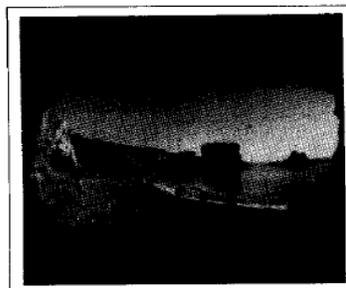
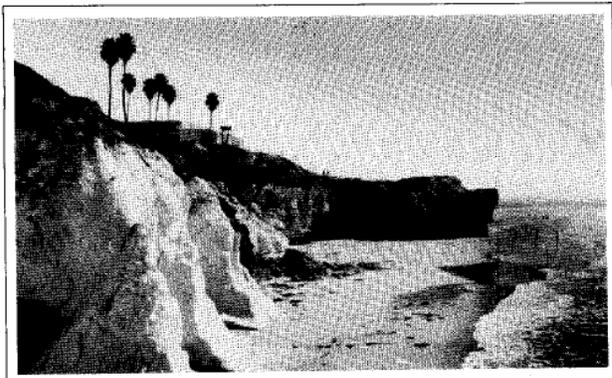
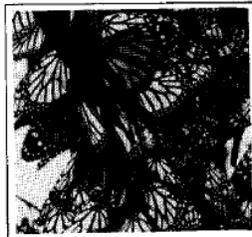


# Conservation & Open Space Element



## Conservation and Open Space Element

### Introduction

California Planning Law requires the general plan to include both a conservation Element and an Open Space Element. Because these elements are so interrelated, they have been combined for the Pismo Beach General Plan. Several issues that are mandatory under state law are not applicable to the city including forests and harbors.

### Natural Resources

The conservation issues focus on the natural resources of Pismo Beach including air, water, biology, archeology and physical geography. The intent of policies is to guide the management of these resources to enhance the quality of life of residents and visitors and to prevent waste, haphazard exploitation, destruction, or neglect. Because the supply of natural resources is limited, the importance of conservation planning cannot be underestimated. The residents and visitors to Pismo Beach depend heavily on natural resources, whether they be water, clean air, the scenic and recreational qualities of the community, or gas or electricity for cooking. Responsibility for conservation of natural resources lies not only with the City Council, Planning Commission and other governmental bodies, but depends on the wise use of natural resources by every resident and visitor.

Pismo Beach is located in a special environmental setting on a narrow marine terrace bordered by the beach and ocean on one side and the hills on the other. It is the only community in central California where Highway 101, the ocean, and the community converge in close proximity. The major physical factors and resources affecting the community's development include soil and landforms, such as the sandy beaches, coastal bluffs and surrounding hills, the surface and ground- water resources, climate, air quality, unique biological habitats and the Pacific Ocean. These resources make up the special essence of Pismo Beach's environment. They are highly inter-related and must be viewed in context with one another when considering development within the city. These unique inter-related resources are what make Pismo Beach *Pismo Beach*.

### Open Space

Open space is one of man's most important nonrenewable resources; a premium space that, once destroyed, can only be recovered by expending tremendous energy and cost. Pismo Beach relies heavily on its scenic, natural setting to maintain its economic life stream of vacationers and tourists, not to mention retirees and families who desire to live in Pismo Beach because of its amenities. Table CO-1 compares Pismo Beach's open spaces to six open space categories.

### Biotic Habitants

Although open space lands are traditionally viewed as unimproved, and park and recreation land as improved, in reality the distinction often is blurred and lands serve dual functions. This has what may be called a value multiplying effect. For example, not only does the beachfront have recreational and economic values, but also cultural, scenic and biological values.

The natural resource conservation areas discussed in the Conservation Element host a large number of diverse plant and animal species--from tide pool organisms to shore birds and terrestrial mammals. A listing of these animals and the associated plants of the various habitats are contained in the Technical Appendix to the General Plan.

Protection of animal species is dependent on protection of habitat. The Element discusses the most important habitat areas and states policies for their protection.

**Table CO-1**

**Comparison of Pismo Beach Open Space to Open Space Categories**

**Open Space Categories**

	Archeological Sites	Butterfly Habitat	Coastal Foothills	Pacific Ocean, Beach & Coastal Cliffs	Pismo Creek/Price Canyon	Pismo Marsh	Soils & Drainage	Parks
<b>Natural and historical resources</b> plant and animal life, habitats for fish and wildlife species, rivers and estuaries, coastal beaches, watershed lands, archaeological resources.	●	●	●	●	●	●	●	●
<b>Resource management</b> agricultural lands, air quality, areas for recharge of ground-water basins and major mineral deposits.	●			●		●	●	●
<b>Recreation</b> active and passive park and recreation areas of scenic or historic value. (See Parks and Recreation Element.)		●	●	●	●	●	●	●
<b>Public health, safety and protection</b> earthquake fault zones, unstable soils, flood plains and fire risks. (See Safety Element.)			●	●	●	●	●	●
<b>Guidance and control of urban growth</b> urban reserve land, green belts.				●	●	●		●
<b>Psychological function</b> the psychological sense of mountains, cliffs and the sea that are at the core of Pismo Beach's identity and existence.	●	●	●	●	●	●	●	●

## ***Principles***

The Conservation and Open Space Element is based on a few key principles. These principles impact the entire General Plan and are also the basis for 30 conservation and open space policies that are considered essential to the quality of life of Pismo Beach. Topics are discussed in the following eight categories. (Water is discussed in the Public Facilities and Services Element.)

- Air Quality
- Archaeology
- Butterfly Habitat
- Coastal Foothills
- Pacific Ocean, Tidal Zone, Coastal Cliff
- Pismo Creek/Price Canyon
- Pismo Marsh (Ecological Preserve)
- Soils and Drainage

### **P-2 Natural Resources--Key Foundation of the City**

Pismo Beach is the ocean, beaches, hills, weather and related ecosystems. Conservation and protection of these resources shall be the key focus of the General Plan. The unique geographical character of Pismo Beach is recognized as the foundation for all other aspects of the community. These physiographic characteristics enhance the quality of life of residents and visitors and shall not be wasted, destroyed, or neglected. They are generally nonrenewable and provide many of the scenic, historic, economic, recreation, open space and ecological values for the community.

### **P-3 Resources and Open Space Belong to Everyone**

Pismo Beach is an integral part of the larger California coastal community, linked by shared resources that are prized by the state, national and even international community. Congenial and cooperative use of these resources by both residents and visitors is recognized. Solutions for co- operative use shall always be based on retaining the area's fragile charm and resources.

### **P-4 Clean Air--A Must**

Pismo Beach shall cooperate with the San Luis Obispo Air Pollution Control District and all regional jurisdictions to meet or better both federal and state clean air standards. Clean air is not a negotiable feature of the community.

### **P-5 Guaranteed Water Supply**

The well-being of Pismo Beach is dependent on a reliable source of clean water which shall be available, expanded, and protected at all times.

### **P-6 The Big Three**

The three primary resources and open space for Pismo Beach are:

#### **✓ The Ocean--A Resource For Everyone**

The ocean, coastal cliffs, and shoreline resources are vital to Pismo Beach for their wildlife habitat, recreational use, open space, scenic value and the city's overall economy. These natural assets will be protected and made available to all.

