BIOLOGICAL RESOURCES

Purpose

Sustaining healthy ecosystems, preserving biodiversity, enhancing degraded habitats, and protecting diverse landscapes honors San Luis Obispo County's history and ensures a future that is healthy and vibrant ecologically, socially and economically. This chapter identifies biological resources of importance to the County and outlines a framework to achieve this future.

Introduction

San Luis Obispo County is home to a number of diverse and important natural communities, from coastal marine environments to riparian habitats, and a mosaic of forests, woodlands, grasslands, and chaparral (see **Figures BR-1, BR-2, BR-3, and BR-4**). Occurrences of special-status species are known throughout San Luis Obispo (see **Figure BR-5)**. More than 103 special-status plants and 53 special-status animal species in San Luis Obispo are monitored regularly. The wide variety of vegetation types add immeasurable beauty to the county's landscape, whether it be the oak studded hillsides, pines along a mountain ridge, or lush willows along the streams. In addition to their beauty, plants are a vital part of the ecosystem: shelter for wildlife, cleansing the air, preventing soil erosion and water pollution, and as food for humans and animals. (An overview of the biological resources setting is provided in **Appendix 3.)**

Ecosystems

Ecosystems hold the key for preserving vegetation and wildlife. In fact, we cannot truly protect endangered species unless we preserve the ecosystem within which they thrive and interact.

Accordingly, the wisest and most efficient strategy for preserving rare or endangered species - and in the end the least costly - is to prevent them from becoming rare and endangered in the first place.

Biodiversity *refers to the variety of life and its processes, including the variety of living organisms, the genetic differences among them, and the communities and ecosystems in which they occur.*

An ecosystem can be defined as all the components of a biological community and the physical environment, and the interactions among and between them. Ecosystems are more than just the sum of their various components, involving a complex system of linkages between plants, animals, their environment, and humans. (Refer to **Figure A3-1** in **Appendix 3**.)

The key to protecting biological resources and sustaining the great variety of lifeforms on earth is to protect and sustain healthy, functioning ecosystems and the biological diversity within them. "Biodiversity" refers to all living organisms and the ecological setting on which they depend for life - the natural variety, abundance, and variability of different plant and animal species. One of the generally accepted key principles of ecology is that biological diversity leads to stability of an ecosystem.

Island effect *is the isolation of one habitat fragment from other areas of habitat. Habitat fragmentation is often caused by land conversion.*

If one of the key links in the system is broken - a certain keystone species is lost, for example, - the functioning of the entire ecosystem upon which many plants and animals depend can be weakened, and the natural communities lost. Extinction of a key plant or animal - predator or prey - can be the beginning of the end for an ecosystem. The key to avoiding this is to maintain the complex system of linkages in the ecosystem wherever possible. This can be done by maintaining large, unfragmented areas of natural habitat and by maintaining physical connections between those areas to enable wildlife migration - preserving biological diversity.

Wildlife movement corridors *are linear features whose primary wildlife function is to connect at least two significant habitat areas (Beier and Loe 1992).*

Wildlife corridors between habitat areas are a way to minimize the “island effect.” Good examples of wildlife corridors are streams and riparian corridors. Wildlife corridors can also be recreated and protected by humans. The protection of corridors can be required in certain circumstances in order to minimize the effects of public and private construction projects on wildlife migration.

Conserving valuable but rapidly diminishing wetland habitats also provides the benefits of filtering pollution, protecting water quality, controlling flooding, and maintaining a reliable water table. The importance of wetlands has been long recognized in the County General Plan. The significant reduction in wetlands in the county due to development, grading, agricultural activities, and conversion of land uses increases our need to preserve the county's remaining wetlands.

Streams and their associated riparian vegetation corridors are important open space resources. Maintaining streams and riparian corridors in a natural state offers many benefits, including conserving fish spawning areas and key corridors for wildlife migration and survival. Other benefits include maintaining the productivity of estuaries downstream, providing ground water recharge, maintaining high aesthetic quality, and providing potential recreational opportunities.

Like the resource it seeks to protect, wildlife conservation must be dynamic, changing as conditions change, seeking always to become more effective.

– *Rachel Carson*

This Conservation and Open Space Element is an important step towards conservation planning in San Luis Obispo County. If planning programs can be more effective on an ecosystem basis, the programs will be more effective at protecting those species already listed as rare and endangered. Programs that are more effective can also reduce the number of new species added to the rare and endangered lists.

Human activity has had major adverse effects on the health and sustainability of these natural communities. Since the mid-19th century, grazing, logging, agriculture, road building, and development have markedly altered the natural landscape. Specific programs seek preservation of special-status species, sensitive natural communities, important wildlife habitat and movement corridors, wetlands, riparian habitats, coastal dunes, and baylands.

Preservation, protection, and restoration of biological resources in San Luis Obispo County is the responsibility of both the private and public sectors. On one hand, residents, businesses, and organizations, have responsibilities to do their part to preserve and protect the county's biological resources. On the other, federal, state, regional, the County, and the incorporated cities

have roles to regulate and encourage conservation and resource protection.

We will recognize success when…

- *Restoration of important habitats such as streams, wetlands, woodlands, and corridors is underway.*
- *The acreage and integrity of sensitive habitat such as oak woodlands, wetlands and streams and riparian vegetation is maintained or increased.*
- *A network of major ecosystems has been established and is being managed.*
- *A diversity of wildlife flourishes in the county's woodlands, streams, wetlands, and other habitats.*

Relationship to Other Elements, Plans, and Programs

This Element contains biological resource-specific policies. However, it and all the elements of the General Plan work together to form a cohesive set of goals, objectives, and policies that cumulatively preserve, enhance, and protect biological resources for generations to come.

The goals, policies, and implementation strategies in this chapter are designed to be consistent with the Agriculture Element, which is intended to balance protection of open space and biological resources with the needs of production agriculture and to minimize the impacts to ongoing production agriculture.

Many of the sensitive and scenic areas identified in this plan are already identified in the Land Use Element (LUE) by existing Sensitive Resource Area (SRA) combining designations. (Refer to Title 22, County Land Use Ordinance.) In those areas, standards in the LUE and Land Use Ordinance (LUO) protect sensitive resources and mitigate the effects of development. However, there are also other important sensitive and scenic areas and features that are currently not designated in the LUE, such as major ecosystems, key wildlife corridors, sensitive natural communities identified by the California Department of Fish and Game, oak woodlands identified by the California Department of Forestry, and County Natural Area Preserves.

Major Issues

1) Integrated management approach. Increasing risk of degradation and/or elimination of natural resources requires coordinated and integrated management of the county's biological resources by public, private, nonprofit, and agricultural organizations at ecosystem and site-specific levels.
2) Land use conversion. Changing land uses, particularly conversion of agricultural and rural lands to residential

and urban uses, adversely impact species and their habitats.

3) Wildlife protection. Changing land uses impact wildlife movement corridors and displaces wildlife.
4) Oak woodlands. Areas of oak woodlands and native trees are diminishing due to tree cutting, urban land conversion and displacement by exotic/non native species.
5) Wetland habitats. Changing land uses impact wetlands, steams, and riparian habitats.
6) Fisheries. Marine resources and fisheries are increasingly vulnerable to degraded habitat, polluted runoff, and sedimentation from urban development.

Goals, Policies, and Implementation Strategies

The intent of the following goals, policies, and implementation strategies is to identify and protect biological resources that are a critical component of the county's environmental, social, and economic well-being. Biological resources include major ecosystems; threatened, rare, and endangered species and their habitats; native trees and vegetation; creeks and riparian areas; wetlands; fisheries; and marine resources. Individual species, habitat areas, ecosystems and migration patterns must be considered together in order to sustain biological resources.

TABLE BR-1
GOALS FOR BIOLOGICAL RESOURCES

Goal BR 1	Native habitat and biodiversity will be protected and enhanced.
Goal BR 2	Threatened, rare, endangered, and sensitive species will be protected.
Goal BR 3	Maintain the acreage of native woodlands, forests, and trees at 2008 levels.
Goal BR 4	The natural structure and function of streams and riparian habitat will be protected and restored.
Goal BR 5	Wetlands will be preserved.
Goal BR 6	The County's fisheries and aquatic habitats will be preserved and improved.
Goal BR 7	Significant marine resources will be protected.

