Protecting Local Wetlands



A TOOLBOX FOR YOUR COMMUNITY



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Shute, Mihaly & Weinberger

E. Clement Shute, Jr. Rachel B. Hooper Richard S. Taylor Brian A. Schmidt Save The Bay has been working for four decades to protect and restore the San Francisco Bay and Sacramento-San Joaquin Delta and to improve public access to its shoreline. We are committed to keeping the Bay healthy and beautiful for future generations.

Disclaimers

Save The Bay, in conjunction with Shute, Mihaly & Weinberger, prepared this handbook for informational purposes only. The handbook is not intended to serve as legal advice and may not reflect the most current legal developments, decisions, or settlements. Readers should not act upon this information without seeking professional legal counsel.

Additionally, this handbook includes several excerpts from the Draft Model Wetland Protection Ordinance. Although the California Coastal Conservancy prepared the Draft Model Ordinance, it never finalized the document or adopted it as an official project or publication. Use of this text does not imply that this constitutes the official policy of the California Coastal Conservancy.

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Protecting Local Wetlands A Toolbox for Your Community

The creeks overflow; a thousand rivulets run 'Twixt the roots of the sod, the blades of the marshgrass stir; Passeth a hurrying sound of wings that westward whirr; Passeth, and all is still, and the currents cease to run; And the sea and the marsh are one.

Sidney Lanier from *The Marshes of Glynn*

Wetlands are transitional areas between water and land. Three physical features characterize wetlands: standing water, hydric (watersaturated) soils, and hydrophytic plants. Wetlands have a positive effect on drinking water, flood control, shoreline erosion, and wildlife habitat.

Foreword

The last two decades have brought a sharp increase in public knowledge about the value of wetlands, thanks to the tireless efforts of scientists, educators, journalists, activists, and elected officials. The public now understands the urgency of protecting those wetlands we still have and the benefits of restoring degraded wetlands where we can. Save The Bay's *Protecting Local Wetlands: A Toolbox for Your Community* is designed to help government officials, stakeholder organizations, and individuals protect and restore their local wetlands.

Enormous opportunities for reclaiming and restoring wetlands await those with the will and the necessary skills. Residents living near the San Francisco Bay-Delta Estuary – which includes the San Francisco Bay Area and the Sacramento-San Joaquin Delta – are particularly challenged and blessed. Vast wetland riches in the Estuary have been destroyed over the past 150 years, dramatically changing the Estuary's shape and contributing to its decline. Through the efforts of many, wetland loss has decreased, and areas targeted for restoration are on the rise. But much work remains if we are to achieve a clean and healthy Bay, and to protect and restore wetlands throughout the state. It is our hope that this handbook provides both the encouragement and the essential tools for that undertaking.

As the regional membership organization devoted to protecting and restoring the San Francisco Bay-Delta Estuary, Save The Bay is taking a leadership role in restoring wetland habitat. We accomplish this by campaigning for specific restoration projects, sponsoring community-based restoration efforts, promoting policies that encourage restoration, and building alliances and partnerships to advance restoration throughout the region.



Chapter One

The Importance of Wetland Protection

Wetlands are valuable resources that provide clean water, flood control, wildlife habitat, open space, and recreational opportunities. In addition, wetlands provide refuge for 43 percent of all threatened and endangered species. Unfortunately, California has lost more than 90 percent of its historic wetlands to agriculture, housing, industry, and airports.

Swamps, bogs, marshes, and sloughs; prairie potholes and playas. No matter what you call them, wetlands rank among our most vital natural resources. They purify our drinking water, save our homes from floods, and protect our shorelines from erosion. Wetlands provide critical habitat for a vast diversity of plants and animals – including endangered species – and serve as nurseries for juvenile fish and shellfish. Wetlands are as biologically productive as tropical rainforests and coastal reefs. In fact, 43 percent of all threatened and endangered species rely on wetlands for their survival.

Wetlands, like many of our nation's once unspoiled natural resources, have been the focus of unhampered degradation, misuse, and destruction in the name of progress. Viewed contemptuously as pestilent, mosquito-infested wastelands swarming with snakes and other undesirable creatures, wetlands have been drained, filled, and converted to farmland, highways, sewage lagoons, landfills, industrial complexes, shopping malls, parking lots, housing developments, and airports. Since colonial times we have destroyed more than 50 percent of the wetland acreage once found in the United States. Less than 100 million acres remain today - representing less than 5 percent of the land mass in the continental United States. Twenty-two states have lost at least 50 percent of their original wetland acreage and seven states, including California, have lost more than 80 percent.

Despite laws enacted by Congress to protect wetlands and knowledge of the benefits wetland habitats provide, we continue to lose wetlands at an alarming rate. More than 90 percent of California's original wetland acreage has been destroyed, and many of the remaining wetlands are threatened. Even federally protected wetlands such as the Florida Everglades are in danger of being destroyed by excessive runoff of pollutants and diverted water flow. The impetus of over 200 years of subsidized wetland destruction in the United States is difficult to slow, and our remaining wetlands can be saved only through a change in the public's attitude towards wetlands and the aggressive defense of wetlands nationwide.

The San Francisco Bay-Delta Estuary provides a dramatic example of the value of wetlands and the impact of their destruction.

1.1 WETLANDS IN THE SAN FRANCISCO BAY-DELTA: AN ECOLOGICAL TREASURE UNDER ASSAULT

The San Francisco Bay and the Sacramento-San Joaquin Delta form the West Coast's largest estuary, draining approximately 40 percent of California's land. With its blend of fresh and ocean waters, thousands of miles of rivers and streams, numerous microclimates and landscapes, the Estuary is an ecological treasure that supports an enormous diversity of animals and plants. Approximately 255 bird species, 120 fish species, 81 mammal species, 30 reptile species, and 14 amphibian species live in the Estuary, many relying on the wetland habitats and open waters of the ecosystem for spawning, nursing, and feeding. Nearly half the birds of the Pacific Flyway and two-thirds of California's salmon pass through the Bay.