- ✓ **The Foothills**  
It is recognized that the freeway foothills northwest of Pismo Heights are both a visual and open space asset to the community as well as a sensitive environmental resource. The city shall preserve the area's native flora and fauna and preserve the foothills as an undeveloped visual backdrop for the city.
- ✓ **Pismo Creek/Price Canyon--A Public Resource**  
Pismo Creek/Price Canyon and environs are a key natural resource/open space area and the major inland entrance to the city. It shall be managed as a public resource for the community.

## **Air Quality (See Principle P-4)**

### **Background**

Overwhelmingly, the citizens of Pismo Beach have stated that one of the greatest assets of the community has been clean air and a pleasant climate. Traditionally, Pismo Beach and other communities in San Luis Obispo County have used clean air as an attraction for visitors and new residents. Unfortunately, a side effect of increased population and tourism has been increased traffic and commuting, and the consequent degradation of regional air quality.

The state Air Resources Board has designated San Luis Obispo County a nonattainment area under the standards of the California Clean Air Act of 1988. Nonattainment occurs in the levels of ozone and respirable particulate matter. The standard for sulphur dioxide was achieved in 1990 by a narrow margin; however the region must make considerable effort if this standard is to be maintained. From 1988 - 1992, the City of Pismo Beach, along with other cities and the county, worked with the Air Pollution Control District (APCD) to develop a revised Air Quality and Attainment Plan, referred to as the "Clean Air Plan".

Pismo Beach is in an air quality basin known as the Coastal Plateau. This plateau is five to ten miles wide and varies in elevation from sea level to about five hundred feet. Primary factors affecting air quality are the quantity, type and location of pollutant emissions, topographic features, and the prevailing meteorological conditions. The weather in Pismo Beach is characterized by inversions (a high warm air mass trapping a cooler air mass adjacent to the land and preventing vertical movement of the air). Frequently, these inversions severely limit the dispersion of pollutants from population centers on the coastal plain.

Stationary sources of pollutants in the region are controlled through the permit processes and monitoring of the APCD. In the Pismo Beach area, major stationary sources include the Avila tank farm, UNOCAL and the oil wells in Price Canyon. Smaller sources include gas stations and dry cleaning establishments. The APCD monitors vapor recovery equipment and processes at these sources.

However, 50% of the ozone pollution in the region is caused by automobiles. Vehicle miles traveled (VMT) has almost doubled in relation to population growth over the last ten years, evidencing a major increase in the amount and distance of commuting. APCD reports that 30% of the VMT are commuter miles. Additionally, increases in respirable particulate matter are also caused by automobiles (on paved as well as unpaved roads) and by dust from construction, demolition, and grading activities. The maintenance of air quality also is addressed in the Coastal Act of 1976. Policies relating to air quality are contained in section 30253.3 of the Coastal Act, which states that new developments shall:

...be consistent with requirements imposed by an air pollution control district or the state air resources control board as to each particular development.

Also, section 30253.4 states that new development shall:

...minimize energy consumption and vehicle miles traveled.

The objective of the APCD Clean Air Plan is to bring ozone to levels better than the state standards, and to maintain them at those standards by December of 1997. At a minimum, this will require a 40% reduction in emission of reactive organic gases (ROG) and oxides of nitrogen (NOx), the primary precursors to ozone formation. In order to achieve and maintain these standards over the long term, Pismo Beach, along with other jurisdictions must adopt and implement a land use planning strategy that will reduce air pollution. Additionally, the City must work with citizens, developers, businesses and regional agencies to effectuate transportation management programs to reduce reliance on automobile travel.

To a considerable extent, the following policies will over-lap and complement concerns raised in the Circulation, Land Use, and Housing Elements of the General Plan.

## Policies

### CO-1 Siting of Multifamily Projects

In order to provide easy pedestrian access to commercial areas, the City shall encourage the location of multifamily projects in close proximity to transit routes and to commercial centers. Mixed-use development shall be encouraged in most commercial zones. The land use map shall also consider neighborhood commercial development in reasonable proximity to residential areas.

### CO-2 Jobs/Housing Balance

A mismatch of jobs to affordable housing in the existing city limits, as well as in developments that may occur in annexation areas could cause unnecessary commuting and consequently excessive energy consumption and air pollution. The City shall require the prevention or mitigation of these conditions as an element of environmental review. Mitigation may include inclusionary affordable housing and worker housing as called for in the Housing Element. Transportation management measures such as vanpools or carpools, subsidized transit passes, or other incentives to reduce automobile travel may be required. See:

Conservation Element	CO-4	Trip Reduction
Housing Element	H-16	Downtown Redev. Area
Housing Element	H-18	Service Indus. Emp. Housing
Housing Element	H-15	Inclusion of Afford. Housing Within Existing City Limits
Housing Element	H-23	Affordable Housing Dev. in Annexed Properties

### CO-3 Grading, Construction, Demolition

The City shall require contractors to strictly adhere to APCD guidelines regarding dust and combustion emissions from construction and grading. Specifically, the City will ensure that the grading site is frequently watered, and that netting is used until new vegetation is established. Additionally, the City will require that dirt be transported in trucks with liners and covers over the loads. Construction work may

be halted when excessive winds create air pollution problems. Related General Plan Principles and Policies include:

Circulation Element	P-1	Balanced Transportation
Circulation Element	C-12	Bikeway Encouraged
Circulation Element	C-13	Pedestrian Circulation
Circulation Element	C-16	Multimodal Transfer Areas
Circulation Element	C-19	Downtown Traffic
Circulation Element	C-20	Express or Transit Service
Circulation Element	C-21	Subdivision Planning

#### **CO-4 Trip Reduction**

In order to reduce pollution, the city shall emphasize various procedures to reduce the number of vehicle trips in the community. Techniques shall include, but not be limited to, transportation management measures such as vanpools, carpools, and subsidized transit passes; jobs/housing balance (Policy CO-2); bikeways and facilities (Policies C-12, C-13, and C-22); pedestrian facilities (Policy C-14); and transit improvements (Policies C-19, C-21).

## **Archaeological Resources**

### **Background**

Archaeological sites resulting from thousands of years of human settlement along the coast are among the most fragile of resources. Protection of these resources is established in the California Environmental Quality Act (CEQA), the California Public Resources Code, and the California Health and Safety Code.

The Central Coast area, including Pismo Beach, was the home of the Chumash people at the time of early explorations and settlements by Europeans. Evidence of the culture and occupations by the Chumash may be found at numerous sites in the vicinity of Pismo Beach. Most of the city's archaeological data comes from studies conducted as part of the CEQA process. Additionally, a general map showing the status of archaeology within the city has been prepared and is used in the processing of development proposals.

### **Policies**

#### **CO-5 Protect Archaeological Resources**

Archaeological and paleontological resources are declared to be important to be conserved. The City shall have available a map that identifies the possible location of archeological resources.

As part of the CEQA process for all new development projects, all known or potential archaeological resources shall be fully investigated by a qualified archaeologist recognized by the state Historic Preservation Office. Appropriate protections shall be determined as part of the review process including:

- a. Locations within the city known to have a high probability of occurrence of archeological sites shall be zoned in the Archeological Resources overlay district.
- b. Sites of statewide or national significance shall be nominated for inclusion in the Registry of California Historic Landmarks or National Historic Landmark Program.