FIGURE BR-1
VEGETATION RESOURCES

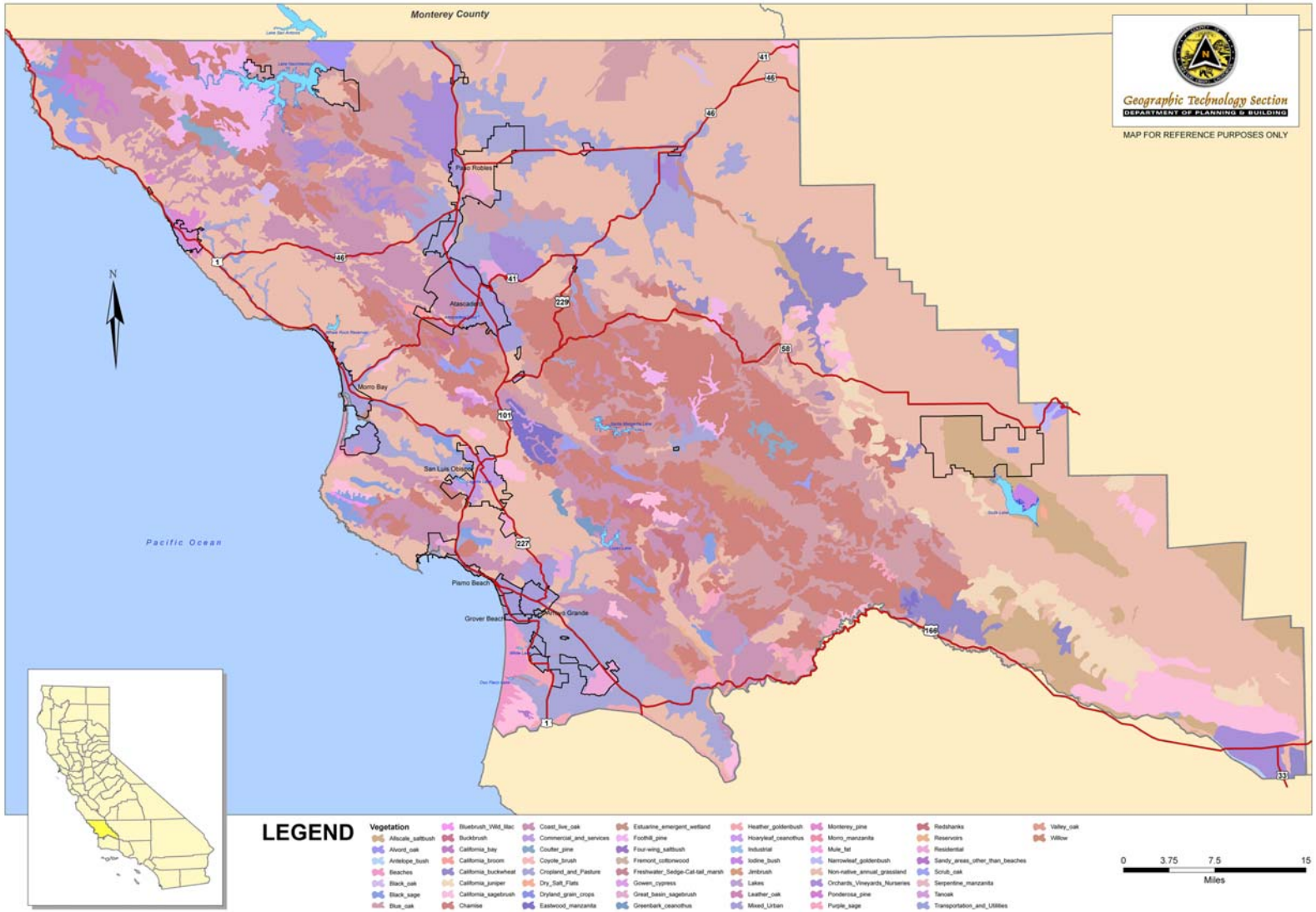


FIGURE BR-2
VEGETATION RESOURCES – DETAILED PERSPECTIVE

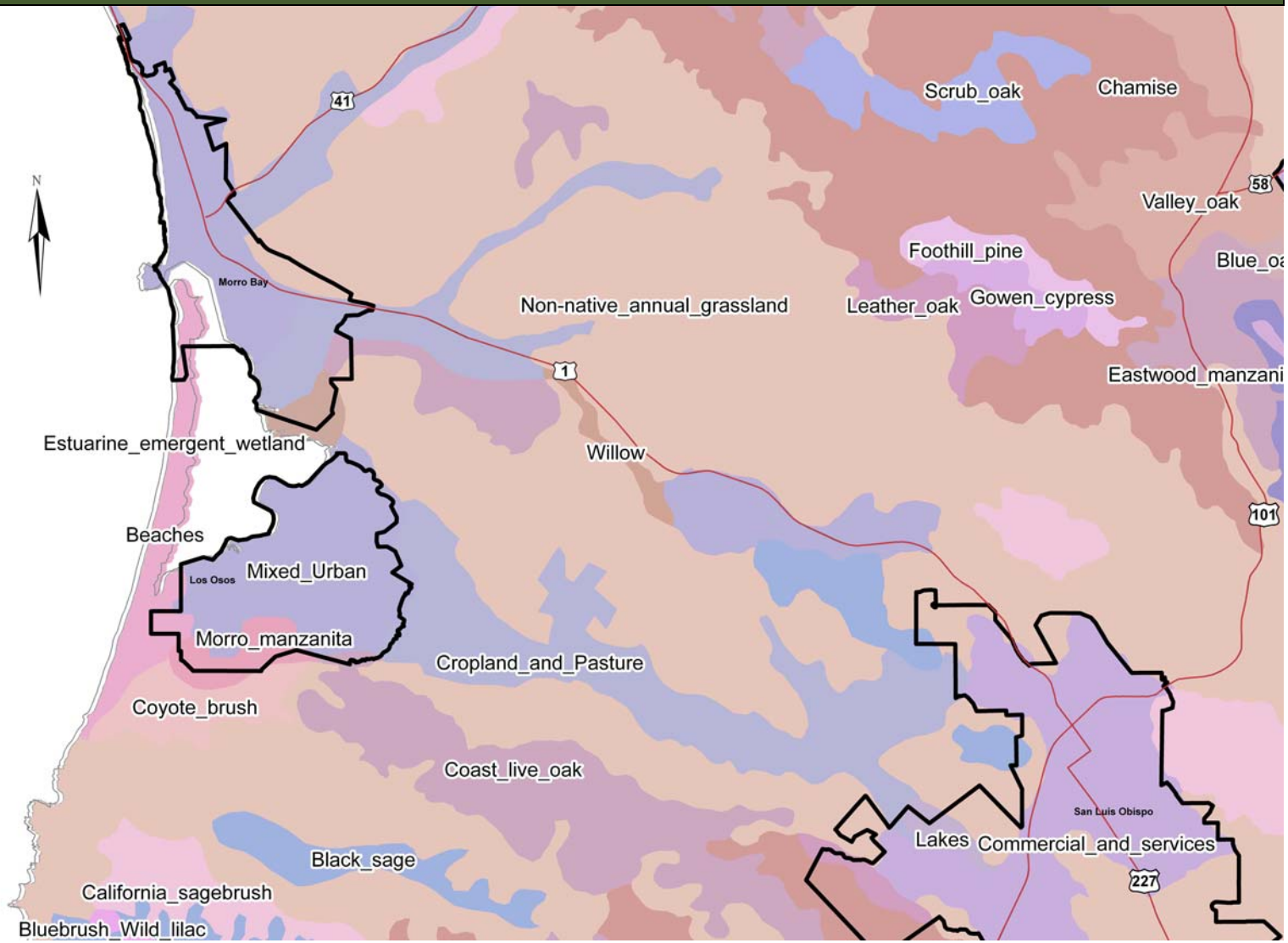


FIGURE BR-3
HARDWOOD RESOURCES

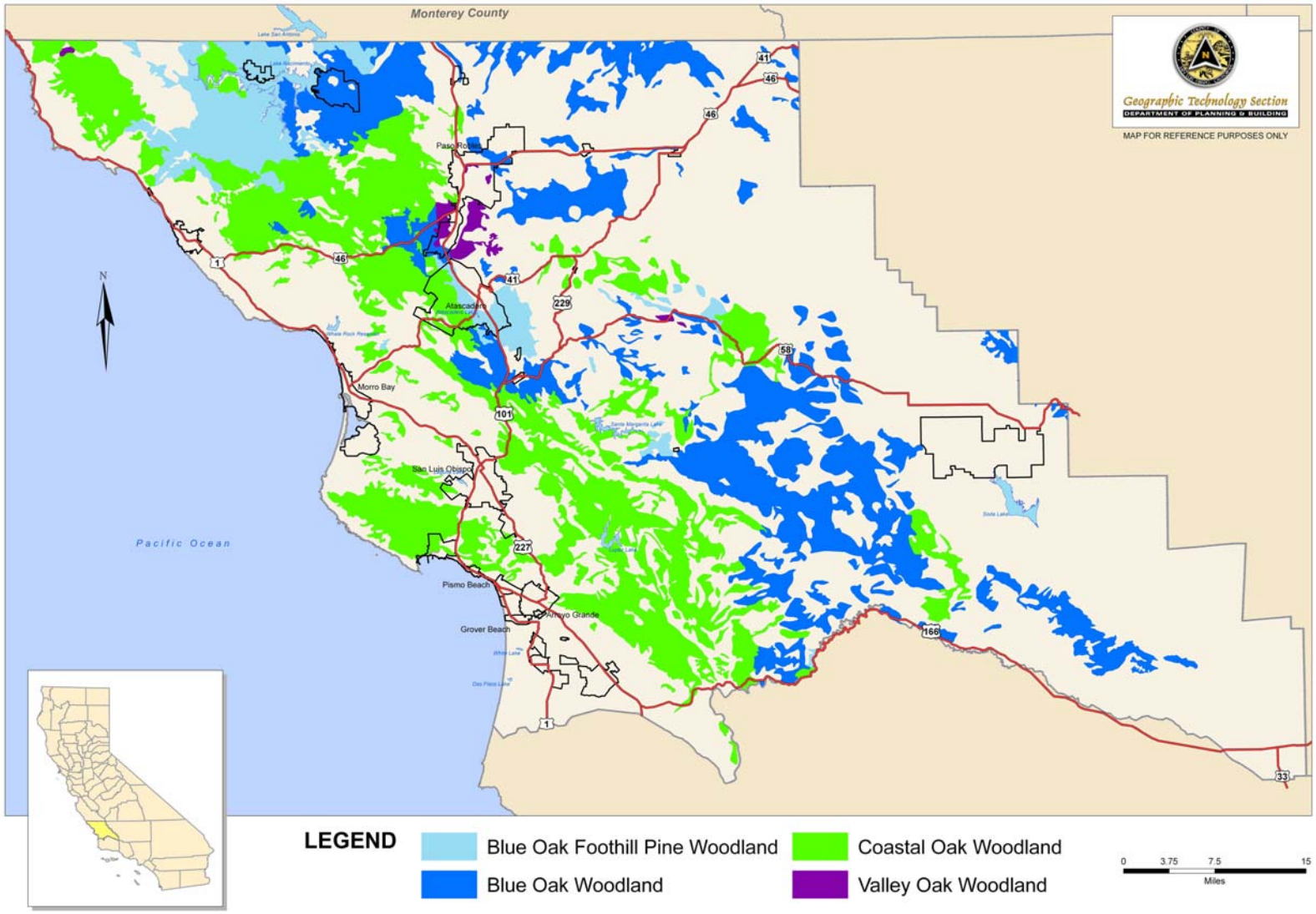


FIGURE BR-4
HARDWOOD RESOURCES – DETAILED PERSPECTIVE

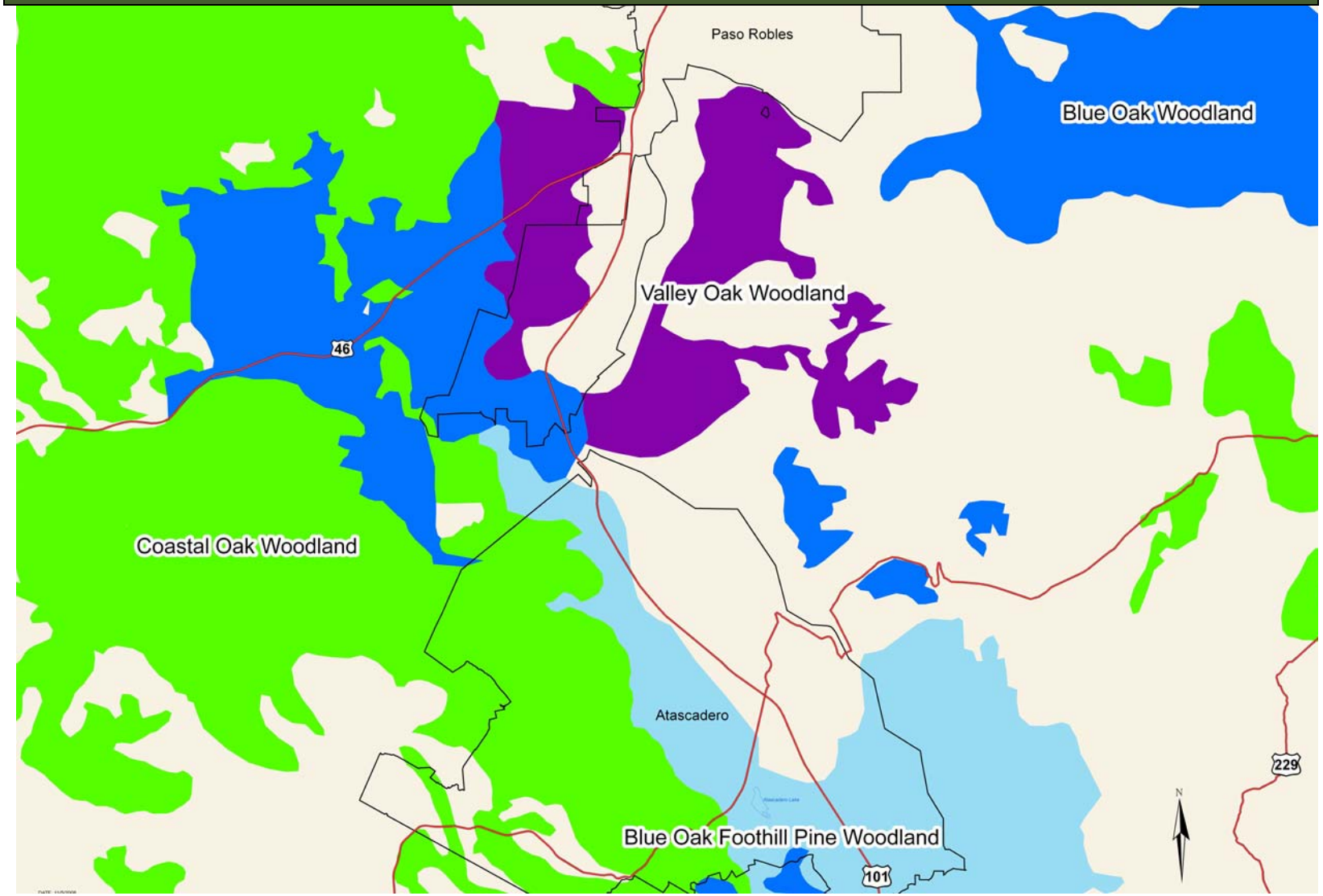
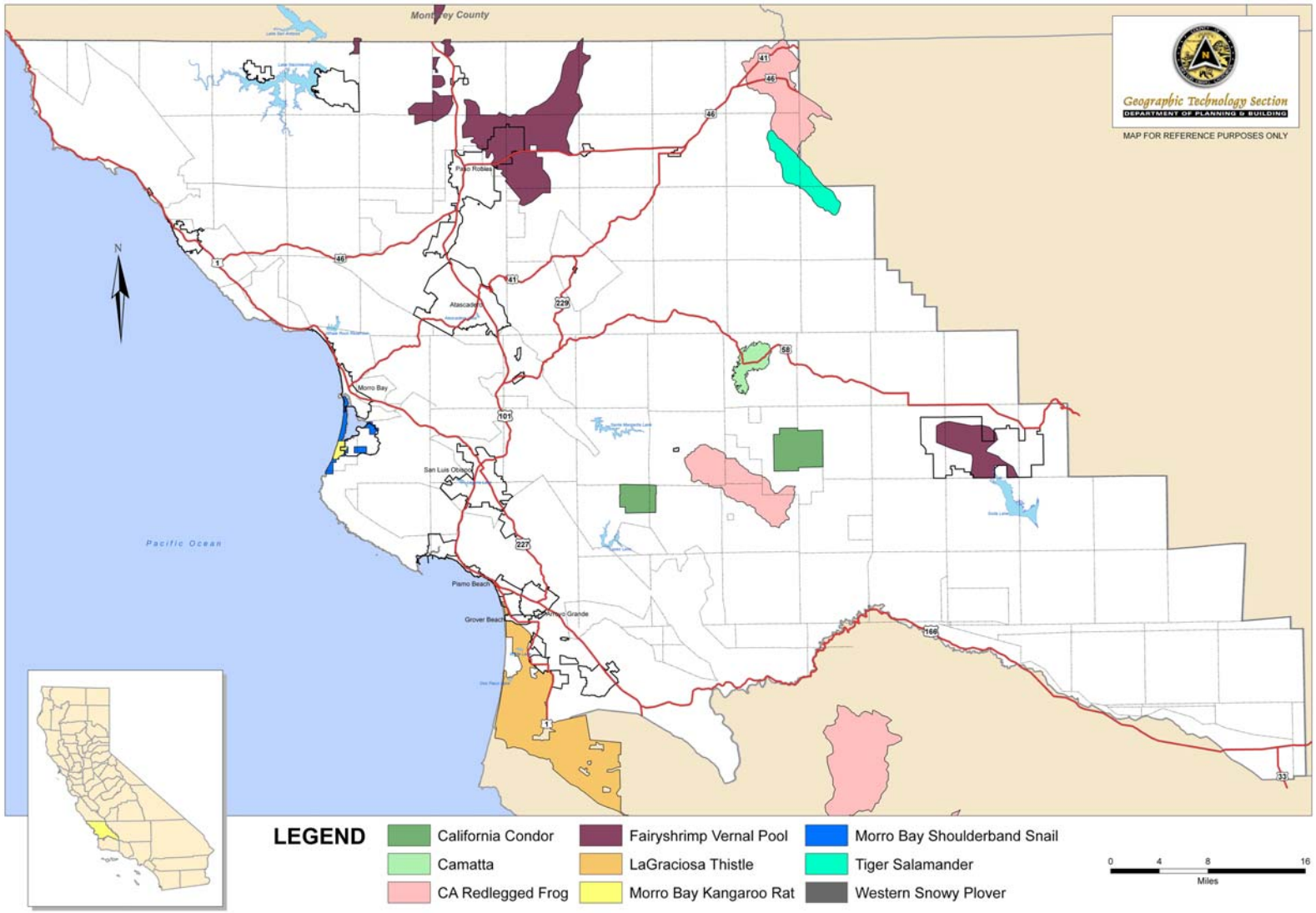


FIGURE BR-5
CRITICAL HABITATS



GOAL 1

NATIVE HABITAT AND BIODIVERSITY WILL BE PROTECTED AND ENHANCED.

Policy BR 1.1 Protect Sensitive Biological Resources

Protect sensitive biological resources such as, wetlands, migratory species of the Pacific flyway, and wildlife movement corridors through:

1) environmental review of proposed development applications, including consideration of cumulative impacts,
2) participation in comprehensive habitat management programs with other local and resource agencies, and
3) acquisition and management of open space lands that provide for permanent protection of important natural habitats.

Policy BR 1.2 Limit Development Impacts

Regulate proposed development in areas that contain essential habitat for special-status species, sensitive natural communities, wetlands, coastal and riparian habitats, and wildlife habitat and movement corridors as necessary to ensure the continued health and survival of these species and protection of sensitive areas.

Policy BR 1.3 Environmental Review

Require environmental review of development applications pursuant to CEQA and County procedures to assess the impact of proposed development on native species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and important wildlife nursery areas and movement corridors.

Policy BR 1.4 No Net Loss

Require that development projects are approved with adequate conditions and mitigation measures to ensure the protection of sensitive resources and to achieve “no net loss” of sensitive habitat acreage, values, and function. Give highest priority to avoidance of sensitive habitat. When avoidance is not feasible, require provision of replacement habitat onsite through restoration

Sensitive biological resources *include those species listed by the federal or state government as endangered or threatened as well as non-listed species of concern. Sensitive biological resources also include habitats of limited occurrence or distribution such as riparian and riverine areas subject to Army Corps of Engineers or California Department of Fish and Game jurisdiction.*

The ***Pacific Flyway*** *is a major north-south route of travel for migratory birds in the Americas, extending from Alaska to Patagonia. Migratory birds travel some or all of this distance in spring and in fall, following food sources, heading to breeding grounds, or travelling to overwintering sites.*

and/or habitat creation. When onsite mitigation is not feasible, provide for offsite mitigation.