This resource is also surrounded by the nation's fourth largest metropolitan region, bustling with shipping, commerce, and an expanding population. Historically, wetlands were considered unproductive unless they were diked, drained, filled, and converted to other uses. So over the last 150 years, the Estuary's wetlands have been decimated by conversion to agriculture and urban development, and by the combined effects of hydraulic mining, flood control, and water diversion. As a result,

"Today's Estuary encompasses roughly 1,600 square miles, drains more than 40 percent of the state, provides drinking water to 20 million Californians, and irrigates 4.5 million acres of farmland."

- State of the Estuary Report 1992-1997, The San Francisco Estuary Project. Tributary rivers and streams that feed the Estuary have been diverted so extensively that only 40 percent of the water volume that once flowed into the Bay still reaches it today. There remains only one free flowing river from the Sierra Nevada Mountains to the Bay – the Cosumnes River. California has plowed under and paved over some of the most fertile and economically beneficial ecological systems in the state.

Wetland habitats most severely impacted in the San Francisco Estuary have been the tidal freshwater marshes and riparian forests of the Delta and the tidal salt and brackish marshes of San Pablo, San Francisco, and Suisun Bays. The extent of open water in the Estuary has been reduced by about one-third since 1850. Tidal wetlands in San Francisco Bay have been reduced from approximately 190,000 acres to 40,000 acres and in the Sacramento-San Joaquin Delta from 345,000 acres to 9,000 acres. This represents a total loss of 92 percent throughout the Estuary. With similar losses of seasonal wetlands and riparian habitat, fisheries and wildlife populations have been crippled. Food chain productivity in the Estuary has plummeted, and the loss of wetlands is a primary factor.

This dramatic alteration and loss of habitat has accompanied a loss of species. California seablite (*Suaeda californica*), a salt marsh plant, is now considered extinct in the North Bay. California clapper rails were once so numerous that they were marketed for food in San Francisco. Today, these birds are at the brink of extinction, classified as endangered. Of the 32 endangered species that inhabit San Francisco Bay, 23 depend on wetlands for critical habitat, including the clapper rail and salt marsh harvest mouse.

Decreasing fresh water flows and extensive pollution also have taken their toll on the quality of the Estuary's ecosystem. Tributary rivers and streams that feed the Estuary have been diverted so extensively that only 40 percent of the water volume that once flowed into the Bay still reaches it today. To replace the natural marshes that once cleaned pollutants from the Bay, the public paid billions of dollars to finance sewage treatment plants. Raw sewage and garbage are no longer dumped directly into the Bay as they were for over a century, but the Bay's bottom contains pollutants dating from the Gold Rush. Despite increases in water quality standards, thousands of tons of municipal and agricultural contaminants continue to flow into the Estuary each year. The San Francisco Bay no longer boasts a bountiful commercial fishing industry, and the fish

consumed by subsistence fishermen and their families pose significant health hazards.

Together, all of these impacts jeopardize the Estuary's web of life. But the degradation has also prompted broader community interest in protecting existing wetlands from destruction and in restoring degraded wetlands and diked, former wetlands to productive habitat. Wetland protection and restoration activity in this region is increasing rapidly, improving the chances that the Estuary and the species dependent on it can be restored to health.

One such broad effort to protect and restore wetlands in the San Francisco Bay is the San Francisco Bay Area Wetlands Ecosystem Goals Project. Over 100 participants representing local, state, and federal agencies, academia, and the private sector formed an interdisciplinary coalition to determine the wetlands and related habitats needed to sustain a healthy Bay. Teams of environmental scientists assessed the past and present conditions of the baylands ecosystem and recommended ways to improve its ecological health. These teams collaborated for more than three years to write the Baylands *Ecosystem Habitat Goals Report.*¹ "This report presents recommendations for the kinds, amounts, and distribution of wetlands and related habitats that are needed to sustain diverse and healthy communities of fish and wildlife resources in the San Francisco Bay Area."2 In other words, the Goals Report establishes a flexible vision for restoring bayland habitats.

1.2 WHAT ARE WETLANDS?

Differing viewpoints on what defines wetlands have resulted in a number of scientific and administrative definitions. Essentially, wetlands are transitional areas between water and land environments. They are areas where water is the primary factor controlling the environment and the associated plant and animal life. These transitional habitats occur between uplands and aquatic environments where the water table is at or near the surface of the land, or where the land is covered by shallow water up to 6.6 feet (2 meters) deep. This ecosystem imposes unusual conditions for survival on plants and animals, and it demonstrates varied and ingenious strategies for utilizing the rich supply of nutrients found in wetlands. A wide variety of habitat types therefore qualify as wetlands.

Wetlands can be categorized in many ways. The categories most pertinent to the San Francisco Bay-Delta Estuary are:

- Tidal versus non-tidal.
- Permanent versus seasonal.
- Freshwater versus saline.
- Managed versus unmanaged.

Tidal wetlands are those regularly exposed to the ebb and flow of the tides. While most of the Bay's wetlands were formerly tidal, about 75 percent have been diked off from tidal action and are now classified as non-tidal. These diked, former wetlands are known as "baylands." Some of these baylands occasionally receive tidal waters when unusually high tides overtop the dikes.

Tidal wetlands provide essential feeding grounds for hundreds of thousands of shorebirds. The lowest of the tidal wetlands are called tidal mudflats, which are non-vegetated. Above these are low tidal marshes, followed by high tidal marshes. Low tidal marshes are covered with tidal waters for longer periods each day than are high tidal marshes. High marshes may have considerably higher soil salinity due to infrequent flushing by the tides. Tidal wetlands are the Bay's "bread basket," providing food and nutrients for the entire ecosystem.

Non-tidal wetlands can be classified as permanent or seasonal, depending on how long they are ponded or saturated with water each year. Permanent wetlands hold water yearround except in very dry years. Seasonal wetlands generally dry out each spring or summer. For example, vernal pools are shallow, intermittently flooded wet meadows that dry up during the warm summer months. Some wetland species must leave these wetlands during the dry season or, as in the case of many invertebrates and plants, enter a dormant stage.