- c. Specific recommendations prepared by the archaeologist shall be incorporated into project approval including: avoidance of portions of sites containing resources, minimizing the impacts of the development on the archaeological resources, preserving a full archaeological record, and/or partial site dedication, and providing a native American monitor onsite to observe excavations in locations where there is a possibility of discovery of human remains.

**CO-6 Construction Suspension**

Should archaeological or paleontological resources be disclosed during any construction activity, all activity that could damage or destroy the resources shall be suspended until a qualified archaeologist has examined the site. Construction shall not resume until mitigation measures have been developed and carried out to address the impacts of the project on these resources. See policies:

Land Use Element	LU-B-7	Special Environmental Conditions
Land Use Element	LU-C-4	Special Environmental Conditions
Land Use Element	LU-F-5	Archaeology Reconnaissance
Land Use Element	LU-J-6	Archaeology
Land Use Element	LU-M-2	Route 101 (Paragraph g)
Land Use Element	LU-N-6	Archaeology
Land Use Element	LU-P-2	Lucia Mar School Archaeology

## Butterfly Habitat

**Background**

At Meadow Creek, on the south side of the city within the state park North Beach campground, is a circular grove of eucalyptus trees, which is a habitat for the monarch butterfly. Each year massive numbers of these beautiful butterflies come here to make their winter homes.

The time the butterfly's duster in Pismo Beach is the most sensitive part of the monarch's life cycle. The specialized monarch butterfly habitat is of important scientific and educational interest and an open space resource for residents and visitors alike.

<b>Policies</b>
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**CO-7 Preserve Monarch Butterfly Habitat**

The City shall cooperate with the state Department of Parks and Recreation to preserve and enhance the butterfly habitat. Specific actions shall include but not be limited to:

- a. If any tree is removed or lost due to disease or threat to life or property, it shall be replaced with appropriate species. Refer to policy:

Design Element	D-12	Special Tree Preservation
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- b. Development within the park adjacent to the butterfly habitat shall have a minimum setback of 50 feet.

- c. The City shall pursue, with Grover City and the Southern Pacific Railroad, mutual regulations to preserve the groves on the east side of Dolliver Street that supplement and support the habitat.
- d. The City should request the state Department of Parks and Recreation to place appropriate signing and develop adequate visitor parking for the Monarch Butterfly Reserve.

## **Coastal Foothills (See Principle P-6)**

### **Background**

The city has three major coastal foothill areas, the Oak Park Heights area, the Northwestern Freeway Foothills and Price Canyon Foothills. Future annexations will also occur in the foothills area. These areas provide a significant visual and open space backdrop to the city and four major wildlife habitats. The majority of the habitat is heavily grazed open lands, followed by oak woodlands, riparian, and chaparral.

The Oak Park area drains into the sensitive Pismo Marsh habitat. Due to residential development and grazing, only islands of native chaparral vegetation remain. The eastern portion of this area, which drains into the marsh, contains open land, oak woodlands and riparian area and forms a complex habitat that is particularly sensitive to certain disturbances.

The Freeway Foothills, which is the predominant land- form in the northwestern portion of the community adjacent to the U.S. 101, is a significant visual asset. The hills are generally grassland with pockets of oak woodlands and coastal scrub. Barrancas or finger canyons, which line the surface of the hills, add visual texture as well as valuable habitat to the foothills.

The Price Canyon foothills drain into Pismo Creek and form the major inland entry to the city. The habitat consists of open grazing land, oak woodlands and riparian areas surrounding the creek.

Terrestrial wildlife in the various foothill habitat areas include a variety of rodents, such as ground squirrels, mice and gophers, foxes, weasels, opossum, deer, and occasionally mountain lions. Bird species include meadowlarks, finches, sparrows, turkey vultures, and predators such as owls, hawks, and falcons. Wildlife populations are generally more numerous in the steeper canyon areas, which retain moisture and provide protective cover. No rare or endangered species are known to occur in the various foothill habitats.

Topography strongly affects the use of land and natural features. It influences the formation of soil types and the possibility for soil erosion. It guides the location of plant and animal communities, and directs the location and rate of surface water run-off. Moreover, slopes have been a controlling influence in the shaping of Pismo Beach as a city. Steep slopes have traditionally constrained urban development, and city policies have prohibited development on slopes over 30% in all areas except Pismo Heights. Disturbance of the hillsides and natural drainage patterns, and removal of vegetation can result in slope instability, landslides, and increased erosion. Siltation caused by slope disturbance may lower downstream water quality.

### **Policies**

Related policies include:

Land Use Element	LU-N-10	Open Space
Land Use Element	LU-A-2	Upper slopes and Hillside
Land Use Element	LU-A-8	Open Space
Land Use Element	LU-B-2	Open Space



**CO-8 Regional Open Space**

The City, in cooperation with San Luis Obispo County, the State of California, private foundations and private interests, shall work to create a coastal foothill open space area as conceptually shown in Figure CO-1. This open space area shall for all time preserve the ocean facing slopes overlooking U.S. 101 as an undeveloped natural area and as a scenic backdrop to the city of Pismo Beach and the Shell Beach area. (See Parks and Recreation Element PR-13, Pismo Creek/Price Canyon Regional Park and Open Space.)

To accomplish this purpose the city shall:

- a. Support retention of the existing restrictive low development intensity land use and resource policies of the county as they apply to these lands.
- b. Request that any development reviewed by the County be requested to locate building sites outside the designated open space area.
- c. Encourage and support efforts to acquire the area as permanent open space including:
  - County park funds
  - Creation of open space district
  - Developer financial contributions
  - Developer land dedications
  - Private donations and loans
  - State and federal park funds

See related General Plan policies:

Growth Management	GM-8	Annexations
Parks, Rec & Access	PR-13	Pismo Creek/Price Canyon Regional Park
Land Use Element	LU-N-20	Pismo Creek Price Canyon Adobe

**CO-9 Land Above 200 Foot Contour**

All the land above the 200 ft. contour line, in the ocean facing slopes of the coastal foothills northwest of Pismo

Heights facing U.S. 101 shall be designated as permanent open space (Policy CO-8). Development standards for parcels, which extend above the 200 ft. contours, are as follows:

- a. The maximum permitted number of dwelling units shall be calculated on the basis of the amount of land up to the 250 ft. contour but shall exclude any such lands with on an existing natural slope greater than 30%.
- b. No building pads or structures shall be permitted above the 200 ft. contour. Until such time that properties in this area request annexation to Pismo Beach, the City shall request the County of San Luis Obispo to maintain the open areas of the ocean-facing slopes as described herein.
- c. A scenic or open space easement prohibiting any development above the 200-foot contour shall be required to be dedicated to the City as a condition of approval of any development below the 200 foot contour.

#### **CO-10 Slopes Over 30%--Permanent Open Space**

No buildings or grading shall be permitted on existing natural slopes over 30%. The areas over 30% shall be retained as permanent public or private open space. Building and grading on existing legal lots of record in the Pismo Heights Planning Area that exceed the 30% slope limitation may be approved provided that requests for development are accompanied by engineered plans ensuring structural stability over the life of the residence and the development can be accommodated in accordance with the resource and hazard protection standards of the certified LCP (including but not limited to the Safety (S-10 – S-15), Conservation (CO-11 – CO-14, CO-31), and Land Use (LU-P-1 – LU-P-10) elements/policies of the General Plan/Local Coastal Plan and the Hazard Protection and View Consideration Overlay Standards of the Zoning Ordinance (Sections 17.078 and 17.096). Grading shall be limited to the minimum amount necessary to construct the least environmentally damaging alternative for building sites with a slope in excess of 30%. Development shall be directed to the least-steep portions of the site, taking into account other resource constraints.

