by the Planning Director, to control existing problems depending on the severity of the problem, and the extent of necessary control measures. Where feasible, erosion problems shall be controlled no later than the beginning of the next rainy season (October 15th).

16.22.050 Project design.

The density and design of new development shall be planned to be consistent with the characteristics and constraints of the site:

(A) Structures on slopes that would normally require major grading shall utilize pole, step, or other foundations that do not require major grading.

(B) New lots shall not be created which will:

(1) Require new access roads and driveways to cross slopes exceeding 30 percent; or

(2) Require cuts and fills greater than 10 feet in height for distances greater than 50 feet or 10 percent of the new roadway length, whichever is greater.

(C) For any project, access roads and driveways should not cross slopes greater than 30 percent and cuts and fills should not exceed 10 feet. <u>VariancesExceptions</u> to this rule can be granted if a route across steep slopes will result in less environmental damage than all alternative routes, or if no other alternative exists.

(D) Building and access envelopes or nonbuildable areas may be required to be delineated on the development plans so as to keep disturbance out of particularly erodible areas. Envelopes shall be required in areas of high erosion hazard.

(E) Streams or drainage courses shall not be obstructed or disturbed except for approved road crossings, unless disturbance of a drainage course will improve overall site design and be consistent with the purpose of this chapter.

(F) If the project is for creation of or access to a building site, land disturbance shall not take place until a building permit has been issued. If a permit cannot be issued until a determination of adequate water source and sewage disposal or other required site investigation is made, land disturbance shall be limited to the extent necessary to allow such an investigation. This provision shall not apply to road construction or other grading activities which are specifically required as a condition of a minor land division or other permit.

(G) Erosion control measures specified in <u>a land clearing permit or a winter operations erosion control</u> <u>permit</u>, or <u>otherwise required</u> pursuant to, <u>the regulations of</u> this chapter, shall be in place and maintained at all times between October 15th and April 15th.

16.22.060 Erosion control plan.

(A) Prior to issuance of a building permit, A condition of approval of a discretionary development permit or land division, shall require that an erosion control plan be incorporated into the building and grading plans indicating proposed methods for the control of runoff, erosion, and sediment movement, shall be submitted and approved. Prior to issuance of a building, grading, land clearing or winter operations erosion control permit, erosion control measures consistent with the standards of this chapter shall be included in project plans submitted and approved. Erosion control plans may also be required by the Planning Director for other types of applications where erosion can reasonably be expected to occur. The erosion control plan may be incorporated into other required plans, provided it is identified as such. Erosion control plans shall include, as a minimum, the measures required under SCCC 16.22.070, 16.22.080, 16.22.090, and 16.22.100. Additional measures or modification of proposed measures may be required by the Planning Director prior to project approval. No grading or land clearing, coastal development, or winter gradingoperations may take place on the site prior to approval of an erosion control plan for that activity. Final certification of project completion may be delayed pending proper installation of measures identified in the approved erosion control plan.

(B) Applications for land clearing permits-approvals granted pursuant to this chapter shall be made according to <u>SCCC_Chapter 18.10-SCCC</u>, Level III_administrative permit process, and shall include two sets of plans for each application and may be processed as concurrent approvals pursuant to SCCC 18.10. Particular components may be required by the Planning Director. Plans shall be drawn to scale upon substantial material, minimum size 18 inches by 24 inches, and shall be of sufficient clarity to indicate the nature and the extent of the work proposed and show in detail that it will conform to the provisions of this chapter and all relevant laws and regulations. The minimum size for plans for land clearing permits shall be eight and one-half inches by 11 inches. The plans <u>submitted in an application for a land clearing permit</u> shall include the following information in writing and/or diagrams:

(1) General location of the proposed site.

(2) Property lines and contours of the site including finish contours to be achieved by grading, details of terrain, and area drainage; proposed construction, proposed drainage channels, and other runoff control measures.

(3) Measures for runoff control and erosion control to be constructed with, or as a part of, the proposed work. All measures required under this chapter shall be shown. Function of erosion control measures shall be consistent with the provisions of this chapter.

(4) Delineation of areas to be cleared during development activities.

(5) Revegetation proposal for all surfaces exposed or expected to be exposed during development activities, including cut and fill slopes.

(6) Name and address of the owner(s).

(7) Assessor's parcel number(s) of the property on which the work is to be done.