Wetlands also can be divided into freshwater and saline types, based on the salinity of their soils. Wetland soils are strongly influenced by water salinity, but also by the degree to which salts are retained or leached from the soil. Wetlands of intermediate salinity are called brackish. Freshwater tidal wetlands are located along streams near the upper end of tidal influence. For example, the Cosumnes River has numerous tidal freshwater wetlands. Saline tidal wetlands and connected freshwater riparian habitats provide corridors for anadromous fish that migrate upstream to spawn. For example, the Napa River, Sonoma Creek, and Petaluma River are principal migratory routes for silver salmon and steelhead trout. Riparian corridors also provide habitat for the California freshwater shrimp and nursery and spawning grounds for trout, salmon, steelhead, and other fish.

The term "managed wetlands" is generally applied to wetlands where water levels or vegetation are manipulated to achieve specific habitat objectives. Most managed wetlands in the San Francisco Estuary are located on state or federal wildlife refuges or private hunting clubs, and most are managed primarily to benefit wintering or breeding waterfowl. Unmanaged wetlands may receive occasional management such as weed control or levee repairs, but they are not managed intensively on an annual basis.

Additionally, farmed wetlands are areas that would function as wetlands if they were not drained, disked, and planted as part of an ongoing agricultural operation. These areas include nearly all the diked historic baylands that currently are being farmed. The farms surrounding San Pablo Bay between the Napa and Petaluma Rivers are good examples of farmed wetlands.

1.3 THE VALUE OF WETLANDS

Wetlands and riparian habitats play a vital and frequently overlooked role in maintaining a healthy ecosystem. These habitats perform many functions, including buffering the impact of floodwaters, cleansing pollutants from runoff, recharging overdrawn water supplies, protecting our shorelines from erosion, and providing habitat for hundreds of fish and wildlife species. Wetlands and riparian habitat also provide economic benefits by supporting commercial fisheries, offering recreational opportunities, and generally contributing to a higher quality of life for humans, especially in densely populated areas such as the San Francisco Bay Area.

Examples of Tidal Wetlands:

Bothin Marsh in Mill Valley, Petaluma Marsh, Arrowhead Marsh near the Oakland Airport, and Palo Alto Baylands.

Examples of Non-Tidal Wetlands:

The South Bay salt ponds.

Examples of Tidal Freshwater Wetlands:

Cosumnes River and Delta meadows located near the towns of Walnut Grove and Locke.

Examples of Farmed Wetlands:

Subsided farmlands between the Napa and Petaluma Rivers and throughout the Delta.

Wetland Functions:

- Provide crucial habitat for migratory bird and resident bird, mammal, and fish populations.
- Provide food for fish and wildlife.
- Enhance water quality by trapping sediments and filtering pollutants.
- Recharge groundwater.
- Protect upland areas from erosion and flooding.

Recognition of the multiple functions and values of wetlands is relatively recent. For nearly 200 years, the federal government not only promoted wetland destruction, it also helped finance it. But public opinion in recent years has overwhelmingly shifted towards wetland preservation primarily due to our increased understanding of wetland functions and values.

Wetlands are valuable to both wildlife and humans. A 1992 study estimated that California's wetlands provided as much as \$22.9 billion in identifiable value to the state annually, not including the incalculable value of wetland species and biodiversity.³ Among the most striking functions that wetlands provide to humans are:

- Water supply Wetlands are increasingly important for the recharge of both ground and surface water because of the growth of urban centers and dwindling ground and surface water supplies.
- Water quality The cleansing capabilities of wetlands are important for filtering out chemical and other water-borne pollutants.
- **Recreation** Wetlands serve as recreation areas for hunting, fishing, boating, hiking, photography, and wildlife observation.
- Habitat and food web support Wetlands provide essential habitat for hundreds of plant and animal species. Wetlands also support the food web, both by providing food for fish and wildlife and by exporting nutrients to downstream areas.
- Open space and aesthetic values Wetlands are areas of great diversity and beauty, providing open space for recreational and visual enjoyment.
- Economic value Wetlands provide millions of dollars of economic benefits to California communities and to the public at large, by performing a number of functions such as flood control and

water purification as well as recreation, ecotourism, and fishing jobs.

Wetlands perform many complex chemical and hydrological functions. As mentioned above, these functions include improvement of water quality, groundwater discharge and recharge, and flood and erosion protection.

1.3.1 Water Quality

Wetlands are important in maintaining the water quality of downstream areas because they remove pesticides, fertilizers, and other pollutants. Through a variety of physical, chemical, and biological mechanisms, wetlands filter pollutants that occur naturally as well as contaminants from municipal wastewater and urban stormwater inputs. They also can transform these pollutants into forms that are less toxic to plants and animals. However, the capacity of wetlands to absorb contaminants is finite, and this capacity has been exceeded in some areas.

Wetlands also maintain water quality by removing sediments. Trapping sediments is important because excessive sediments entering an estuary can smother bottom-dwelling organisms, degrade spawning and rearing habitat, and reduce food production for fish. Sediments often have a high organic content, and decay of this organic matter may harm fish and aquatic invertebrates.

1.3.2 Groundwater Discharge and Recharge

Groundwater discharge is the movement of groundwater up to the surface. Groundwater recharge is the movement of surface water down into the groundwater basin. Wetlands are more likely to function as groundwater discharge areas than as recharge areas. Groundwater discharge areas are represented on the surface by seeps and springs.

1.3.3 Flood and Erosion Protection

Wetlands reduce the effects of flooding by providing water storage within the floodplain, slowing water velocities, reducing peak flows, and increasing the duration of flow. Many freshwater and riverine wetlands are depressions that retain stormwater runoff and provide supplemental channel capacity when rivers overflow their banks. Additionally, some wetland soils retain water like a sponge and slowly release it to the surface during periods of low water. This water retention also helps reduce the extent of flooding during periods of heavy rainfall and acts as a buffer against rising sea levels. Vegetation in floodplain wetlands can double the friction coefficient of water flow compared to non-vegetated channels, thereby decreasing water flow velocities and reducing potential flood-peaks in downstream areas as well as riverbank erosion. Vegetated river channels and wetlands can slow shoreline erosion and reduce the need along waterfronts and rivers for hard shore protection such as seawalls and rip rap. (Rip rap is a term for large stones placed against a stream bank for stabilization.)