Best Management Practices (BMPs) shall be incorporated into the project design in the following progression:

- Site Design BMPs (any project design feature that reduces the generation of pollutants or reduces the alteration of the natural drainage features, such as minimizing impervious surfaces or minimizing grading);
- Source Control BMPs (practices that prevent release of pollutants into areas where they may be carried by runoff, such as covering work areas and trash receptacles, practicing good housekeeping, and minimizing use of irrigation and garden chemicals);
- Treatment Control BMPs (a system designed to remove pollutants from runoff including the use of gravity settling, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process).

Site design and source control BMPs shall be included in all new developments. Where the development poses a threat to water quality due to its size, type of land use or proximity to coastal waters (or proximity to a creek, channel or storm drain system that leads to coastal waters) and the combination of site design and source control BMPs is not sufficient to protect water quality, treatment control BMPs shall be implemented.

Where post-construction treatment controls are required, the BMPs (or suites of BMPs) shall be designed to infiltrate and/or treat the amount of storm-water runoff produced by all storms up to and including the 85<sup>th</sup> percentile, 24-hour storm event for volume-based BMPs, and/or the 85<sup>th</sup> percentile, 1-hour storm event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs. The term treatment includes physical, biological ponds and adsorption media. The actual type of treatment should be suited to the pollutants generated by the development.

This provision shall not be construed as a guaranteed right to development of the entire lot but rather the minimum necessary to provide a reasonable economic use of the site and to avoid a taking of property. No future subdivisions that result in additional lots whose only building sites would be on a greater than 30% in slope or within environmentally sensitive habitat, ESHA buffer, riparian areas, finger canyons, or native chaparral vegetation shall be permitted.<sup>1</sup>

#### **CO-11 Development Regulations--Slopes Under 30%**

Development in all foothill areas with slope under 30% shall comply with the following:

- a. **Erosion.** A drainage and erosion control plan shall be required prior to approval of discretionary permits. Erosion control methods shall be implemented and maintained during and after construction
- b. **Landscaping.** After completion of construction and before occupancy of the structure, landscaping shall be installed per approved landscape plans. Landscape plans shall include the following:
  - ✓ All cut and fill areas shall be revegetated predominantly with native species that require little water and blend with the natural landscape; and
  - ✓ Landscaping and trees shall be planted to soften and partially obscure structures from the view shed below. Attention shall also be given to conserving the views from the development.
  - ✓ Development approvals shall incorporate a landscape management plan, which shall include a monitoring program.
- c. **Sensitive Habitats.** Development in the coastal foothills shall minimize removal of natural vegetation and shall preserve sensitive habitats. Development adjacent to areas considered to have environmentally sensitive habitat(s) shall be designed to minimize impacts that could degrade the habitat.
- d. **Grading.** Development shall be designed to minimize grading and emphasize natural landforms. Techniques shall include contour grading, use of daylight

<sup>1</sup> Amendment approved 09/07/2004: City Council Resolution R 2004-052

cuts and fills, use of 3:1 and 4:1 slopes, and generally limiting cuts and fills to no more than 15 ft. in height.

- e. **Views.** Development shall be planned to take advantage of views of the ocean and surrounding hills. Such views shall not only be from private properties but also from the public streets and open space systems.

#### **CO-12 Finger Canyon Preservation**

It is essential to protect the finger canyons and their specialized vegetation. No disturbance except footpaths, trails, seating, picnic areas, or approved road or utility construction shall be permitted in these areas. Any construction shall minimize grading and restore the barranca to its natural appearance.

#### **CO-13 Oak Tree Protection**

Native species of oak (e.g. *Quercus agrifolia*, *Quercus lobata*, *Quercus chrysolepis*) should be preserved within the City of Pismo Beach, both as an aesthetic resource benefiting the entire community and for their ecological value. The following policies shall apply to protection of oak trees when considering discretionary planning permits:

##### **a. Applicability**

The following requirements shall apply to all native oak species, except scrub oak (e.g. *Quercus dumosa*), measuring at least 6 inches in circumference at 4.5 ft. above natural grade.

##### **b. Management Plan Required**

All applications for development on parcels, which contain oak trees, which meet the criterion in "a." shall include a proposed vegetation management plan. A registered arborist or landscape architect that is experienced in oak tree preservation shall prepare this plan. The plan shall include the following:

1. A site plan showing the location of all existing trees by diameter, species and location, groves of oaks that will not be disturbed by the development may be shown by location only.
2. Identification of all existing trees that are proposed to be removed.
3. Identification of all existing trees that will have proposed grading or construction, which encroaches within the tree protection zone as, defined below.
4. Identification of the protective measures that will be undertaken to avoid or reduce adverse effects on existing trees during grading, construction and following completion of the development project.
5. A monitoring and reporting program to verify compliance with the management plan.

##### **c. Removal of Trees**

Oak trees may be removed only under these conditions:

1. A tree is diseased and a registered arborist or landscape architect experienced in oak tree preservation has evaluated its condition and determined that protective measures would no longer be effective in reversing the decline of the tree.
2. The location of a tree presents a clear hazard to the public safety.

3. The location of a tree creates a demonstrably severe hardship to logical or harmonious configuration of the development for which no alternative design solution is feasible. This provision shall pertain to individual trees and shall not be used as a basis to allow removal of a grove of oak trees. Any tree removed for this reason shall be replaced as specified in the City's tree protection ordinance and standards.

**d. Construction Adjacent to Trees**

1. A tree protection zone shall be established for each tree that may be affected by the proposed development. The extent of this zone shall be calculated as one foot of radius for each inch of trunk diameter (measured at 4.5 feet above natural grade).
2. Disturbance of the natural grade of the earth within the protection zone by grading, trenching, compacting or filling should be avoided. Such disturbances may be permitted only when necessary for logical or harmonious development and a registered arborist or landscape architect determines that such activities will not adversely affect the health and survival of the tree.
3. Special measures such as fencing shall be required for tree protection during construction.
4. Landscape plans shall not include irrigated plantings within the tree protection zone.

**e. Tree Protection Ordinance and Standards**

To implement the details of this policy, the City shall prepare an oak tree protection ordinance and accompanying standards and guidelines for protection of oak trees.

Design Element	D-12	Special Tree Preservation
Land Use Element	LU-P-5	Development Guidelines (Paragraph e)
Land Use Element	LU-N-5	Oak Trees
Land Use Element	LU-Q-3	Minimize Impact on Foothills

**CO-14 Riparian Habitat**

Riparian habitat is the environment associated with lands adjacent to freshwater sources perennial and intermittent streams, estuaries, marshes, springs, seeps. The habitat is characterized by plant and animal communities that require high soil moisture in excess of that available from precipitation. Among the major plants associated with riparian habitat in the Pismo Beach area are sycamore, cottonwood, willow and occasionally oak. Large riparian areas occur along the banks of Pismo Creek, Meadow Creek, and Pismo Marsh, although smaller areas can be found in the planning area.