(8) North arrow, scale, and name and location of nearest public road intersection.

(9) Name, address, and phone number of person who prepared the plan.

(C) For minor development proposals, the erosion control plan is not required to be prepared by a registered professional (as listed in subsection (D) of this section).

(D) For major development proposals, the erosion control plans shall be prepared by a registered professional authorized to do such work under State law. For these major development projects, detailed plans of all surface and subsurface drainage devices, runoff calculations, and other calculations demonstrating adequacy of drainage structures shall be included. Inspection by the personprofessional who prepareding the approved plan and certification of proper installation of control measures may be required by the Planning Director. Major proposals include:

(1) Subdivisions of more than four lots.

(2) Grading in excess of 2,000 cubic yards.

(3) Commercial or industrial development permits for new structures; or residential development permit<u>s</u> for more than four units.

(4) Other projects of a similar nature determined by the Planning Director to cause major land disturbance.

(E) Applications for activities where the Planning Director recognizes that no land disturbance will take place shall not be required to include an erosion control plan. Such activities may include, but are not limited to:

(1) Change of use permits where there would be no expansion of land disturbing activities.

(2) Construction within an existing structure. [Ord. 4496-C § 86, 1998; Ord. 3439 § 1, 1982; Ord. 3337 § 1, 1982; Ord. 2982, 1980].

16.22.070 Runoff control.

Runoff from activities subject to a building <u>grading</u>, <u>or land clearing</u> permit, <u>or parcel map</u>, <u>subdivision</u> approval or development permit shall be properly controlled to prevent erosion. The following measures shall be used for runoff control, and shall be adequate to control runoff from a 10-year storm:

(A) On soils having high permeability (more than two inches/hour), all runoff in excess of predevelopment levels shall be retained on the site. This may be accomplished through the use of infiltration basins, percolation pits or trenches, or other suitable means. This requirement may be waived where the Planning Director determines that high groundwater, slope stability problems, etc., would

inhibit or be aggravated by onsite retention, or where retention will provide no benefits for groundwater recharge or erosion control.

(B) On projects where onsite percolation is not feasible, all runoff should be detained or dispersed over nonerodible vegetated surfaces so that the runoff rate does not exceed the predevelopment level. Onsite detention may be required by the Planning Director where excessive runoff would contribute to downstream erosion or flooding. Any policies and regulations for any drainage zones where the project is located will also apply.

(C) Any concentrated runoff which cannot be effectively dispersed without causing erosion shall be carried in nonerodible channels or conduits to the nearest drainage course designated for such purpose by the Planning Director or to on-site percolation devices. Where water will be discharged to natural ground or channels, appropriate energy dissipators shall be installed to prevent erosion at the point of discharge.

(D) Runoff from disturbed areas shall be detained or filtered by berms, vegetated filter strips, catch basins, or other means as necessary to prevent the escape of sediment from the disturbed area.

(E) No earth or organic material shall be deposited or placed where it may be directly carried into a stream, marsh, slough, lagoon, or body of standing water.

16.22.080 Land clearing <u>permit</u> approval.

Land clearing shall be kept to a minimum. Vegetation removal shall be limited to that amount necessary for building, access, and construction as shownand shall be identified on the approved <u>development</u>, grading, building, land clearing grading and/or erosion control plan. The following provisions shall apply:

(A) When no land development permit has been issued, the following extents of land clearing require approval of <u>a land clearing permit and an erosion control plan according to the application processing and approval procedures in SCCCChapter 18.10 SCCC</u>, Level III <u>administrative development permit</u>:

(1) Any amount of clearing in a sensitive habitat, as defined in this chapter.

(2) One-quarter acre or more of clearing in <u>any other area subject to county jurisdiction.the</u> Coastal Zone if also in a least-disturbed watershed, a water supply watershed, or an area of high erosion hazard.

(3) One <u>quarter acre or more of clearing in all areas not included in subsection (A)(1) and (2) of this section.</u>

(B) When a land development permit has been issued, land clearing may be done according to the approved development plan.

(1) For land clearing in the Coastal Zone which will be more than that shown on the approved erosion control plan, a new land-clearing <u>permitapproval</u> is required if the land is located in a least-disturbed watershed, a water supply watershed, or an area of high erosion hazard.