1.4 THE BENEFITS OF RESTORATION

Restoring degraded wetlands and re-creating historic wetlands offer dramatic positive impacts. For example, restoring wetlands in the San Francisco Bay-Delta Estuary would include the following benefits.

- Revegetated tidal marshes and related wetlands will provide critical habitat for endangered and threatened species, including fish, waterfowl, and shorebirds.
- 2. Wetlands will improve water quality as they cleanse pollutants from the Bay and capture sediments. Tidal marshes that increase Bay surface area and water volume will improve circulation to aid water quality.
- 3. Wetlands will absorb floodwaters and protect our shorelines from erosion.
- 4. Wetland habitat will provide recreational, scenic, and educational benefits to the human inhabitants of the area, thereby improving the region's quality of life.

1.5 WHAT HAPPENS NEXT?

For centuries wetlands were considered insectridden, unattractive, and dangerous areas waiting to be drained and filled. Now, as we enter a new millennium, we recognize wetlands as beautiful and valuable places that serve a vital ecological role. This understanding has taught us the urgency of protecting those wetlands we still have and the benefits of restoring degraded wetlands where we can. This handbook is designed to help government officials, stakeholder organizations, and individuals protect and restore their local wetlands.

Appendix A, located towards the back of this handbook, contains a list of acronyms used throughout the text. A list of wetland-related Internet sites is provided in Appendix B. "To achieve, one must dream greatly, one must not be afraid to think large thoughts."

-Rachael Carson



Chapter Two

The Regulation of Wetlands by Federal and State Agencies

Since the passage of the Clean Water Act in 1972, the federal government has played a central role in regulating and protecting wetlands. The role of the federal and state Endangered Species Acts has increased over time as wetland species populations have declined. California bolstered its wetland protection through the California Coastal Act and the California Environmental Quality Act.

hapter One demonstrated both the importance of wetlands and the jeopardy they face. In an effort to stem the loss of valued wetland resources, a complex system of federal and state wetland regulations has developed over the years. Navigating this regulatory maze can be extremely difficult. For example, the seemingly simple question, "What is a wetland?" has different answers depending on the regulatory agency involved.

Historically, wetland regulation has been achieved primarily through the federal Clean Water Act, Section 404. Increasingly, other state and federal laws are playing roles, the most important of which is the regulation of coastal wetlands under California law. In addition, federal and state endangered species laws are playing a greater role. As the amount of wetlands continues to shrink, the importance of wetlands as habitat for rare, threatened, or endangered species becomes increasingly evident. Truly effective local-level wetland protection must consider all these federal and state programs.

2.1 FEDERAL WETLAND REGULATORY PROGRAMS AND AGENCIES

Wetland regulation in the United States primarily involves three federal programs: the Clean Water Act, the Rivers and Harbors Act, and the Endangered Species Act.

2.1.1 The Clean Water Act

Congress passed the Clean Water Act of 1972⁴ to protect the nation's water quality by regulating "discharges" of pollutants into "waters of the United States."⁵ The Army Corps of Engineers (Corps) and the Environmental Protection Agency (EPA) were charged with implementing the Clean Water Act (CWA). They defined the term "waters of the United States" to include wetlands.⁶

Section 404 of the CWA governs uses that alter or destroy wetlands. It is the most important wetland regulatory program because it is the only one that uniformly covers wetlands throughout California and the rest of the United States. Because it dominates the wetland regulatory field, local wetland protection programs must be coordinated with the Section 404 program. For this reason, Chapter Three provides more details on Section 404. This section merely provides a general introduction to the Section 404 program and the roles various agencies play in that program.

Section 404 Overview. Section 404 of the Clean Water Act expressly prohibits the discharge of dredged or fill material into "waters of the United States" and their adjacent wetlands without prior approval from the Secretary of the Army. The Section 404 program is administered jointly by the Corps and the EPA, with the Corps taking the lead role. Other federal agencies have advisory roles, including the U.S. Fish and Wildlife Service (FWS) in the Department of Interior and the National Marine Fisheries Service (NMFS) in the National Oceanic and Atmospheric Administration.

Permit Program. With limited exceptions, any private party or government entity proposing to discharge dredged or fill material into wetlands must first obtain a Section 404 permit from the Corps.⁷ The first step in the process is typically a pre-application consultation with the Corps. The applicant then requests a

The Clean Water Act, Section 404 regulates the discharge of dredged or fill material into the "waters of the United States" and their adjacent wetlands. Wetland policy is a prime candidate for coordinated action among the Corps, EPA, FWS, state agencies, and local governments. formal "jurisdictional determination," providing the Corps with a description of the land, the proposed project, and a map. The Corps then identifies which of the lands affected by the proposed project meet its wetland definition, and therefore fall within its jurisdiction.

The Corps' jurisdiction extends only to the "waters of the United States" and their adjacent wetlands. But in 1985 the U.S. Supreme Court upheld the Corps' authority over wetlands adjacent to, but not hydrologically connected with, other waters of the United States.8 The Corps will generally assert its jurisdiction to the limits of the Commerce Clause.9 Under Section 404, it has jurisdiction over all wetlands that meet the criteria found in its definition, including tidal waters, tributaries to tidal waters, non-tidal wetlands, lakes, streams, intermittent streams, swamps, bogs, and prairie potholes. In other words, the Corps has jurisdiction over everything except isolated wetlands that have no interstate use (not even by migratory birds) and do not flow into or lie adjacent to an otherwise regulated body of water.10

Once the Corps' jurisdiction has been established, the project proponent must apply for an "individual permit" unless:

- 1. The project is modified to avoid the jurisdictional wetlands.
- 2. The project is eligible for one of the "nationwide permits" that cover various activities, including placement of navigation aids, utility crossings, bridge construction, and survey work.
- 3. The project falls under a specific exemption to the permit process, such as normal farming activities, silviculture (forestry), maintenance of irrigation ditches, or maintenance of currently serviceable structures.¹¹

An individual permit application typically consists of a detailed project description, an alternative analysis, and a mitigation plan. The Corps has sixty days to complete the permit processing; however, in practice the process often takes much longer. The Corps provides public notice, complete with a summary of the project proposal, to affected federal and state agencies, interest groups, and individuals. A comment period follows, after which the project applicant is given an opportunity to prepare responses.¹²