It is the policy of the City to preserve riparian habitat under the following conditions:

1. As part of discretionary planning permits, a biotic resources management plan shall be required.

2. The biotic resources management plan shall include standards for project development, which will avoid habitat disturbance.
3. The standards specified in the biotic resource management plan shall be utilized to determine the extent of development. The minimum standards that may be specified in the biotic plan for the preservation of habitat shall include:
  - Preservation of groupings of trees in which at least ten trees with a minimum six-inch diameter (measured four and one half feet above natural grade) will be preserved.
  - Plants may be removed from the habitat areas if diseased or if they present a hazard to public safety. A professional horticulturist or a certified landscape architect must certify such conditions. Plants removed for these reasons must be replaced with at least four minimum 15-gallon specimens of each species.
  - No significant disruption of riparian vegetation will be permitted. In addition, a minimum riparian buffer area shall be identified for each riparian habitat area at the time of development review. Except as specified in Policy CO-21 for Pismo Creek and Policy CO-23 for Pismo Marsh, the minimum width of the buffer area shall be as identified by the biotic resources management plan and generally not less than 25 feet. Development standards for the minor riparian habitat areas and their respective buffer areas shall be the same as provided in Policy CO-21 with respect to kinds and locations of allowable uses.

## **Pacific Ocean, Beach and Coastal Cliffs (See Principle P-6)**

### **Background**

The Pacific Ocean is the most significant single natural resource and open space for Pismo Beach. It provides a number of unique opportunities. It is valued for its scenic beauty. The community's lineal physical form and related circulation patterns reflect the residents' strong desire to be as close as possible to the water. Historically, the community's economic basis was the ocean, and today the city's major economic and employment source—visitor service—still depends on the ocean. The coast is also Pismo Beach's most vulnerable complex of natural resources due to the intensity and types of uses to which it is subjected. The city's shoreline can be divided into four tidal zones as described as follows.

#### **1. Southern Beach Community**

The beach from the southern city limits to approximately three miles north is predominantly under the ownership of the State of California, controlled by the state Department of Parks and Recreation and managed by Pismo Beach. The beach is used for both passive and active recreational and educational purposes.

At the southern end of the city are sand dunes that are considered part of the coastal strand community, which is composed mainly of beach and primary dunes. Since the plant life must adapt to constantly shifting sand conditions created by the winds, plants that are low growing and often succulent are typical of the plant community. They have the ability to bind sand into small-stabilized hills, usually only a few feet high.

#### **2. Northern Rocky Beach Areas**

The rocky beach areas, cliffs and rocky points extend from northwest of the pier to the northern city limits. The cliffs northwest of the pier are fronted by sandy beach and are eroding from wave activity during storms, drainage from the cliff tops, and related development activities. Proceeding northerly from the Dinosaur Caves area to the Sunset Palisades area and including Shell Beach are marine terraces. These are actually old wave-cut platforms that have been uplifted. Beaches in this area have been formed by sand being

deposited on top of the wave-cut platforms by the ocean currents. The more resistant rock that has withstood the effects of the waves also remains.

The Dinosaur Caves area and the surrounding islet contain roosting areas for the endangered brown pelican; seal haul-out areas, resident and migrating shorebird feeding areas, and significant habitat for marine organisms.

In the Shell Beach area, a sand, small rock and cobble beach occurs at the base of the cliffs. Offshore are rocks, islets, and reefs. This area contains abundant marine life and is an important habitat area.

These coastline characteristics occur up to the South Palisades area, where narrow intermittent sandy pocket beaches with flat offshore rock reefs occur. The rocky points and reefs along the Sunset Palisades area is a particularly valuable habitat for shorebirds, invertebrates and vertebrates. Potential conflicts exist between recreational use of the rocky beach area and the wildlife. Habitat preservation is of primary importance for the rocky islets and reefs in the Dinosaur Caves area, some of the coastline along Shell Beach, and the coastline in the Sunset Palisades area north of Florin Circle.

### **3. Intertidal Zone**

The intertidal zone lies between the high tide and low tide lines. It is covered and uncovered by water twice each day. In the Pismo Beach area, the intertidal zone is characterized generally by semi sheltered coast and open bays where the force of the surf is somewhat dissipated before it can crush the more fragile life forms.

Within the boundaries of Pismo Beach, the State Lands Commission, which has jurisdiction over all matters concerning the area's wildlife populations, owns the intertidal zone most notably the populations of the Pismo clam. A variety of bird species also feed in the intertidal zone.

The intertidal zone in the southern half of Pismo Beach is a most valuable recreational resource area. During low tides, it was in the past used intensively by clammers. Under the protection of the state Department of Parks, the Pismo clam has again begun to be found in the intertidal zone. Due to the return to this region of the sea otter, there is only a limited possibility that the clam beds will ever be re-established in the size that once existed.

At high tides, this zone is popular for surf fishing. At all times, the intertidal area is a popular spot for bird watching, pleasure walking, and jogging. It is characterized by a rockless substrate, fine sand, and an unusually hard surface caused by constant heavy tidal action. In the northern half of the city, the intertidal area is rocky near the shore. Its ground surface is characterized by rocks and pebbles.

Some conflict exists between utilization of the rocky intertidal zone for recreational uses, and preservation of the natural resources. Currently, it appears that the resources are not in jeopardy because the more sensitive intertidal areas are located where public access is limited.

### **4. Sub tidal Zone**

The sub tidal zone lies between the mean-lower low tide line and the point at which the ocean reaches a depth of 100 feet. At present the subtidal land between the mean high tide line and the three-mile limit, which marks the boundary of federal waters, is under the jurisdiction of the State Lands Commission.

The sub tidal zone within the area of Pismo State Beach is characterized by a sand or mud bottom and is relatively level. The sea otter is an inhabitant of this area. This once endangered animal has recovered under federal, state and local protection.

In the northern half of the city, the sub tidal area is rocky near the shore. In this location are kelp beds, which are recognized for their prime habitat value. Although the sub tidal zone is beyond city jurisdiction from a legal standpoint, the city nevertheless has an indirect responsibility for activities that affect the natural resources of the area.

Among the mammals identified offshore in the sub tidal area are the endangered gray whale, the humpback whale, sperm whale, Pacific right whale, fin whale, North Pacific pilot whale, dali porpoise and Pacific white sided dolphins.

If the federal government leases offshore land on the outer continental shelf, the potential exists for conflict between the resource values of the sub tidal zone and exploratory or permanent oil drilling operations. Tidal and current action in the vicinity of Pismo Beach would rapidly carry spilled crude oil towards the shore, thus jeopardizing both recruitment clam stocks and inhabitants of the lower intertidal levels. Accidental tanker spills from an offshore tanker terminal sited in this area could also have similar adverse impacts. An additional potential impact of oil spills from offshore activity would be the degradation, at least temporarily, of the recreational value of the higher sub tidal zones.

## **Policies**

### **CO-15 Ocean Shore-Principal Open Space Resource**

The ocean shore is, and shall continue to be, the principle open space feature of Pismo Beach. Ocean front land shall be used for open space, recreation and related uses where feasible and where such uses do not deteriorate the natural resource.

### **CO-16 Drilling, Filling, Dredging, Diking**

The drilling, filling, diking or dredging of open coastal waters shall be prohibited, except as may be specifically permitted as part of beach restoration, pier maintenance, utility pipes and cables, or wetlands restoration.