*An **ecosystem** is a dynamic and interrelating complex of plant and animal communities and their associated environment.*

*An **ecosystem approach** is a philosophy of resource management that focuses on protecting or restoring the function, structure, and species composition of an ecosystem, recognizing that all components are interrelated.*

Policy BR 1.5 Establish and Maintain a Network of Major Ecosystems

The County will work collaboratively with affected agencies, groups and individuals to establish, protect, and manage a network of major ecosystems.

◇ ***Implementation Strategy BR 1.5.1 Identify regional system of ecosystems***

Identify and conserve an integrated, regional system of the most important native ecosystems and landscapes representative of the region's most important natural ecosystems, as follows: 1) use the County's creeks, rivers, lakes, and other inland and coastal aquatic features in public or nonprofit ownership or management as strategic building blocks, 2) link regional landscapes that include publicly owned lands harboring native ecosystems and privately owned, highly managed properties, 3) conserve critical elements of native ecosystems and landscapes, 4) facilitate the ability of ecosystems and landscapes to function as dynamic systems, and 5) reconcile conservation of native ecosystems with human uses.

◇ ***Implementation Strategy BR 1.5.2 Ecosystem research and monitoring***

Support research and monitoring to effectively plan and manage native ecosystems and landscapes.

◇ ***Implementation Strategy BR 1.5.3 Non-governmental outreach and education***

The County will engage the tourism and agricultural industries, private landowners, conservationists, recreationists, and public agencies in developing the Major Ecosystems Network Program. (OSP 13 and 14 revised)

◇ ***Implementation Strategy BR 1.5.4 Governmental outreach and education***

Provide interested public, cities, and landowners with up-to-date information on sensitive ecological resources and the regulations enacted to protect them. This will help assess the

potential impacts of proposed development on species and habitat diversity, determine when additional detailed site environmental assessment is necessary, provide information on invasive exotic species control, and monitor development trends and habitat management activities. The natural resource information program should contain the following:

a. Up-to-date information on verified sightings of special-status species and sensitive natural communities.

b. Recovery programs for special-status species and sensitive natural communities.

c. Up-to-date information from resource agencies, including lists of special-status species.

d. Mapping of critical habitat areas.

e. Biological reports completed as part of environmental review of proposed development projects.

f. Lists of appropriate and inappropriate plant species for use in developing landscape plans, including invasive exotic plants.

g. Summarized information for use by landowners addressing habitat protection and management of sensitive resources.

Policy BR 1.6 Ecosystem Management

Where County public lands are to be leased for agricultural purposes, the public entity leasing the land will establish management strategies as terms in the lease to ensure continued compatibility between sensitive resources and agricultural uses. (OSP 15 Implementation #7)

Policy BR 1.7 Ecosystem Education

Continue to support education of the public about the importance and benefits of protecting entire ecosystems and wildlife corridors through everyday public contact and by supporting the efforts of conservation and environmental organizations. (OSP 14, 15)

Special-Status Species, Listed Species, *or* ***Sensitive Specie****s are threatened, endangered, fully protected, and plant and animal species of special concern. The CA Department of Fish and Game maintains and updates lists for Special Plants, Special Animals Threatened and Endangered Animals, and Threatened, Endangered and Rare Plants. DFG also provides general information and links to photo databases of plants and animals.*

*"**Special Animals and Plants**" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. These lists are also referred to as the list of "species at risk" or "special status species".*

(State of CA DFG)

Policy BR 1.8 Effects on Agricultural Uses

Designation and management of a Major Ecosystem Network will not interfere with agricultural uses on private lands that are either within or adjacent to the network, as stated in the Agriculture Element (AGP 28). (OSP 13 and 14 revised)

Policy BR 1.9 Preserve Ecotones

Require that proposed discretionary development protects and enhances ecotones, or natural transitions between habitat types because of their importance to wildlife. Ecotones of particular concern include those along the margins of riparian corridors, baylands and marshlands, vernal pools, and woodlands and forests where they transition to grasslands and other habitat types.

Policy BR 1.10 Identify and Protect Ecologically Sensitive Areas

Protect and enable management of ecologically sensitive areas to the maximum extent feasible. (Refer to **Figure BR-1** Vegetation Resources)

◇ ***Implementation Strategy BR 1.10.1 Natural areas database***
Maintain and regularly update a database of the location and condition of natural areas and features, geological forms, soil types, watershed boundaries, wetlands, water bodies, floodplains, wildlife movement corridors, and special-status plant communities and special-status species habitat. Create a framework for the database by the end of 2010. (OSP 14 revised)

◇ ***Implementation Strategy BR 1.10.2 Vegetation classification and mapping project***
Conduct a countywide Vegetation Classification and Mapping Project to develop a detailed vegetation classification based on the National Vegetation Classification System and California Native Plant Society's Manual of California Vegetation (second edition). Upon completion of the Vegetation Classification and Mapping Project, identify additional locations where the SRA combining designation for biological resources can be applied and initiate countywide amendments to the Land Use Element accordingly. Complete

***Ecotones** are transitional zones between two adjacent communities, containing species characteristic of both as well as other species occurring only within the zone.*

*The **Vegetation Classification and Mapping Project** will include countywide vegetation mapping with detailed mapping of oak woodlands.*

*A **geographic information system** (GIS) integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information. GIS allows us to view, understand, question, interpret, and visualize data in many ways. Environmental Systems Research Institute, Inc.*

the classification and mapping project by the end of 2011, and release a public review draft Land Use Element amendments by the end of 2012.

◇ ***Implementation Strategy BR 1.10.3 GIS-based natural communities monitoring***
Use countywide GIS mapping of natural communities and other information sources to work with other agencies to 1) develop a program to monitor trends in habitat loss, protection, and restoration and to prioritize areas most threatened by development, 2) establish cumulative thresholds for habitat loss for particularly vulnerable natural communities, and 3) use the program as a basis for modifying standards for mitigation.

Policy BR 1.11 Protect Wildlife Nursery Areas and Movement Corridors

Identify, protect, and enable the management of connected habitat areas for wildlife movement. (OSP 15) Features of particular importance to wildlife for movement may include riparian corridors, shorelines of the coast and bay, and ridgelines. Identification and designation of wildlife corridors will not interfere with agricultural uses on private lands. (AGP 29).

◇ ***Implementation Strategy BR 1.11.1 Maintain a wildlife corridor database***
Identify and maintain a database of key wildlife corridors that link habitat areas, including major ecosystems and natural area preserves. (OSP 15a)

Policy BR 1.12 Development Impacts to Corridors

Ensure that important corridors for wildlife movement and dispersal are protected as a condition of discretionary permits. Provide linkages and corridors as needed to connect sensitive habitat areas such as woodlands, forests, and wetlands.

◇ ***Implementation Strategy BR 1.12.1 Identify and protect wildlife corridors***
Require all discretionary development applications in rural areas, including land divisions, to identify and protect wildlife corridors, and avoid disturbance of identified key wildlife corridors. (OSP 15b)

Endangered species *means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.*

Threatened species *means a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts.*

-CA Native Plant Protection Act of 1977, CA Endangered Species Act of 1984, and he Federal Endangered Species Act of 1973

◇ ***Implementation Strategy BR 1.12.2 Mitigate impacts to wildlife corridors***

As mitigation for environmental impacts of proposed discretionary projects, consider re-establishing and/or restoring important wildlife corridors that may have been damaged or disrupted. (OSP 15c)

Policy BR 1.13 Maintain Safe Wildlife Movement

Maintain and enhance existing stream channels and riparian corridors to provide for wildlife movement at roadway crossings.

Policy BR 1.14 Wildlife and Roadways

Include the need for wildlife movement in designing and expanding major roadways and stream crossings.

Policy BR 1.15 Restrict Disturbance in Sensitive Habitat during Nesting Season

Avoid impacts to sensitive riparian corridors, wetlands, and coastal areas to protect bird-nesting activities.

◇ ***Implementation Strategy BR 1.15.1 Identify setbacks from bird nesting areas***

Design land divisions and development with adequate setbacks from sensitive habitat areas that are occupied during the nesting season to protect bird nesting, rearing, and fledging activities.

◇ ***Implementation Strategy BR 1.15.2 Preconstruction surveys for bird nesting areas***

Require preconstruction surveys, using established protocols, where development is proposed in sensitive habitat areas during the nesting season in order to protect nests in active use.

Policy BR 1.16 Land Acquisition

Collaborate with conservation organizations to acquire important natural habitat areas for open space purposes, such as wetlands, coastal shorelines, wildlife corridors, and other lands linking permanently protected open space lands. Support public and private partnerships to acquire and manage such areas. Encourage the use of voluntary conservation easements. (OSP 14, 15 revised) (Also refer to Parks and Recreation Element.)

Policy BR 1.17 Resource Conservation Districts

Support efforts of the Natural Resource Conservation Service and the Resource Conservation Districts to conserve and improve habitat and biological resources using programs and strategies such as the Environmental Quality Incentives Program (EQIP), the Conservation Security Program, the San Luis Obispo County Partners in Restoration (PIR), and funding for habitat conservation planning activities.

GOAL 2 THREATENED, RARE, ENDANGERED, AND SENSITIVE SPECIES WILL BE PROTECTED.

Policy BR 2.1 Coordinate with Trustee Agencies

The County will consult with trustee and other relevant state and federal agencies during environmental review when special-status species, sensitive natural communities, or wetlands may be affected. (Refer to **Figure BR 5** Critical Habitats)

◇ ***Implementation Strategy BR 2.1.1 Coordination with trustees during discretionary review***
During review of discretionary development applications, coordinate with relevant trustee agencies and require evidence of compliance with any necessary permits from federal and state agencies prior to issuance of grading or building permits.