Once the responses have been completed, the Corps evaluates the project to determine whether issuance of a permit would be (1)consistent with the EPA's Section 404(b)(1)Guidelines and (2) in the public interest. The Guidelines require that fill be avoided whenever a less environmentally damaging practicable alternative exists.¹³ Practicable alternatives are presumed to exist for all uses that are not water-dependent. If no practicable alternatives exist, the Guidelines require minimization of any unavoidable fill.¹⁴ When making its public interest determination, the Corps can consider a broad range of factors including aesthetics, conservation, economics, and general environmental concerns.¹⁵

Project impacts that cannot be avoided must be fully mitigated by the project applicant. This ensures that no net loss of functional wetland values occurs. As compensatory mitigation, the applicant is normally required to create new wetlands on or near the project site, equivalent (if not greater) in size and quality to the wetlands destroyed by the project.¹⁶

The Role of the EPA. Although the Corps administers the Section 404 program, the EPA shares authority over the program and plays a very important, if often quiet, role. The EPA issues the Section 404(b)(1) Guidelines that describe how the program must be implemented. If the EPA disapproves of a particular permit decision, the agency can elevate that decision to a higher level within the Corps. Ultimately the EPA has veto power over the Corps' permit decision if it finds that the discharge will have an adverse effect on municipal water supplies, shellfish beds, fishery areas, wildlife, or recreational areas.¹⁷ This veto power is used sparingly, however - only 11 applications out of the estimated 150,000 permit applications issued between 1979 and 1993.¹⁸ Nevertheless, because the EPA authors the Guidelines and has veto power over Corps determinations, its comments carry great weight.

The Role of the U.S. Fish and Wildlife Service. The FWS has no explicit regulatory power over wetlands. Nevertheless, it has considerable influence on the Section 404 program. The Corps carefully considers the Service's comments on fish and wildlife matters, and if an endangered species uses the wetlands, the Corps *must consult* with the FWS.¹⁹ Also, like the EPA, the FWS can elevate a permit decision to a higher level within the Corps hierarchy. It does not have, however, veto power over the permit decision.

Section 404 and Local Land Use Decisions.

The Section 404 requirements often force project applicants to redesign their projects to avoid or minimize wetland impacts. Frequently this redesign occurs after project approval by the relevant local government, and thus requires another round of approvals by those same officials. In some cases, landowners abandon entire projects due to a failure to identify wetlands on the project site or a lack of understanding of the regulatory constraints. These factors make wetland policy a prime candidate for coordinated action among the Corps, EPA, FWS, state agencies, and local governments.

2.1.2 The Rivers and Harbors Act

The Rivers and Harbors Act of 1899²⁰ is the oldest law affecting wetlands. It was intended to keep clear those seas, lakes, and rivers that make up what was then considered the nation's "highways for transportation."²¹ Pursuant to Section 10 of the Act, the Corps administers a regulatory program separate from the Section 404 program. It covers dredging and the placement of structures into any "navigable waters" of the United States.²² In 1968 the Corps acknowledged the importance of environmental considerations in achieving the Act's purposes and revised the Section 10 program accordingly. Because jurisdiction under this program extends only to *navigable* waters, a Section 10 permit is not required in all situations where a Section 404 permit is required. When both programs do apply, the Corps normally conducts its Section 10 review concurrent with the Section 404 process.

2.1.3 The Endangered Species Act

The Endangered Species Act (ESA)²³ provides varying degrees of protection for animal and plant species listed as either threatened or

endangered. (These species are known as "listed species.") This law has become increasingly important in wetland regulation as the disappearance of wetland habitat imperils more and more species. While the ESA does not regulate wetlands directly, it has that effect in any situation where habitat modification adversely impacts a listed species present in wetlands.²⁴

The ESA specifically affects wetland regulation in two ways. First, Section 7 of the ESA effectively prohibits the federal government from taking any action that jeopardizes the existence of a listed species and limits the government's ability to take actions that harm listed species.²⁵ Since issuing a Section 404 permit is considered a federal action, the Corps must deny any permit that does not comply with the ESA. Direct responsibility for complying with Section 7 procedures lies with the Corps, however, not with the landowner or the local government.

Second, Section 9 of the ESA prohibits *anyone* from harming a listed species except under an approved habitat conservation plan (HCP) and an incidental take permit issued according to Section 10.26 This prohibition includes modifying habitats in ways that harm species, such as reducing the area available for foraging or breeding. It also prohibits actions that indirectly cause harm to species, including local regulations that allow activities that would harm listed species.²⁷ Section 7 supersedes Section 9, however, if the action requires a federal permit and the permit passes Section 7 review. As this is the case for almost all proposed fill activities. Section 9 rarely has an independent effect on wetlands. But because Section 9 and listed species strongly influence development projects in other types of habitat, local governments are developing broad HCPs that increasingly consider wetland areas as well.

California has a state version of the ESA, called the California Endangered Species Act.²⁸ The state law is similar to the federal law, but includes additional species not listed under the ESA.²⁹

2.1.4 Other Relevant Federal Laws

A number of other federal laws prevent, limit, or discourage certain activities that adversely affect wetlands. For example, the "swampbuster" provision of the Food Security Act of "Endangered species" are those species determined to be currently in danger of extinction.

"Threatened species" are those species likely to become endangered in the foreseeable future. "Over 300 fish and wildlife species breed, raise young, feed and rest in [the San Francisco Bay-Delta] Estuary wetlands. Over 60 plant and animal species in these wetlands are listed as rare, threatened, or endangered, or are candidates for such listing. Hundreds of other species – particularly birds, amphibians, insects, and freshwater fish – make their homes in the Estuary's riparian zones."

- State of the Estuary Report 1992-1997, The San Francisco Estuary Project 1985 denies federal benefits or subsidies to anyone who converts wetlands into dryland agricultural use. Executive Order 11990 requires all federal agencies, to the extent practicable, to avoid undertaking, funding, or permitting any action which will adversely impact wetlands. **Table 1** provides a brief summary of the most important federal laws that impact wetlands. Although these laws are unlikely to influence the substantive components of a local wetland protection program or to shape the program's review process, public officials involved in wetland regulation should be familiar with these laws, their impacts on landowners, and the federal agencies that administer them.