### **CO-17 Man-made Changes**

Shoreline structures, including piers, breakwaters, channel dredges, pipelines, outfalls and similar structures shall be sited to avoid significant rocky points and intertidal and sub tidal areas. The design and construction of revetment devices and other shoreline structures shall be prepared by qualified engineers in accordance with city standards which will avoid or minimize disturbance of sensitive coastal ecological resources. See Policies S-3 and S-6 in the Safety Element regarding standards for shoreline protection structures.

### **CO-18 Beach Access**

Due to public safety and habitat protection considerations, the construction of vertical access ways to the ocean along the rocky coast area shall be limited to those areas with sandy beaches. Prior to any approval for new access to the shoreline, the request shall first be evaluated in terms of protection of sensitive shoreline resources and safety. (See Park and Recreation Element, Access Component.)

### **CO-19 Oil**

Offshore drilling or other activities, which may endanger the ecological resources of the coast, shall be prohibited within the city boundaries, which extend outward into the ocean for three miles. These activities shall also be discouraged in nearby offshore areas beyond the city's boundaries.

### **CO-20 Clam Beds**

The clam bed preserves within the City of Pismo Beach shall be protected.

# Pismo Creek/Price Canyon

(See Principle P-6)

## Background

Pismo Creek, an intermittent stream 5.5 miles in length, originates near the Community of Edna in the San Luis Valley. The creek flows southerly via Price Canyon, bisects the city and empties into the ocean south of the downtown area. The actual creek bed, which is dry most of the year, is approximately 5 feet deep and 10 to 12 feet wide. The bottom is gravel and sand-silt with some boulders in the slow moving portions of the stream. At high tide, salt water flows into Pismo Creek for nearly a half mile upstream. During low tide, a sand bar separates the mouth of the creek from the ocean, creating a small lagoon.

Fish surveys in the 1970s determined that the creek contains species found in both marine and fresh water habitats. Species included rainbow trout, speckled dace, prickly scuplin, threespined stickleback, and brown bullhead. The tidewater goby, starry flounder, jacksmelt, and white surfperch were found to inhabit the estuary at the mouth of the creek. Other than resident and migratory waterfowl, little wildlife inhabits the creek side area south of Highway 101, due to its developed character. North of the highway, various terrestrial and bird species may be found, including deer, raccoons, opossums, rodents, reptiles and amphibians.

At Price Canyon, the streambed is well shaded by sycamores, oaks, willows, nettles and poison hemlock. Steep hillsides of chaparral and oak woodland slope down to the lush vegetation growing along the edges of the creek. Some of the vegetation has been cut back in the area of the city's sewage treatment plant. The creek's south bank, from west of the railroad and U.S. Highway 101 crossing to the mouth of the creek, has been graded. Although no rare or endangered species, with the exception of the steelhead trout, have been observed, the existing riparian habitat and estuary conditions make the creek a valuable wildlife habitat. In order to accommodate the trout, a fish ladder has been constructed south of the concrete railroad bridge crossing.

Although the city owns small pockets of the creek and adjoining land, most of the creek and Price Canyon is under private ownership and therefore is subject to development pressure. Within the city limits, the creek's alignment has been altered by railroad and freeway construction. Over a period of time nature has also changed the creek's alignment. Impacts to the creek have been loss of habitat, pollution and siltation. Additionally, what was once solid ground has been eroded. Property may be subject to inundation during severe storms. The result has been additional berming, flood control improvements, and some channeling of the creek.

Price Canyon lies between the 101 Freeway and Highway 227, a distance of 4.5 miles. The valley varies in width between 200 - 2000 ft. It is edged on both sides by hills rising to 500 - 600 ft. in elevation. Within the city limits the southern part of the valley is developed with the PG&E facility and housing. The northern portion is undeveloped. Outside the city limits the entire valley is undeveloped except for an extensive oil well facility near the intersection of Price Canyon Road with Highway 227.

## Policies

### CO-21 Pismo Creek Protection

Pismo Creek shall be retained in its natural state and protected from significant alterations. The following measures shall be employed to accomplish this intent:

- a. **Streamside Protection Zone**--There shall be a minimum streamside protection zone to conserve the environmentally sensitive habitats of the creek. This buffer zone shall be measured from the outer edge of the riparian vegetation or, where there is no riparian vegetation, from the top of the creek bank. The minimum width of the buffer shall be as follows:
- |           |  |
|-----------|--|
| West Bank | 100 feet/Cypress northward to City limits  |
|           | 25 feet/Cypress to the ocean               |
| East Bank | 100 feet/U.S. 101 northward to City limits |
|           | 50 feet/U.S. 101 to Dolliver Street        |
|           | 25 feet/Dolliver to the ocean              |

A lesser buffer may be permitted if: 1) the minimum widths set forth above would render a parcel inaccessible or unusable for the purpose designated in the land-use plan; or 2) there is a showing by an applicant through the resource assessment study identified in item "h" that a lesser buffer will not result in loss of, or adverse effects on, streamside vegetation or the biotic quality of the stream. Alternative mitigations shall be required where lesser buffers are authorized. No new construction or vegetation removal, except for normal maintenance, shall be allowed in the buffer zone with the exception of public roadways or bridges identified in the Circulation Element, paths, trails, fences, flood control structures, and other similar structures deemed not to adversely affect the creek.

- b. **Open Space**--The sandpit and channel where Pismo Creek enters the ocean and those portions of parcels located within the creek channel shall remain as open space and no structures or fill shall be permitted thereon.
- c. **Conservation Dedication**--Any new development shall be required to dedicate as a condition of any discretionary approval, an easement for the protection of the streamside area consisting of 25 feet or more from the top of the creek bank. In addition, new development shall provide access amenities adjacent to the creek for the city to use as a greenbelt and/or recreation corridor.
- d. **Structures in the Stream Corridor**--No structures shall be located within the stream corridor except: dams; structures necessary for flood control purposes; bridges, when supports can be located outside of critical habitat; a public pathway and pipelines, when no alternative route is feasible.
- e. **Limitations on Development**--All development, including dredging, filling and grading, within the stream corridor shall be limited to activities necessary for flood control purposes, bridge construction, water supply projects, or laying of pipelines, when no alternative route is feasible. When such activities require removal of riparian plant species, revegetation with local native plants shall be required. Minor clearing of vegetation shall be permitted for hiking and equestrian trails, bike trails, view points, etc.
- f. **Minimize Impacts** All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.

- g. Channeling**--No concrete channeling or other major creek alteration shall be permitted, unless no viable alternative exists.
- h. Resource Protection Plan**--A Resource Assessment and Protection Plan shall be required and approved concurrent with city action on projects located on parcels which have a portion within the streamside protection zone. The plan shall include appropriate measures to protect the creeks biological and visual aspects.