Trustee Agency *means a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California. There are 4 trustee agencies – the Department of Fish and Game, the State Lands Commission, the Department of Parks and Recreation, and the University of California. – CEQA*

Policy BR 2.2 Promote Early Consultation with Other Agencies

Require applicants to consult with all agencies with review and/or permit authority for projects in areas supporting wetlands and special-status species at the earliest opportunity.

◇ ***Implementation Strategy BR 2.2.1 Promote pre-application activities***
Inform applicants during pre-application review or other pre-submittal activities about other agencies that may have jurisdiction, and the policies and standards of those agencies that may regulate proposed development activities.

*A **Habitat Conservation Plan (HCP)** is a plan that outlines ways of maintaining, enhancing, and protecting a given habitat type needed to protect species; usually includes measures to minimize impacts, and may include provisions for permanently protecting land, restoring habitat, and relocating plants or animals to another area.*

*A **recovery plan** serves a guide for activities to be undertaken by Federal, State, or private entities in helping to recover and conserve endangered or threatened species.*

Policy BR 2.3 Habitat Conservation Plans

The County will continue to collaborate with local agencies, landowners, and nonprofit organizations to fund and prepare habitat conservation plans (HCPs) for federally listed species.

Policy BR 2.4 Species Recovery Programs

Support recovery programs for endangered and threatened species.

◇ ***Implementation Strategy BR 2.4.1 Require consistency with recovery plans***

Require that applications for discretionary land use projects and land divisions located in the habitat for endangered or threatened species be consistent with applicable recovery plans.

Policy BR 2.5 Species Recovery Plans and General Plan Amendments

The County will coordinate with the U.S. Fish and Wildlife Service to ensure that General Plan amendments do not conflict with the final recovery plans for federally listed species.

Policy BR 2.6 Development Impacts to Listed Species

Ensure that potential adverse impacts to threatened, rare, and endangered species from development are avoided or minimized through project siting and design. Ensure that proposed development avoids significant disturbance of sensitive natural plant communities that contain special-status plant species or provide critical habitat to special-status animal species. When avoidance is not feasible, require no net loss of sensitive natural plant communities and critical habitat areas. (OSP 17 revised)

◇ ***Implementation Strategy BR 2.6.1 Use of biological resource surveys***

Require applications for discretionary projects and land divisions to provide a biological resource survey performed by a qualified biologist when needed to address special-status animal and plant species and their associated habitats.

◇ ***Implementation Strategy BR 2.6.2 Use of habitat preservation ratio***
Where avoidance, restoration, or replacement of habitat of special status species is not feasible, require preservation and/or enhancement of similar habitat at a 2:1 ratio or greater to avoid significant cumulative loss of valuable habitats.

◇ ***Implementation Strategy BR 2.6.3 Use of easements to protect habitat***
Obtain easements or dedications to protect habitat, especially where it is connected to other large areas of unique or sensitive habitat. Open space areas created in development projects should be contiguous to natural areas adjacent to the site if possible.

◇ ***Implementation Strategy BR 2.6.4 Use of habitat banking or TDC program***
As an alternative to onsite mitigation and habitat protection, consider participation in an established habitat banking or Transfer of Development Credit (TDC) program if the project meets the criteria of the program. (Also, refer to Policy OS 1.15)

◇ ***Implementation Strategy BR 2.6.5 Habitat banking program***
Evaluate the development of a habitat-banking program to mitigate the effects of development on unique or sensitive habitat. (Also refer to Policy OS 1.9)

Policy BR 2.7 Fire Suppression and Sensitive Plants and Habitats

Balance the need for fire suppression and/or vegetation (fuel) management with the need to protect sensitive biological resources. Where possible, design land divisions and development so that fuel-breaks, vegetation, or fuel modification areas that are needed to reduce fire hazards do not disrupt or cause adverse impacts to special-status plant communities or critical habitat for special-status animal species. Fuel-breaks and vegetation or fuel modification areas shall be located on the development side of required setbacks from sensitive features, and shall be in addition to the required setbacks. (See AGP 25)

*A **native species** is a species within its natural range or natural zone of dispersal, i.e., within the range it would or could occupy without direct or indirect introduction and/or care by humans.*

***Exotic species** are any species or other variable biological material that enters an ecosystem beyond its historic range, including such organisms transferred from one country to another. Also known as nonindigenous or non-native.*

***Invasive species** are species that establish and reproduce rapidly outside of their native range and may threaten the diversity or abundance of native species through competition for resources, predation, parasitism, hybridization with native populations, introduction of pathogens, or physical or chemical alteration of the invaded habitat.*

(State of CA 2008)

Policy BR 2.8 Invasive Plant Species

Promote and support efforts to reduce the effects of noxious weeds on natural habitats. The County will work with local resource and land management agencies to develop a comprehensive approach to controlling the spread of non-native invasive species and reducing their extent on both public and private land.

◇ ***Implementation Strategy BR 2.8.1 Monitoring of natural plant communities***
Encourage scientific study, monitoring, and active management where biotic communities and habitats of limited distribution or sensitive natural plant communities are threatened by the spread of invasive non-native species.

◇ ***Implementation Strategy BR 2.8.2 Prohibit invasive species in landscaping***
Prohibit use of invasive plant species in landscaping of proposed development. Invasive plants are those plants listed in the state's Noxious Weed List, the California Invasive Plant Council's Invasive Plant Inventory, and other priority species identified by the San Luis Obispo County Agricultural Commissioner and California Department of Agriculture. Revise the County's invasive plant list by the end of 2010.

◇ ***Implementation Strategy BR 2.8.3 Require removal of invasive exotic plants***
Require the removal of invasive exotic plant species, to the extent feasible, when reviewing discretionary development projects, and include monitoring to prevent re-establishment in managed areas. Support educational programs that inform property owners about appropriate vegetation management techniques.

◇ ***Implementation Strategy BR 2.8.4 Use of plant lists***
Prepare and update lists of appropriate native, non-native, and non-invasive landscape species that have habitat value, low water requirements, and low flammability. Consult with the California Native Plant Society and the Natural Resources Conservation Service to prepare and update the plant lists.

◇ ***Implementation Strategy BR 2.8.5 Invasive exotic plant education***
Provide information on invasive exotic species control and management, including up-to-date lists of invasive exotic species of concern, to project applicants, the public and other interested parties.

Policy BR 2.9 Promote Use of Native Plant Species

Landscaping for proposed development will use a variety of native or compatible non-native, non-invasive plant species as part of project landscaping to improve wildlife habitat values.

Policy BR 2.10 Integrated Pest Control

Encourage the use of integrated pest management and organic practices to manage pests with the least possible hazard to the environment.

Policy BR 2.11 Control Spread of Non-native Invasive Animal Species

The County will work with landowners, the California Department of Fish and Game, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, the National Invasive Species Council, and other agencies and organizations to control and prevent the spread of non-native, invasive animal species.

Native Flowers and plants in the County.

Blue Oak
Quercus douglasii

Coast Live Oak
Quercus agrifolia
Used with permission of www.laspilitas.com

***Oak** means any species in the genus Quercus. **Oak woodlands** means an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover.*
- CA Oak Woodlands Conservation Act

GOAL 3 MAINTAIN THE ACREAGE OF NATIVE WOODLANDS, FORESTS, AND TREES AT 2008 LEVELS.

Policy BR 3.1 Native Tree Protection

Protect native and biologically valuable trees, oak woodlands, trees with historical significance, and forest habitats to the maximum extent feasible. (Refer to **Figure BR-3** for a distribution of hardwood resources in the county.)

◇ ***Implementation Strategy BR 3.1.1 Prepare countywide native tree protection ordinance***
Develop a countywide native tree protection ordinance to avoid disturbance of protected trees and to require replacement ratios and replanting standards. Prepare and release a public review draft ordinance by the end of 2012.

Policy BR 3.2 Protection of Native Trees in New Development

Require proposed discretionary development and land divisions to avoid damage to native trees (e.g., Monterey Pines, oaks) through setbacks, clustering, or other appropriate measures. When avoidance is not feasible, require mitigation measures.

◇ ***Implementation Strategy BR 3.2.1 Tree replacement in new development***
If avoidance of damage to native specimen trees is not feasible in discretionary land use permits and land divisions, require mitigation measures such as tree replacement using native stock at specified ratios, replanting plans, reseeding disturbed open areas with native, drought, and fire resistant species. A long-term monitoring plan will also be required.

Policy BR 3.3 Oak Woodland Preservation

Maintain and improve oak woodland habitat to provide for slope stabilization, soil protection, species diversity, and wildlife habitat.

◇ ***Implementation Strategy BR 3.3.1 Implement Oak Woodlands Preservation Act***
Comply with the Oak Woodlands Preservation Act (PRC Section 21083.4) through the review of proposed discretionary

development by maintaining the integrity and diversity of oak woodlands, chaparral communities, and other significant vegetation.

◇ ***Implementation Strategy BR 3.3.2 Oak woodlands mapping***
Develop a base map of oak woodlands in the county by the end of 2012.

◇ ***Implementation Strategy BR 3.3.3 Oak Woodlands Management Plan***
Prepare an Oak Woodlands Management Plan that includes significance standards and mitigation requirements for discretionary projects that affect oak woodlands. The plan should also identify a conceptual reserve system that, if preserved, would ensure that oak woodlands achieve long-term sustainability in the county. Mitigation for impacts to oak woodlands could be directed to the reserve system. If an in-lieu fee is required for small projects, the fees should be used to purchase easements within the reserve system from willing landowners. Prepare and release the public review draft management plan by the end of 2013.

Policy BR 3.4 Vegetation and Wildlife Disease Management Programs

Continue to support agency programs to limit the impacts of Sudden Oak Death syndrome and any other diseases harmful to native vegetation and wildlife in the county, while addressing any potential adverse effects on sensitive resources.