TABLE 1. FEDERAL LAWS THAT IMPACT WETLANDS

Name of law	Citation	Description
National Environmental Protection Act	42 USC 4321, et seq.	Requires the federal government to prepare an environmental impact statement (EIS) for all federal actions (including approvals and funding) that may significantly impact the environment. The Act lists wetlands as one of the environmen- tal parameters to be evaluated in an EIS. For example, the Corps must prepare an EIS for all projects issued an individual permit under Section 404.
Water Resources Development Act	PL 99-662, 100 Stat. 4082	Requires mitigation of displaced or degraded wetlands concurrent with project construction. The Act also authorizes the Corps to mitigate past wetland losses, and provides an annual budget of \$30 million for this purpose.
Coastal Barrier Resources Act of 1982	16 USC 3501, et seq.	Prohibits the use of federal funds for non- wetland restoration projects on designated coastal barrier islands and beaches.
Food Security Act of 1985	16 USC 3801	Creates the Erodible Land and Wetland Conservation and Restoration Program, which increases wetland acreage by discouraging farm practices that destroy wetland values. The Act provides for: creation of conservation reserves for highly erodible lands taken out of crop production; denial of federal subsidies for farm- ers who drain or plough wetlands; evaluation of foreclosed lands for wetland restoration; and consultation between the Farmers' Loan Administration and FWS before any loan approval occurs.
National Flood Insurance Program	42 USC 4001, et seq.	Requires communities participating in the flood insurance program to control urban development within the 100-year floodplain. The Program prohibits unprotected structures or development that will exacerbate downstream flooding.
Executive Order 11988		Requires federal agencies to not fund development activities in the 100-year floodplain unless no practical alternative exists.
Executive Order 11990		Requires federal agencies to avoid activities that adversely impact wetlands unless no practical alternative exists.

2.2 STATE WETLAND REGULATORY PROGRAMS AND AGENCIES

California does not have a comprehensive wetland protection law. However, there are numerous state laws and administrative policies that either protect wetlands in certain regions or protect wetlands as part of a larger environmental program. Local governments should be familiar with these laws and the agencies that implement them. This information is critical because (1) in situations where jurisdictions overlap, the agencies' permitting processes may need coordination; (2) the agencies may participate in the local regulation's review process; and (3) the agencies have expertise that local officials may want to use. Agency expertise could be used when identifying local wetland resources, devising local regulatory programs, or implementing wetland restoration projects.

2.2.1 The California Environmental Quality Act

The California Environmental Quality Act (CEQA)³⁰ requires state agencies to identify and analyze a proposed project's significant impacts on the environment before approving the project. The agencies also must adopt any feasible alternatives and mitigation measures necessary to reduce or eliminate the identified impacts.³¹ Determining what constitutes a significant impact is a central component of the CEQA process. The CEQA Guidelines encourage agencies to develop and publish "thresholds of significance," indicating that environmental impacts exceeding the threshold would typically be classified as significant.³² The Guidelines also list several environmental impacts related to wetlands that should be considered during the environmental review process. These include whether the project:

- Affects rare or endangered plant or animal species, or impacts their habitat.
- Interferes with the movement of any resident or migratory bird, fish, or other wildlife species.
- Disturbs groundwater recharge or degrades the water supply.
- Causes flooding, erosion, or siltation.
- Reduces habitat for fish, wildlife, or plants.³³

Additionally the CEQA Guidelines remove agency discretion in certain situations, requiring a finding of significant impact if the activity reduces habitat, threatens the continued existence of a fish, wildlife, or plant population, or reduces the number (or range) of any endangered, rare, or threatened species.³⁴

Courts have required local governments to analyze and mitigate a project's adverse impacts to wetlands when conducting an environmental review, even when the amount of wetlands affected is quite small. For example, one court required the local government to conduct further environmental review and issue a supplemental environmental impact report when, after certification of the original environmental impact report, the agency discovered that the proposed project encroached on a wetland area one quarter of an acre more than previously thought.³⁵

2.2.2 The California Coastal Commission: Local Coastal Plans

The California Coastal Act³⁶ authorizes the California Coastal Commission to regulate all development activities in the coastal zone, except for the San Francisco Bay Area (see Section 2.2.3 of this handbook). The coastal zone is defined as "land and water area(s) ... extending seaward to the state's outer limit of jurisdiction ... and extending inland generally 1,000 yards from the mean high tide line of the sea."³⁷ Within this area, the federal Coastal Zone Management Act³⁸ provides that the Corps may not issue a Section 404 permit unless the Coastal Commission certifies the project as consistent with California's coastal zone management program.³⁹ The Coastal Commission - or the relevant local government, if it has an approved coastal plan – has its own permit process as well.⁴⁰ Development in coastal zone wetlands is highly restricted, and these restrictions are significantly more stringent than the Section 404 standards.41

2.2.3 The San Francisco Bay Conservation and Development Commission

In the San Francisco Bay Area, the San Francisco Bay Conservation and Development Commission (BCDC) has jurisdiction over shoreline development activities rather than the California Coastal Commission. The BCDC requires project applicants to obtain permits The Bay Conservation and Development Commission (BCDC) was created in 1969, and was the first coastal protection agency in the country. Save The Bay was instrumental in creating the public awareness and political pressure needed to create the agency. Anyone interested in local wetland protection should research applicable local ordinances and become familiar with their requirements. under its San Francisco Bay Plan for any project that involves placing fill, extracting materials, or making substantial changes in the use of any water, land, or structure within its jurisdiction.⁴² In general, the BCDC has jurisdiction over all areas of the San Francisco Bay subject to tidal action. Its jurisdiction also includes a band along the shoreline extending 100 feet inland from the high tide line. This includes salt ponds, certain managed wetlands, and other waterways and their associated wetlands as specified in the McAteer-Petris Act.⁴³ The BCDC regularly comments on Bay Area Section 404 permit applications, even on projects located outside its jurisdiction that may impact lands within its jurisdiction. The BCDC has authority to certify or veto Section 404 permits for projects located within its jurisdiction pursuant to the federal Coastal Zone Management Act.44

2.2.4 The Department of Fish and Game: Streambed Alteration Agreements

Any individual or public agency proposing to "divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake" must enter into a streambed alteration agreement with the California Department of Fish and Game (DFG).⁴⁵ The Department cannot refuse to enter into a streambed alteration agreement, but it can impose reasonable conditions on the proposed project. If negotiations with the DFG result in an impasse, the matter must be submitted to arbitration. All DFG decisions on project proposals are subject to CEQA review.⁴⁶

The Department also participates in the Section 404 program and the CEQA process as a commenting agency. The Department generally endorses a policy of "no net loss" of wetland quality and acreage and adheres to the FWS's broader definition of wetlands (discussed in Section 2.4 of this handbook).