(2) For land clearing in any area which will include more than one-<u>quarter</u> acre in excess of that shown on the approved plan, a new land-clearing <u>permitapproval or amendment of the approved</u> <u>development permit</u> is required.

(C) <u>Approval Approvals</u> of land clearing <u>permit requests</u> shall <u>be based upon review and placing</u> <u>conditions on plans as needed to ensure that the proposed activities incorporate or meet the following</u>

<u>measures</u> conditions. All disturbed surfaces shall be prepared and maintained to control erosion and to establish native or naturalized vegetative growth compatible with the area. This control shall consist of:

(1) Effective temporary planting such as rye grass, barley, or some other fast-germinating seed, and mulching with straw and/or other slope stabilization material;

(2) Permanent planting of native or naturalized drought resistant species of shrubs, trees, etc., pursuant to the County's landscape criteria, when the project is completed;

(3) Mulching, fertilizing, watering or other methods may be required to establish new vegetation. On slopes less than 20 percent, topsoil shall be stockpiled and reapplied.

The protection required by this section shall be installed prior to calling for final approval of the project and at all times between October 15th and April 15th. Such protection shall be maintained for at least one winter until permanent protection is established.

(D) No land clearing shall take place prior to approval of <u>a land clearing permit which includes</u> the erosion control plan. Vegetation removal between October 15th and April 15th shall not precede subsequent <u>permitted</u> grading or construction activities by more than 15 days. During this period, erosion and sediment control measures shall be in place.

(E) Land clearing of more than one-quarter acre that is not a part of a permitted activity shall not take place on slopes greater than 30 percent.

16.22.090 Winter operations erosion control permit.

(A) No land clearing operations greater than one<u>-quarter</u> acre per year per site or grading operations greater than 100 cubic yards may take place between October 15th and April 15th, unless authorized by the Planning Director and found to be consistent with the purposes of this chapter. When construction will be delayed due to the limitation on winter operations, the date for expiration of the <u>land clearing and/or</u> <u>grading</u> permit shall be extended by that amount of time that work is delayed by this chapter.

(B) When winter operations are permitted, the following measures shall be taken to prevent accelerated erosion. Additional measures may be required as conditions of approval of the winter operations erosion control permit:

(1) Between October 15th and April 15th, disturbed surfaces not involved in the immediate operations shall be protected by mulching and/or other effective means of soil protection as required by the Planning Director.

(2) All roads and driveways shall have drainage facilities sufficient to prevent erosion on or adjacent to the roadway or on downhill properties. Erosion-proof surfacing may be required by the Planning Director in areas of high erosion hazard.

(3) Runoff from a site shall be detained or filtered by berms, vegetated filter strips, and/or catch basins to prevent the escape of sediment from the site. These drainage controls shall be maintained by the permittee and/or property owner as necessary to achieve their purpose throughout the life of the project.

(4) Erosion control measures shall be in place at the end of each day's work.

(5) The Planning Director shall stop operations during periods of inclement weather if <u>heit is</u> determine<u>ds</u> that erosion problems are not being controlled adequately. [Ord. 3337 § 1, 1982; Ord. 2982, 1980].

16.22.100 Overall responsibility.

It shall be the responsibility of the owner and the permittee to ensure that erosion does not occur from any activity during or after project construction. Additional measures, beyond those specified, may be required by the Planning Director as deemed necessary to control accelerated erosion.

16.22.110 Exemptions.

Conditions of accelerated erosion existing prior to adoption of this chapter are not exempted. The intent of this section is not to invalidate existing discretionary, <u>building or grading</u> permits, but rather to prevent or mitigate accelerated erosion. The following work is exempted from all provisions of this chapter except SCCC 16.22.040 and 16.22.160 through 16.22.190:

(A) Agricultural Activities. Permitted agricultural grading, routine agricultural activities such as plowing, harrowing, disking, ridging, listing, land planing, and similar operations to prepare a field for a crop, including routine clearing to maintain existing rangeland;

(B) Timber Harvesting. Work done pursuant to a valid timber harvest permit;

(C) Quarrying. Quarrying done pursuant to a valid quarry permit (Reclamation Plan);

(D) Septic Systems and Wells. Work done pursuant to a valid permit for septic system installation and repair or well drilling; however, SCCC 16.22.080(B) and 16.22.090(B) shall apply, and sediment from these activities shall not be allowed to enter any stream or body of water;

(E) Resource Management. Clearing, fuel management, reforestation, erosion control, or other resource management programs carried out under the auspices of a government agency which include appropriate erosion control measures. Agencies shall notify the Planning Director of such projects.