Policy BR 3.5 Non-native Trees

Protect healthy and non-hazardous, non-native trees (e.g., eucalyptus groves) and forests that provide raptor nesting or roosting sites or support colonies of monarch butterflies.

Sudden Oak Death *is a highly contagious disease that can infect and quickly kill several species of native California oaks. It is caused by a fungus-like brown alga called Phytophthora ramorum (phy-TOFF-thoruh ruh-MOR-um). Beetles then attack the weakened trees, and in the later stages of decline, decaying fungi are seen on the trunks of oaks and tanoaks. A tree may be infected for several years before it dies. In addition to coast redwood and Douglas fir, the current host list includes: California black oak, coast live oak, Shreve oak, tanoak, rhododendron, California bay laurel, big leaf maple, madrone, manzanita, huckleberry, California honeysuckle, toyon, California buckeye, and California coffeeberry, among many others.- University of California Agriculture and Natural Resources*

GOAL 4

THE NATURAL STRUCTURE AND FUNCTION OF STREAMS AND RIPARIAN HABITAT WILL BE PROTECTED AND RESTORED.

***Riparian Habitat** is characterized by vegetated areas along bodies of freshwater including streams, lakes and rivers.*

***Riparian corridors** are highly favorable for wildlife. They are the areas with the most water and the densest plant cover, providing predator protection, shade, breeding and nesting areas, and food sources.*

Policy BR 4.1 Protect Stream Resources

Protect streams and riparian vegetation to preserve water quality and flood control functions and associated fish and wildlife habitat. (OSP18 revised)

◇ ***Implementation Strategy BR 4.1.1 Approach to stream protection***

a. Require preservation of natural streams and associated riparian vegetation in an undisturbed state to the greatest extent feasible in order to protect banks from erosion, enhance wildlife passageways, and provide natural greenbelts.

b. Where appropriate, include stream and riparian corridors as part of a network of wildlife corridors. (OSP18)

c. Where possible, protect steam corridors and setback areas through easements or dedications. (OSP 19)

d. Consider wildlife values before watercourse alteration is undertaken, explore alternatives to alteration, and assure that stream diversion structures protect habitats. (SLMP3) (OSP 18, 19)

Policy BR 4.2 Minimize Impacts from Development

Minimize the impacts of public and private development on streams and associated riparian vegetation due to construction, grading, resource extraction, and development near streams. (SLMP1) (OSP 18) [This policy and the following implementation strategy do not apply 1) within the coastal zone, because the Local Coastal Program already includes detailed policies and standards to protect streams and riparian vegetation, and 2) on private lands designated Agriculture in the Land Use Element and on other lands used for production agriculture; for those lands, refer to Policy AGP 26 in the Agriculture Element.]

◇ ***Implementation Strategy BR 4.2.1 Setbacks from streams and riparian vegetation***

Set back development on public lands and all private development subject to discretionary review a minimum of 50 feet from the top of the bank of any stream or outside the dripline of riparian vegetation, whichever distance is greater, as shown in **Figures BR-6 and BR-7**. (Top of creek bank is the uppermost ground elevation paralleling a creek or watercourse where the gradient changes from a more defined vertical component to more horizontal.) Locate buildings and structures outside the setback; public trails may be located within this required setback only if trail design and construction avoid or mitigate environmental impacts. Provide for adjustments where alternatives are infeasible or more environmentally damaging, but require a minimum 30-foot building setback consistent with the requirements of the Regional Water Quality Control Board's Basin Plan. The following apply to applications subject to this strategy: (OSP 19)

1) Do not grade inside the established setback, unless the applicant provides justification that alternatives are infeasible or more environmentally damaging. When grading is permitted within the setback, require erosion control during construction and habitat restoration following grading. (OSP 19)
2) Limit the alteration of riparian vegetation. (OSP 19)
3) Allow stream alterations for water supply and flood control projects, road maintenance, maintenance of existing channels, improvement of fish and wildlife habitat, or where no practical alternative is available. (OSP 19)
4) Assure that stream diversion structures protect habitats. (OSP 19)
5) When there is no practical alternative to a significant impact to stream or riparian resources, implement a County-approved mitigation and monitoring plan that will lessen the impact. The plan shall be prepared and

A stream corridor.

implemented by a qualified professional funded by the applicant. (OSP 19)

6) Where feasible, and where a nexus exists with the proposed project, restore damaged riparian habitats as a condition of approval. (OSP 19)

7) Where possible, protect stream corridors and setback areas through easements or dedications. (OSP 19)

8) Locate parcel lines in land divisions that include stream or riparian corridors to optimize resource protection as shown in **Figure BR 7**. (OSP 19)

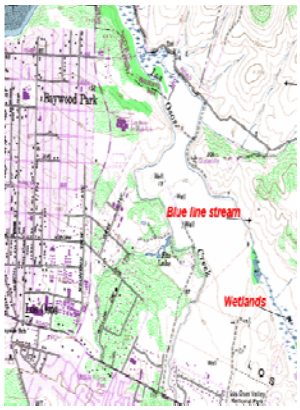
9) Direct polluting drainage away from the creek or include appropriate filters.

10) Minimize all ground disturbance and native vegetation removal.

11) To offset possible losses of riparian woodland, provide and maintain similar quality and quantity of replacement habitat or in-kind funds to an approved wildlife habitat improvement and acquisition fund in San Luis Obispo County.

◇ ***Implementation Strategy BR 4.2.2 Develop stream protection standards***

Prepare proposed amendments to the Land Use Ordinance and Subdivision Ordinance to establish criteria and development standards to implement the measures contained in this policy (**BR 4.2**) and **Implementation Strategy 4.2.1**. Prepare and release public review draft amendments by the end of 2013.



Blue line stream *is a perennial (continuous flow) or intermittent (seasonal flow) creek, stream or watercourse indicated by a solid or broken blue line on a U.S. Geologic Survey 7.5 minute series quadrangle map.*

Policy BR 4.3 Alluvial Well Extractions

Require discretionary projects that depend on alluvial well extractions and stream diversion to monitor the long-term effects on surface streamflow and riparian vegetation. Identify and implement contingencies for maintaining streamflow (e.g., minimum bypass flows, alternate water sources, decreased pumping rates, groundwater discharge).

Policy BR 4.4 Vegetated Treatment Systems (Low Impact Development Techniques)

Promote use and maintenance of engineered, vegetated treatment systems such as constructed wetlands, vegetated swales, or vegetated filter strips where they will reduce nonpoint source pollution from private and public development.

Policy BR 4.5 Encourage Stream Preservation on Private Lands

Encourage private landowners to protect and preserve stream corridors in their natural state and to restore stream corridors that have been degraded.

◇ ***Implementation Strategy BR 4.5.1 Support ongoing riparian vegetation management***

Support expansion of ongoing efforts led by the County Agricultural Commissioner, the Flood Control and Water Conservation District, resource conservation districts, and local conservation groups to implement riparian vegetation management techniques. Specifically, the approaches established for the management and/or elimination of invasive plant species as part of the Zone 9 and 1/1A Waterway Management Program (San Luis Obispo Creek and Arroyo Grande Creek watersheds) can be used as a model throughout the region.