2.2.5 The State Water Resources Control Board and Regional Boards

The State Water Resources Control Board (SWRCB) oversees nine regional water quality control boards. The SWRCB and the nine regional boards' primary responsibility is to regulate the discharge of "waste" into waters of the United States under the authority of the Clean Water Act, Section 402.⁴⁷ (This is known as the National Pollutant Discharge Elimination System or NPDES.) The state and regional boards review Section 404 applications to determine compliance with state water quality standards, and the boards can veto any project not in compliance with those standards.⁴⁸ The boards also participate in the Section 404 program as commenting agencies. While there is no statutory limitation on their comments' subject matter, the boards' veto power historically has been directed towards water quality, rather than effects on broader environmental issues.⁴⁹

2.2.6 The Tahoe Regional Planning Agency

Created by an interstate compact between California and Nevada, the Tahoe Regional Planning Agency (TRPA) implements a regional plan for the Tahoe Basin. The plan ensures that future development in the Tahoe Basin does not exceed the Basin's environmental carrying capacity. It sets minimum standards for a wide range of land use issues that affect wetlands, including grading, shoreline protection, soil and sediment control, and watershed protection. Development cannot occur within the Tahoe Basin without written findings demonstrating that the proposed project complies with the regional plan and all TRPA regulations.⁵⁰

2.2.7 The Suisun Marsh Preservation Act

The Suisun Marsh, located in Solano County, is the largest remaining wetland in the San Francisco Bay Area, comprising 85,000 acres of tidal marsh, managed wetlands, and waterways. The Suisun Marsh Preservation Act of 1977⁵¹ provides a mechanism to preserve and enhance the marsh's wetland values and to ensure retention of the adjacent upland areas in compatible uses. Local governments have the primary responsibility for carrying out the Act's provisions. Each must prepare a local protection program to protect the marsh's wetlands and surrounding riparian habitat. The program also must limit urban development and other uses incompatible with the Act's preservation goals.52

2.3 LOCAL WETLAND REGULATORY PROGRAMS AND AGENCIES

Numerous municipal and county ordinances protect local wetland resources, and each takes a unique approach to accomplishing this task. These local ordinances are too numerous to mention here. However, examples of local wetland protection ordinances are discussed in Chapters Four and Five of this handbook, and the text of several ordinances is provided in the appendices. Anyone interested in local wetland protection should research applicable local ordinances and become familiar with their requirements.

Municipal and county governments are the local agencies typically involved in wetland regulation. But many other agencies and organizations, such as open space districts, resource conservation districts, and land trusts are often involved in wetland acquisition, restoration, and enhancement. These local agencies and their roles are discussed in Section 6.4.4 of this handbook.

2.4 REGULATORY WETLAND DEFINITIONS

There is much disagreement in the scientific and regulatory communities over which lands actually have wetland values. One important point to draw from this dispute is that a nonexpert cannot always be certain that wetlands are present or absent on a particular site. For example, a non-expert may not realize that wetlands could include seasonally dry streams, occasionally flooded forests, salt evaporation ponds, wetlands on sloped hillsides, farmed wetlands, degraded wetlands, and raised land with wetland-characteristic vegetation – depending on the particular definition used.⁵³

Despite the dispute over which lands have wetland values, general consensus exists that three physical features characterize wetlands:

- Standing water throughout the year or on a seasonal basis.
- Hydric soils (i.e., soils having a chemistry that reflects frequent water saturation).

• Hydrophytes (i.e., plants displaying adaptations to hydric soils) under normal circumstances.

These three features constitute the building blocks of most federal and state agency wetland definitions.

Two broadly accepted federal wetland definitions currently exist: the Section 404 definition and the FWS definition. These definitions are described in more detail in the following two subsections.

2.4.1 Section 404 Wetland Definition

To be classified as a wetland subject to regulation under Section 404, the land in question must have *all three* physical features: standing water, hydric soils, and hydrophytic plants. Wetland areas without all three characteristics are not subject to Section 404. The wetland definition does not apply to non-wetland "waters of the United States" such as lakes and streams. Although they do not have hydrophytic plants, these areas are also regulated by Section 404. The procedures for determining whether an area possesses these characteristics are described in the *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual.*⁵⁴

2.4.2 U.S. Fish and Wildlife Service Wetland Definition

The Service defines wetlands more broadly than the Corps in order to include those lands best suited for fish and wildlife habitat protection. Under the FWS definition (also known as the Cowardin definition), only one of the three physical features must be present: either standing water, hydric soils, or hydrophytic plants. Thus, the FWS definition includes all lands subject to the Section 404 program as well as those wetlands that lack plants adapted to living in saturated soils, such as tidal mudflats, or that lack hydric soils, such as rocky tidepools. As part of its National Wetlands Inventory, the FWS released maps of wetland areas meeting this definition. Although these maps do not cover all areas and cannot serve as the final basis for determining if a specific property contains wetlands, they can provide guidance to both regulators and landowners during initial site planning and design.

Wetlands are transitional areas between land and water. Three physical features characterize wetlands: standing water, hydric (water-saturated) soils, and hydrophytic plants.



Chapter Three

The Clean Water Act, Section 404

Section 404 of the Clean Water Act dominates the wetland regulatory field and has broad implications for any local wetland protection program. The Army Corps of Engineers is responsible for implementing Section 404, and it regulates a limited number of activities. Local wetland protection programs should work in tandem with this section, but consider expanding its scope to better protect local wetland resources.