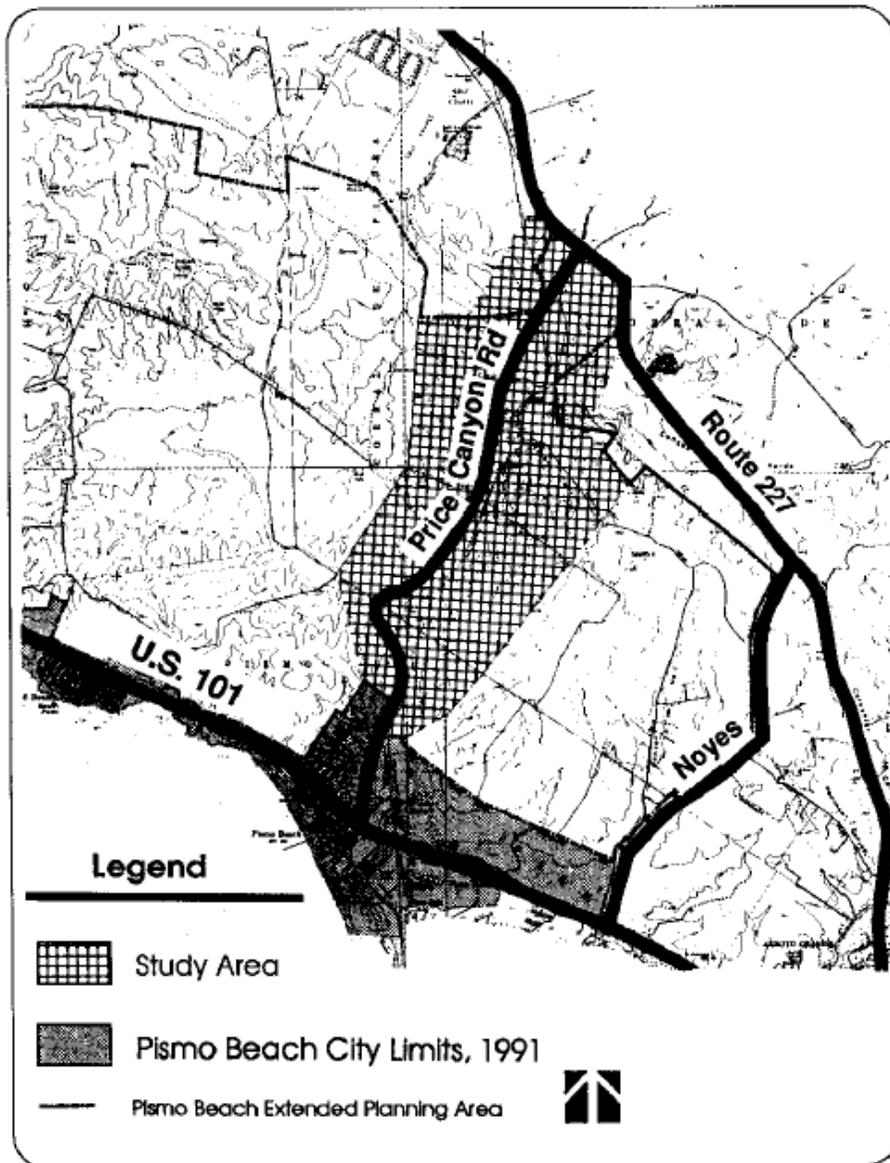
**CO-22 Price Canyon Open Space and Study Area**

Any development in Price Canyon and the surrounding hills shall emphasize the open space aspects of the Price Canyon corridor. Preferred views from Price Canyon Road shall be of open space rather than development.

Pismo Beach, in cooperation with San Luis Obispo County and affected property owners, shall prepare a visual and open space study for the Price Canyon corridor as illustrated in Figure CO-2. This plan shall focus on retaining the corridor as a scenic entrance to Pismo Beach and an open space corridor separating Pismo Beach from the Route 227 corridor. See related policies:

Circulation Element	C-3	Price Canyon Road
Conservation Element	CO-8	regional Open Space/Park
Design Element	D-12	Special Tree Preservation
Land Use	LU-R	Sections 1 through 10

**Figure CO-2  
Price Canyon Study Area**



## **Pismo Marsh**

### **Background**

Pismo Marsh, also known as Pismo Lake Ecological Preserve, is primarily a fresh water marsh with associated riparian habitat. However, an unusual area of salt marsh vegetation exists in the southwest portion of the preserve. The elevation of the preserve ranges from near sea level to approximately 32 feet. The 54-acre marsh is entirely within the Pismo Beach city limits and is presently under the ownership and management of the California Department of Fish and Game. The preserve's management does not presently allow any interpretive, educational or passive recreational access to the marsh. Since the

preserve is completely surrounded by privately owned land within both Pismo Beach and Grover City limits, the state has no authority over adjacent land uses.

The marsh's configuration has changed over the years. Its original water source, Pismo Creek, no longer feeds it. Meadow Creek, with a drainage basin of over 3800 acres, is now the primary source of water. Although the marsh is not entirely natural, it is an extremely valuable resource. The diverse plant communities provide excellent habitat for a wide range of wildlife species. The California Department of Fish and Game has estimated that as many as 59 species of birds, 24 species of mammals and four species of reptiles and amphibians may be found in the relatively undisturbed lake habitats. Therefore, it plays an extremely important role as habitat for a wide variety of wildlife. It also provides a vital link in the Pacific Flyway used by numerous species of migratory birds.

Development has occurred nearby and contiguous to the marsh resulting in direct impacts to the marsh. Increased runoff, erosion, sedimentation and disturbance to the habitat areas have occurred. The most damaging to the preserve is increased sedimentation. This decreases open water areas and circulation necessary to support marsh vegetation and migratory birds. Pesticides and other toxic substances, nutrient- laden agricultural runoff, and urban wastewater could also constitute problems in maintaining water quality and wildlife habitat. Commercial and residential developments adjacent to the marsh have turned their backs to it rather than recognize it as an important visual and open space asset.

## **Policies**

### **CO-23 Marsh Protection Program (Buffer Zone)**

Pismo Marsh shall be retained in its natural state and protected from significant alteration. The City shall encourage the development of a resource protection program for Pismo Marsh in coordination with the state Department of Fish and Game and Grover City. As a protection mechanism, the City shall require a 100-foot buffer between the environmentally sensitive areas and new development. All buffers shall be measured from the landward most edge of the riparian vegetation or where there is no riparian vegetation, from the top of the marsh bank. Within the buffer, no structures, diking, filling, or dredging shall be permitted below the 45' contour, except structures required for flood control or the protection of public health and safety. Lesser buffers may be permitted if the minimum marsh buffer standards set forth above cannot be achieved because the small size or irregular shape of the existing parcels proposed to be developed would render such parcels inaccessible or unusable for the purposes for which they are designated in the City's certified Local Coastal Plan. Reductions in the proposed minimum marsh buffer standards shall be based upon the criteria for establishing buffer areas contained in "Statewide Interpretive Guidelines for Wetland and Other Wet Environmentally Sensitive Habitat Areas" adopted by the State Coastal Commission on February 4, 1981. These criteria include:

1. Susceptibility of the parcel to erosion;
2. Use of natural topographic features to locate development;
3. Use of existing cultural features to locate buffer zones;
4. Lot configuration and location of existing development; and

5. Type and scale of development proposed. Any reduction in the minimum buffer width shall include alternative mitigations (such as planting of appropriate vegetation or design modifications) to alleviate potential impacts stemming from the reduced buffer width (such as increased noise, light or sedimentation) to protect adjacent riparian vegetation and creek channels. Development allowed in the buffer areas shall be limited to access paths, fences necessary to protect habitat areas, and similar uses which have either beneficial effects on wildlife or no significant adverse effects. No principal structures (whether attached or detached) shall be permitted.