FIGURE BR-6
CREEK AND RIPARIAN CORRIDOR SETBACKS

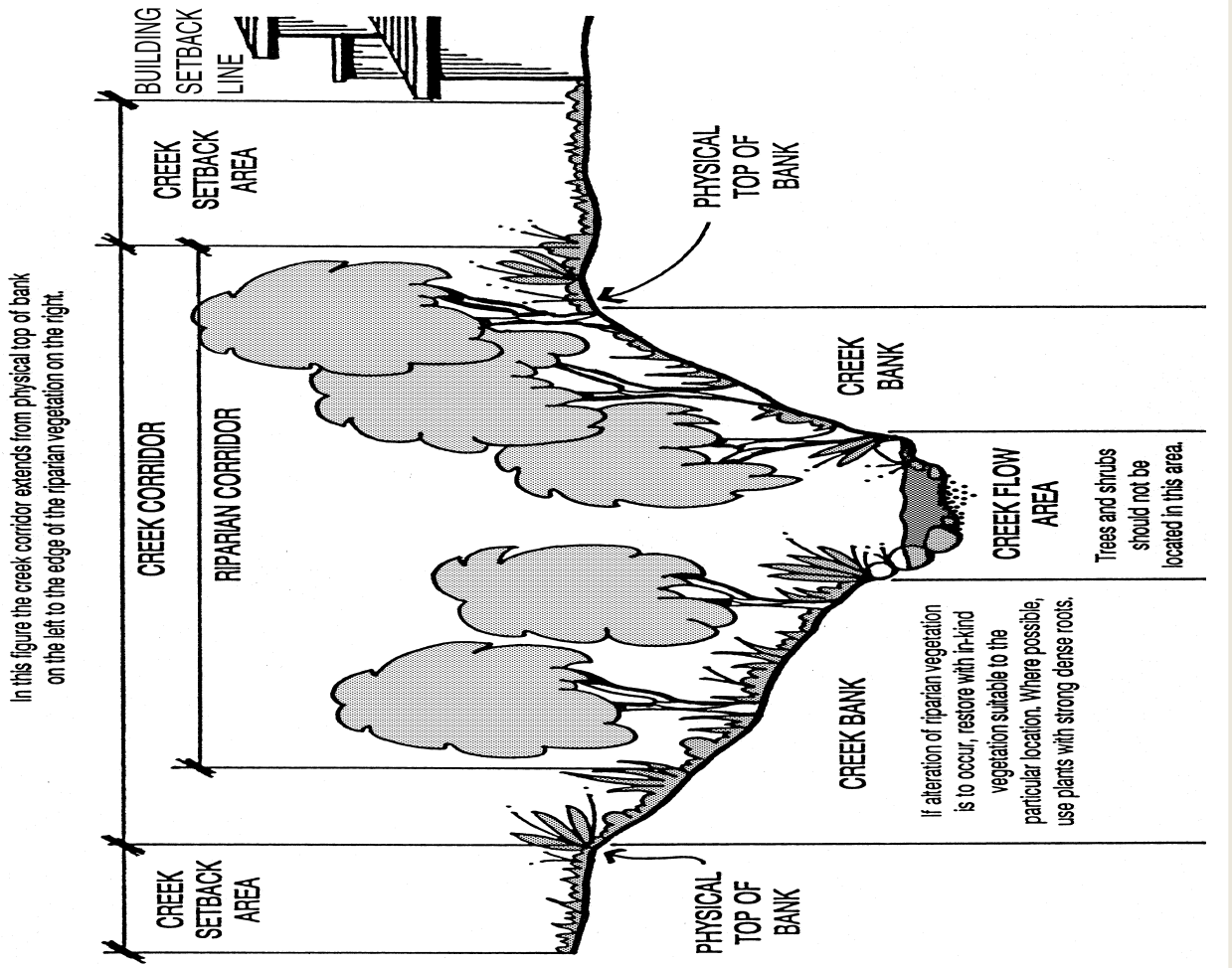
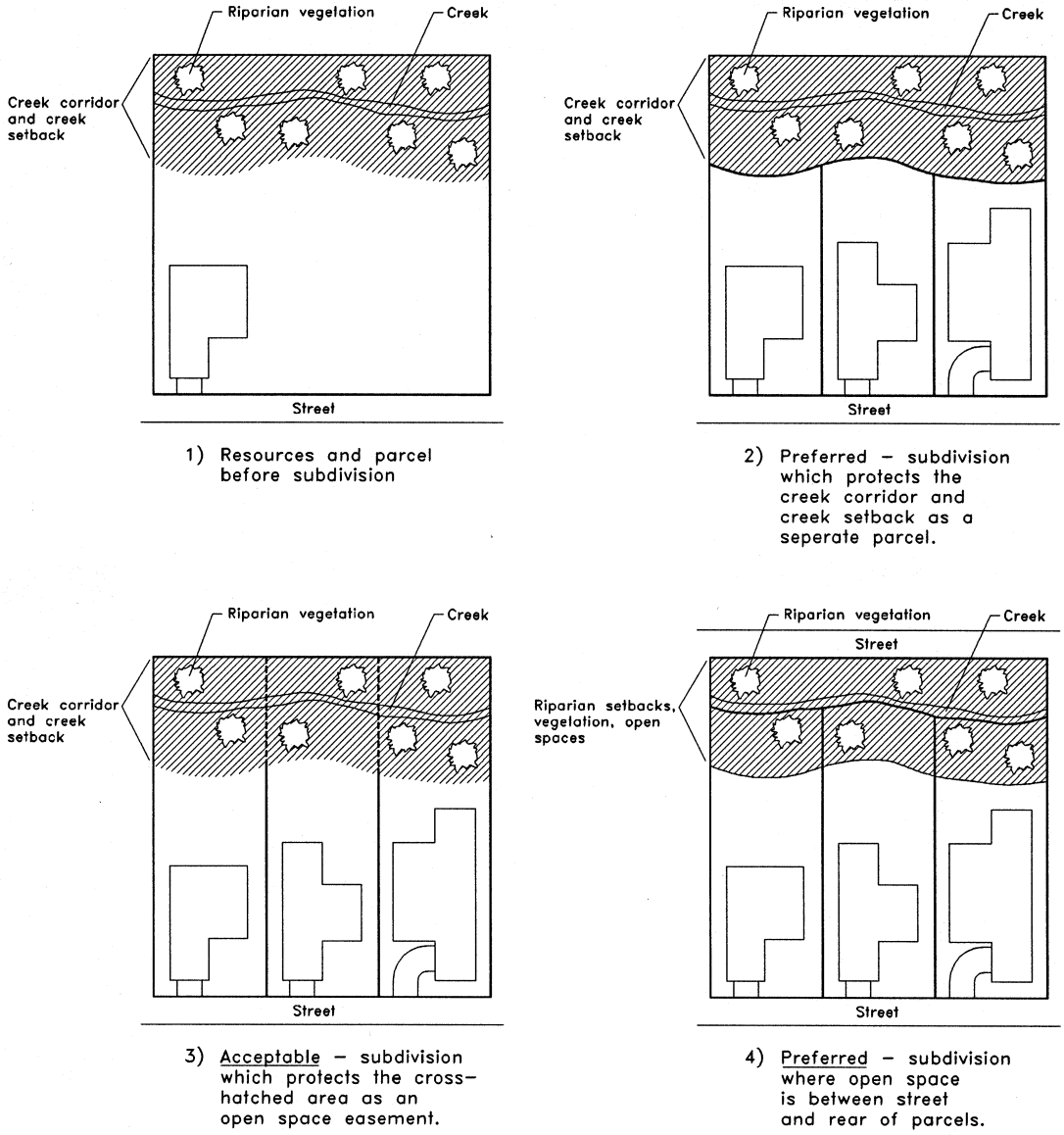


FIGURE BR-7
ACCEPTABLE SITE DESIGN IN CREEK AND RIPARIAN CORRIDORS



Policy BR 4.6 Encourage Stream Preservation on Public Lands

Protect stream and riparian corridors in their natural state on public lands. (OSP18)

◇ ***Implementation Strategy BR 4.6.1 Creek restoration***
Where streambank erosion is a concern, restore creeks to stabilize streambanks, enhance riparian habitat, and improve water quality. The County should coordinate with and seek technical assistance from agencies such as the Natural Resources Conservation Service, Resource Conservation Districts, the California Department of Fish and Game, U.C. Cooperative Extension, the County Farm Bureau, and the Regional Water Quality Control Board.

Policy BR 4.7 Contamination from Pesticides

Limit contamination from the use of commercial, residential, and public application of pesticides and herbicides into all inland and coastal waters, including but not limited to rivers, streams, wetlands, and intertidal areas. Make exceptions when such application is beneficial to public safety or welfare, or is necessary to protect a crop and is applied in accordance with label directions and permitted by the California Department of Food and Agriculture. (SLMP4)

Policy BR 4.8 Runoff from County Lands

Reduce fertilizer and pollutant runoff from County-owned and managed lands.

Best Management Practice (BMP): *A technique, process, activity, or structure used or developed to reduce the pollutant content of a storm-water discharge.*

◇ ***Implementation Strategy BR 4.8.1 Non-point source best management practices***
Implement Best Management Practices, including integrated pest management, to minimize pesticide application and minimize fertilizer runoff from County-owned and managed properties.

◇ ***Implementation Strategy BR 4.8.2 Pet waste in County facilities***
Provide receptacles for disposal and pickup of pet waste in County recreation areas.

Policy BR 4.9 Pesticide Reduction

Encourage agriculturalists and other landowners to consult with agencies such as the Natural Resource Conservation Service, U.C. Cooperative Extension, and Resource Conservation Districts to 1) reduce pesticide use, explore use of integrated pest management, 2) consider environmental impacts in choosing pesticides, and 3) otherwise reduce contamination of surface water and groundwater from pesticides.

Policy BR 4.10 Vector Control

Control vectors to prevent disease problems in keeping with good conservation principles. Vector control practices should minimize disturbance of the environment. (SLMP5) (OSP 18)

GOAL 5

WETLANDS WILL BE PRESERVED.

The following policies and implementation strategies do not apply within the coastal zone, because the Local Coastal Program already includes detailed policies and standards to protect wetlands.

Policy BR 5.1 Protect Wetlands

Require development to avoid wetlands and provide upland buffers.

- ***Implementation Strategy BR 5.1.1 Wetland delineations for new development***
  Require development applications to include wetland delineation for sites with jurisdictional wetlands and to demonstrate compliance with these wetlands policies, standards, and criteria, and with state and federal regulations.

- ***Implementation Strategy BR 5.1.2 Avoidance of wetlands***
  Amend the Land Use Ordinance to require development to avoid wetlands and transition zones. If avoidance of wetlands is not feasible, require the provision of replacement habitat onsite through restoration and/or habitat creation, provided that no net loss of wetland area, wetland function, and habitat

Wetlands *are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. –Clean Water Act*

values occurs. When on site wetland mitigation is not feasible, provide for offsite mitigation.

Wetlands in the County.

***Jurisdictional wetlands** are wetlands under the protection of the United States Army Corps of Engineers (USACE) as designated in the Rivers and Harbors Act Section 10 and Section 404 of the Clean Water Act. - http://www.usace.army.mil/cw/cecwo/reg/*

◇ ***Implementation Strategy BR 5.1.3 Wetland impact mitigation measures***

Amend the Land Use Ordinance to incorporate wetland impact mitigation measures that accomplish the following objectives:

a. Prevent net losses in wetland acreage, functions, or values.

b. Minimize any short-term loss and modification to wetlands.

c. Establish setbacks to protect adjacent upland habitat to provide an adequate buffer.

d. Permanently protect and manage mitigation sites for open space and wildlife habitat purposes.

e. Give priority to restoration of wetlands over creation of new replacement wetlands.

f. Minimize the need for ongoing maintenance.

g. Monitor the success of the restoration project and modify mitigation measures as needed.

h. Require mitigation that is commensurate with adverse impacts of the wetland alteration and provide similar values to and greater wetland acreage than those of the wetland area adversely affected.

i. Require performance bonds for habitat creation and enhancement projects.

Policy BR 5.2 No Net Loss of Wetlands

Ensure that all public and private projects avoid impacts to wetlands if feasible. If avoidance is not feasible, ensure no net loss of wetlands, consistent with state and federal regulations and this Element.

◇ ***Implementation Strategy BR 5.2.1 Identify wetlands and minimize impacts***

For projects subject to discretionary review: 1) require a report from a qualified biologist to determine the extent of wetlands,

potential impacts of the project and recommended mitigation measures, and 2) minimize impacts to wetlands through measures such a clustering development, low impact development (LID) and use of vegetated swales.