16.22.120 Variances Exceptions.

(A) A request for a variance<u>exception</u> from the provisions of this chapter, the permit conditions, or the plan specifications may be considered according to <u>the application processing and approval procedures in SCCCChapter 18.10</u> SCCC at the level specified in SCCC 16.22.060(B)., Level III administrative discretionary permits.

(B) A request for <u>an exception-variance</u> must state in writing the provision from which it is to be <u>variedexcepted</u>, the proposed substitute provisions, when it would apply, and its advantages. In granting the <u>exceptionvariance</u>, the Planning Director shall<u>find-be guided by the following criteria</u>:

(1) That there are special circumstances or conditions affecting the property.

(2) That the <u>exception-variance</u> is necessary for the proper design and/or function of a reasonable project for the property.

(3) That adequate measures will be taken to ensure consistency with the purpose of this chapter.

(C) As contemplated in this section, an <u>exception</u>-variance shall be granted for alternative methods of construction for projects which could be constructed under the basic standards established in this chapter, but which, if a<u>n exception</u>-variance is granted, can be better and/or more economically designed and

constructed than if an exception variance were not given. An exception variance shall not be granted if the part of an exception variance would have the effect of allowing the construction of a project which would otherwise without the exception variance not be possible under the provisions of the County Code.

16.22.130 Fees.

Fees for checking, inspection, violations, variance exception requests, and for land-clearing permits, and winter operations erosion control permits shall be set by resolution of the Board of Supervisors.

16.22.140 Inspection and compliance.

The Planning Director shall conduct inspections to ensure compliance with this chapter.

(A) Inspection. The following inspections may be performed by the Planning Director:

(1) Pre-Site Inspection. To determine the potential for erosion resulting from the proposed project.

(2) Operation Progress Inspections. To determine ongoing compliance with approved land clearing, witner operations erosion control, or other development plan, permits and approvals.

(3) Final Inspection. To determine compliance with approved plans and specifications.

(B) Notification. The permittee shall notify the Planning Director at least 24 hours prior to start of the authorized work, and also <u>nine business24</u> hours prior to any inspection requested by the permittee or permittee's authorized agent. [Ord. 4392A § 6, 1996; Ord. 3337 § 1, 1982; Ord. 2982, 1980].

16.22.150 Applicable laws and regulations.

Any person doing work in conformance with this chapter must also abide by all other applicable local, State, and Federal laws and regulations. Where there is a conflict with other pre-existing County regulations, this chapter shall take priority.

16.22.160 Violations.

(A) It shall be unlawful for any person to refuse or fail to correct any condition causing or likely to cause accelerated erosion as required by a notice of violation issued under the provisions of subsection (C) of this section.

(B) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any land clearing or winter grading operations as defined in SCCC 16.22.030 unless either a development permit has been obtained and is in effect which authorizes such land clearing or winter grading operations; or the land clearing or winter grading is exempt from the requirement for a permit under the provisions of SCCC 16.22.080(A).

(C) It shall be unlawful for any person to exercise a development permit which authorizes land clearing<u>or</u> winter grading without complying with all of the conditions of such permit.

(D) It shall be unlawful for any person to knowingly do, cause, permit, abet or furnish equipment or labor for any work in violation of a stop work notice from and after the date it is posted on the site until the stop work notice is authorized to be removed by the Planning Director.

(E) It shall be unlawful for any person to cause or allow the existence of a condition on any site that is causing or is likely to cause accelerated erosion as determined by the Planning Director.

16.22.161 Right of entry.

Repealed by Ord. 4392A.

16.22.162 Stop notices.

Repealed by Ord. 4392A.

16.22.163 Notification of violations.

Repealed by Ord. 4392A.

16.22.164 Nuisance abatement of violation.

Repealed by Ord. 4392A.

16.22.165 Recording notice of violation.

Repealed by Ord. 4392A.

16.22.170 Penalties.

Repealed by Ord. 4392A.

16.22.180 Enforcement.

Repealed by Ords. 4392A.

16.22.190 Appeals.

All appeals of actions taken pursuant to the provisions of this chapter shall be made in conformance to the procedures $\frac{18.10}{10}$ SCCC.