**CO-24 Visual and Interpretive Access**

The unique ecological system of Pismo Marsh needs to be made available to the community as a whole. Since protection of the habitat is the primary concern of the Department of Fish and Game, physical access to the preserve has generally been prohibited by the state. Therefore it is essential to make the marsh available visually. Private developments adjacent to the marsh shall use it as a key visual and open space feature of the development. Pedestrian spaces shall be oriented to the marsh and view corridors to the marsh provided. Additionally the state Department of Fish and Game, in cooperation with Pismo Beach and Grover City, shall be encouraged to develop the potential of Pismo Marsh as an educational and passive recreational resource.

**CO-25 Development Adjacent to the Marsh Buffer**

New development adjacent to the marsh, but above the 45 ft. contour, shall be limited to compatible uses that will not result in adverse impacts such as additional sediment, runoff, and other disturbances.

**CO-26 Watershed Protection**

Runoff from any new development projects within the Meadow Creek watershed, which drains to the marsh, shall be evaluated with a hydrology report to determine if its runoff exceeds the existing volume rate of flow or suspended solids content. Existing rates should not be exceeded unless restoration plans are developed. The utilization of permeable ground materials to the greatest extent possible is encouraged as one method of limiting increased runoff. Erosion control measures, such as distillation basins and energy dissipaters, shall be incorporated within any grading plan as necessary.

**CO-27 Department of Fish and Game**

The City shall consult with the California Department of Fish and Game with regards to projects design and mitigation measures when a private development could potentially affect the marsh. See related polities:

Land Use Element	LU-M-2	Route 101 Frontage
Land Use Element	LU-N-2	Pismo Marsh

**Soils and Drainage**

**Background**

Pismo Beach's development patterns have been strongly influenced by its physical geography.

Soil, the combination of weathered minerals and decaying organic material, covers the earth in a thin layer. Soil is affected by both natural and human actions. Urban development often increases soil loss through removal of protective vegetation. Paved surfaces can create excessive runoff. Structures can cause the surface and subsurface materials to become compacted, thereby reducing permeability of the soil and decreasing its saturation potential.

There are no prime soils or agricultural production within the current city limits. Within the proposed sphere of influence there are two small areas of class II soils totaling 25 acres.

The runoff of surface water and the land's drainage pattern, also play important roles in soil erosion and in supporting various plant and animal communities. The principal water features in Pismo Beach, Pismo Creek, Pismo Marsh, and the Pacific Ocean have all been discussed within this chapter. Secondary features include the valleys of the coastal foothills and their intermittent streambeds.

## **Policies**

### **CO-28 Natural Drainage Channels**

Drainage channels shall remain in a natural open space state with minimal or no use of concrete channels. Dredging, filling and grading within stream corridors shall be limited to activities necessary for flood control purposes, bridge construction, water supply projects, or laying of pipelines when no alternative route is feasible.

Revegetation and restoration of the natural setting shall be required.

Alteration of existing drainage patterns shall be prohibited unless special studies prove that the proposed alteration will not cause any adverse impacts downstream or to other aspects of the environment. Prior to approval of any new development, a detailed analysis of surface water runoff patterns shall be undertaken to determine storm drain needs and identify mitigations for any with possible adverse environmental impacts. No runoff that will negatively affect the Pismo Marsh shall be permitted.

### **CO-29 Mining**

Mineral resources of commercial value are not known to exist within the city. Mining and removal of materials (sand, gravel, and other minerals) for commercial use shall be prohibited.

### **CO-30 Soil Conservation**

City grading regulations shall require soil conservation measures. Construction of structures or pathways on easily erodible areas shall be prohibited unless appropriate compensatory measures are taken.

### **CO-31 Grading and Drainage Regulations**

The following specific grading and drainage policies shall be applicable to development and construction projects. The city's grading ordinance shall be revised to include these polities:

- a. Development plans shall minimize cut and fill operations, and any development requiring extensive cut and fill may be denied if it is determined that the development could be carried out with less alteration to the natural terrain.
- b. Development shall be designed to fit or complement the site topography, soils, geology, and any other existing conditions and be oriented to minimize to the extent of grading and other site preparation.
- c. Retaining walls should be of minimum height and length. Earth colored materials shall be preferred. Long, straight-line retaining walls shall be prohibited.
- d. Finished grading shall avoid a manufactured appearance by creating flowing contours of varying gradients generally not exceeding slopes of 4:1. Sharp cuts, fills and long straight-line slopes of uniform grade should be avoided.
- e. Native vegetation shall be preserved to the maximum extent possible. (See Policy CO-1S regarding oak trees.)
- f. All measures for removing sediments and stabilizing slopes shall be in place by November 1 prior to the beginning of the rainy season.
- g. Sediment basins shall be required in conjunction with initial grading operations, and maintained throughout the development process as necessary.
- h. All cut and fill slopes in a completed development shall be stabilized immediately with planting of native grasses and shrubs, or appropriate non-native plants within accepted drought-tolerant landscaping practices.
- i. Surface runoff waters that will occur as a result of development shall be conducted to storm drains or suitable watercourses to prevent erosion.
- j. Degradation of the water quality of the groundwater basins, streams, or wetlands shall not result from development of a project. Pollutants such as chemicals, fuels, lubricants, raw sewage, and other harmful waste shall not be discharged into or along side streams or wetlands during or after construction.
- k. A runoff control plan designed by a licensed engineer qualified in hydrology and soil mechanics shall be required for all development on slopes greater than 10 percent to mitigate any increase in peak runoff. The runoff control plan, including supporting calculations shall be subject to the review and approval of the City Engineer prior to commencement of construction. Such a plan shall include the following provisions:

1. Runoff control shall be accomplished by minimizing grading and utilizing nonstructural techniques such as on-site percolation galleries. Energy dissipating devices at the terminus of outflow drains shall be required.
  2. All permanent erosion control devices shall be developed and installed prior to or concurrent with any on-site grading activities.
  3. Prior to the commencement of any grading activity, the permittee shall submit a grading schedule which indicates that grading shall be completed within the permitted time stipulated in Paragraph f and that any variation from the schedule shall be promptly reported to the City Engineer.
  4. Prior to the issuance of a permit for development, a detailed landscape plan indicating the type, size, extent and location of plant materials, the proposed irrigation system, and other landscape features shall be submitted for approval. Drought tolerant, native plant materials shall be utilized to the maximum extent feasible.
- l. All grading activities for roads, building pads, utilities and the installation of erosion and sedimentation control devices shall be prohibited within the period from November 1 to March 31 of each year, except that the following grading activities may be permitted outside the above time constraints:
1. Grading on slopes if they do not drain into an environmentally sensitive habitat area.
  2. Grading on slopes less than 10 percent, if the amount of material to be graded does not exceed 50 cubic yards.
- m. All areas disturbed by grading shall be planted with temporary or, in case of finished slopes, permanent erosion retardant vegetation. Native species shall be planted wherever feasible. Such plantings shall be accomplished under a plan prepared and submitted by a licensed landscape architect and shall consist of seeding, mulching, fertilization and irrigation adequate to provide 90 percent coverage within 90 days of the time of planting. Planting shall be repeated if the required level of coverage is not established within the time period stipulated above. This requirement shall apply to all disturbed soils, including stockpiles, and to all building pads and road cuts.