Policy BR 5.3 Wetland Conversion

Avoid the conversion of wetlands, including vernal pools, to agricultural uses, except where grazing may improve the health and function of those wetlands. Where grazing occurs in and around wetlands and vernal pools, encourage grazing management that improves the health and function of those wetlands. (SLMP2 revised)

Policy BR 5.4 Wetlands on Agricultural Lands

Support use of best management practices and proper range uses to minimize impacts to wetlands on agricultural lands. (SLMP2)

GOAL 6	THE COUNTY'S FISHERIES AND AQUATIC HABITATS WILL BE PRESERVED AND IMPROVED.

Policy BR 6.1 Avoid Impacts to Fisheries

Require all proposed discretionary land use projects and land divisions to avoid impacts to freshwater and saltwater fisheries and wildlife habitat to the maximum extent feasible. When avoidance is not feasible, offset potential losses of fisheries and wildlife.

Interpretive Display for Listed Species

- ***Implementation Strategy BR 6.1.1 Prohibitions in special-status fish spawning areas***
  Prohibit construction activities within the channel of any waterway identified to contain existing or potential spawning habitat for special-status fish species during limited periods of spawning activities.

- ***Implementation Strategy BR. 6.1.2 Fish-friendly stream and river management***
  Manage stream flows to fish-bearing streams, support a region-wide program to remove or reduce barriers to fish movement, and implement fish-friendly stream and river corridor restoration projects.

GOAL 7

SIGNIFICANT MARINE RESOURCES WILL BE PROTECTED.

This goal is fully implemented by policies and programs in the County's certified Local Coastal Program (LCP). The following general policies protect marine resources consistent with the LCP.

Policy BR 7.1 Coastal Protection

The County should continue to advocate sound energy and coastal protection policies and oppose proposals along the San Luis Obispo County coastline that are inconsistent with the County's Local Coastal Program and other County plans and policies. **(OSP 22)**

Examples of Marine Resources

Policy BR 7.2 Protection of Marine Resources

Make every effort to secure permanent protection and management of the County's ecologically and economically significant marine resources using the National Marine Sanctuary, National Estuary, or other programs and legislation as vehicles for protection and management. **(OSP 22)**

Policy BR 7.3 Best Management Practices

Support landowners that participate in education and assistance programs and other voluntary and cooperative programs, such as conservation programs offered by the Natural Resources Conservation Service and Resource Conservation Districts, that encourage sustainable land management practices (Best Management Practices) that reduce erosion, sedimentation, and nutrient levels in coastal watersheds.

Policy BR 7.4 Sedimentation

Support efforts on public and private lands to keep Chorro Creek, Los Osos Creek, and other watercourses free of excessive sediment and other pollutants to maintain freshwater flow into the Morro Bay National Estuary and the Monterey Bay National Marine Sanctuary, nurture steelhead trout, and support other plant and animal species. On County-owned lands, implement Best Management Practices in order to reduce sediment transport to coastal waters.

◇ ***Implementation Strategy BR 7.4.1 TMDLs***
Implement provisions of Total Maximum Daily Loads (TMDLs) as they are developed for Chorro Creek, Los Osos Creek, and the Morro Bay estuary, and other watersheds consistent with the requirements of the Regional Water Quality Control Board.

Policy BR 7.5 Morro Bay Watershed
Support implementation of the Comprehensive Conservation and Management Plan for the Morro Bay Estuary.

Policy BR 7.6 Morro Bay Estuary Water Quality
Support efforts to ensure a level of water quality in the Morro Bay Estuary that supports recreation, viable commercial fishing and shellfish mariculture industries, healthy eelgrass beds, and thriving fish and shellfish populations.

Policy BR 7.7 Watershed Protection
Promote a voluntary, cooperative, educational, and incentive-based approach to protect Morro Bay and its watershed. Where appropriate, continue to obtain open space easements for sensitive wetlands and bayfront areas, and encourage other agencies and conservation organizations to obtain open space and conservation easements and fee title to these areas.

Summary of Implementation Strategies

For each implementation strategy described in this chapter, the following table (**Table BR–2**) summarizes the County department or other agency that has primary responsibility for carrying out that strategy. In addition, the table summarizes the priority, estimated year of initiation, and potential source of funding of each strategy. The actual timeframe for implementing the strategies is dependent upon the availability of adequate staff and funding.

TABLE BR 2
BIOLOGICAL RESOURCES IMPLEMENTATION

Implementation Strategy	Responsible Department or Agency[1]	Priority	Timeframe to Start	Possible Funding Sources[2]
IS BR 1.5.1 Identify regional system of ecosystems	PB	High	2012	DB, Grant
IS BR 1.5.2 Ecosystem research and monitoring	PB	High	Immediately[3]	DB, Grant
IS BR 1.5.3 Non-governmental outreach and education	PB	High	2011	DB, Grant
IS BR 1.5.4 Governmental outreach and education	PB	Low	2011	DB
IS BR 1.10.1 Natural areas database	PB	High	Immediately	DB
IS BR 1.10.2 Vegetation classification and mapping project	PB	High	Immediately	DB
IS BR 1.10.3 GIS-based natural communities monitoring	PB	Medium	2010	DB
IS BR 1.11.1 Maintain a wildlife corridor database	PB	Medium	2010	DB
IS BR 1.12.1 Identify and protect wildlife corridors	PB	High	Immediately[3]	N/A
IS BR 1.12.2 Mitigate impacts to wildlife corridors	PB, PW	Medium	Immediately[3]	N/A
IS BR 1.15.1 Identify setbacks from bird nesting areas	PB	Medium	Immediately[3]	N/A
IS BR 1.15.2 Preconstruction surveys for bird nesting areas	PB	Medium	Immediately[3]	N/A

Implementation Strategy	Responsible Department or Agency[1]	Priority	Timeframe to Start	Possible Funding Sources[2]
IS BR 2.1.1 Coordination with trustees during discretionary review	PB	High	Immediately[3]	N/A
IS BR 2.2.1 Promote pre-application activities	PB	High	Immediately[3]	N/A
IS BR 2.4.1 Require consistency with recovery plans	PB	High	Immediately[3]	N/A
IS BR 2.6.1 Use of biological resource surveys	PB	High	Immediately[3]	N/A
IS BR 2.6.2 Use of habitat preservation ratio	PB	Medium	Immediately[3]	N/A
IS BR 2.6.3 Use of easements to protect habitat	PB	Medium	Immediately[3]	N/A
IS BR 2.6.4 Use of habitat banking or TDC program	PB	Medium	2012	DB
IS BR 2.6.5 Habitat banking program	PB	High	2010	DB
IS BR 2.8.1 Monitoring of natural plant communities	PB, RCD, UCext	Medium	2012	DB, Grant
IS BR 2.8.2 Prohibit invasive species in landscaping	PB, AG	High	2010	DB, Grants
IS BR 2.8.3 Require removal of invasive exotic plants	PB	Medium	Immediately[3]	N/A
IS BR 2.8.4 Use of plant lists	PB	Low	2013	DB
IS BR 2.8.5 Invasive exotic plant education	PB	Medium	2012	DB
IS BR 3.1.1 Prepare countywide native tree protection ordinance	PB	High	2010	DB
IS BR 3.2.1 Tree replacement in new development	PB	High	Immediately[3]	N/A
IS BR 3.3.1 Implement Oak Woodlands Preservation Act	PB	High	Immediately[3]	N/A
IS BR 3.3.2 Oak woodlands mapping	PB	High	2010	DB
IS BR 3.3.3 Oak Woodlands Management Plan	PB, UCext, AG	High	2011	DB, grants
IS BR 4.1.1 Approach to stream protection	PB	High	Immediately	DB
IS BR 4.2.1 Setbacks from streams and riparian vegetation	PB	High	Immediately[3]	N/A

Implementation Strategy	Responsible Department or Agency[1]	Priority	Timeframe to Start	Possible Funding Sources[2]
IS BR 4.2.2 Develop stream protection standards	PB	High	2011	DB
IS BR 4.5.1 Support ongoing riparian vegetation management	AG, PW, cities, RCD	Medium	2011	DB, grant
IS BR 4.6.1 Creek restoration	GS, PW, RCD	High	2011	DB, GF
IS BR 4.8.1 Non-point source best management practices	GS, PW	High	Immediately[3]	DB
IS BR 4.8.2 Pet waste in County facilities	GS	Medium	Immediately	DB, user fees
IS BR 5.1.1 Wetland delineations for new development	PB	High	Immediately[3]	N/A
IS BR 5.1.2 Avoidance of wetlands	PB	Medium	2011	DB
IS BR 5.1.3 Wetland impact mitigation measures	PB	Medium	2011	DB
IS BR 5.2.1 Identify wetlands and minimize impacts	PB	High	Immediately[3]	N/A
IS BR 6.1.1 Prohibitions in special-status fish spawning areas	PB, PW, GS	High	Immediately[3]	DB
IS BR. 6.1.2 Fish-friendly stream and river management	PB, F&G	Medium	Immediately[3]	DB
IS BR 7.4.1 TMDLs	PB, PW	High	2011	DB, grant

Notes:

1 Department abbreviations:
Cities= Incorporated cities
CSDs= Community Service Districts
GS = County General Services Agency
PB = County Department of Planning and Building
PW = County Department of Public Works
RCD = Resource Conservation District

2 Funding source abbreviations:
GF = General Fund
DB = Planning and Building Department Budget

3 Denotes an ongoing activity.

Source: Department of Planning and Building, March 2009.

References

In addition to the following references, the reader is encouraged to review the Biological Resources Appendix and its accompanying list of references.

Beier, P. and S. Loe. 1992. A checklist for evaluating impacts to wildlife movement corridors. Wildlife Society Bulletin 20:434-440.

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