Given that the enormous federal and state effort described in Chapter Two has slowed wetland loss but not stopped it, the need for local involvement is clear. Local governments must help reverse this trend if we are to regain even a small portion of our lost historic wetlands. Nevertheless, local wetland protection efforts work best when coordinated with existing federal and state programs. Coordination decreases the burden of regulatory compliance and helps identify the "regulatory holes" responsible for wetland loss.

Because Section 404 dominates the wetland regulatory field, a strong working knowledge of its requirements is essential for anyone involved in wetland protection or restoration. This is particularly true for local governments hoping to create a local wetland protection program. Any local effort must work in tandem with the Section 404 program. Therefore, Chapter Three provides a more in-depth look at the Clean Water Act, Section 404 and its regulatory requirements.

3.1 WETLAND DEFINITION

As discussed in Section 2.4 of this handbook, land must have three physical characteristics to be classified as a wetland under Section 404: standing water, hydric soils, and hydrophytic plants.⁵⁵ Wetland areas without all three characteristics are not subject to Section 404.

The Corps, however, will not regulate all wetlands meeting the Section 404 definition. The wetlands also must fall within the Corps' jurisdiction. The Corps' regulatory authority under Section 404 applies only to "waters of the United States." This restriction merely reflects Constitutional limits on federal power and has no bearing on whether a particular parcel possesses wetland values that should be preserved. The exact nature of this limit on the Corps' regulatory authority is the subject of numerous court cases and has yet to be resolved.⁵⁶ These limits do not apply, however, to local land use regulations. A local wetland regulation adopting the Section 404 definition could apply to wetlands which are not "waters of the United States" under the federal regulation, and thus are not subject to Section 404 requirements.

3.2 REGULATED ACTIVITIES

If a parcel contains jurisdictional wetlands that meet the Corps' definition, then the provisions of Section 404 will apply. Section 404 regulates the discharge of dredged or fill material into wetlands and other waters of the United States. Dredged materials are materials removed from the bottom of a waterbody (e.g., to deepen a waterway) and then redeposited elsewhere. Fill materials are materials used to convert a wetland into dry land or to raise the bottom elevation of a waterbody. Examples of regulated activities under Section 404 include:

- Building construction that requires fill for the foundation.
- Placement of fill that creates dry land or a reduced water depth for any recreational, industrial, commercial, or residential use.
- Road fills and causeways.
- Reclamation and property protection structures such as levees, groins, seawalls, revetments, and rip rap.
- Surface activities that remove and redeposit wetland soils (e.g., mechanized land clearing, ditching, channelization, and excavation).

"Waters of the United States" include tidal wetlands, tributaries to tidal waters, non-tidal wetlands, lakes, streams, intermittent streams, swamps, bogs, and prairie potholes – everything but isolated wetlands that have no interstate use and do not flow into or lie adjacent to an otherwise regulated body of water.

"The care of rivers is not a question of rivers, but of the human heart."

– Tanaka Shozo

• Pilings that have the same physical effect as the placement of fill material (e.g., dense placement that increases the sedimentation rate, effectively replaces the bottom of the waterbody, or adversely alters or eliminates aquatic functions).

Because the statutory definition of activities subject to Section 404 is somewhat general, Corps and EPA decisions regarding the scope of regulated activities are often challenged. For example, there is continued controversy over the extent that mechanized land clearing and pilings constitute regulated uses.⁵⁷ Also, Section 404 is limited by the general statutory scheme of the Clean Water Act. In other words, because the Act's primary purpose is to prohibit discharges of pollutants into waterways, the Corps' regulatory authority only covers *discharges* into wetlands.

3.2.1 Unregulated and Less Regulated Activities

Three categories of uses are not regulated under Section 404. Some uses which destroy or degrade the quality of wetlands simply do not constitute a discharge of dredged or fill material. Other uses could be subject to regulation but have been exempted by Congress. Still other uses are subject to a limited form of regulation known as "nationwide permits."

Activities That Do Not Involve Discharges.

Section 404 regulates only *discharges* of dredged or fill material into wetlands. The Corps currently does not regulate excavation (dredging) of wetlands unless more than incidental fallback occurs or the wetland is subject to Section 10 jurisdiction.⁵⁸ It does not regulate uses, such as draining, flooding, burning, or land clearing, which do not result in fill or the conversion of a wetland to a nonwetland. Nor does Section 404 regulate noninvasive uses such as grazing and pesticide application.

These non-regulated activities may not involve discharges, but they nevertheless result in significant wetland loss. The Congressional Office of Technology Assessment (OTA) estimates that only six percent of the wetlands lost from the mid-1950s to the mid-1970s were filled for urban uses. The majority of these wetland conversions involved unregulated, legal activities. The OTA estimates that approximately 80 percent resulted from farming activities.⁵⁹

Moreover, if these activities result in physical changes that remove one or more of the three required wetland characteristics (such as hydrophytic plants), the landowner may argue that future fill activities are not subject to Section 404 because the land no longer meets the wetland definition. For example, under some circumstances, a landowner could first drain a wetland area, and then, once the area had lost its wetland characteristics, fill the area without a Section 404 permit.⁶⁰

Exemptions. Section 404 exempts a number of activities that result in discharges of dredged or fill material. The exemptions reflect a wide range of Congressional policy judgments relating to the potential threat to wetlands, the regulated community's ability to comply with the regulations, and, quite often, the Corps' ability to regulate a wide range of relatively minor activities at the federal level. Exemptions include:

- Normal farming, silvicultural, and ranching activities as part of an ongoing operation.
- Maintenance of currently serviceable structures such as dikes, dams, levees, groins, rip rap, breakwaters, bridge abutments and approaches, causeways, and transportation structures.
- Construction or maintenance of farm and stock ponds or irrigation ditches and the maintenance (but not construction) of drainage ditches.
- Construction of temporary sedimentation basins for construction projects occurring in non-wetland areas.
- Construction and maintenance of farm roads, forest roads, and temporary mining roads in accordance with specified best management practices.⁶¹

An activity will not qualify for an exemption for three reasons: (1) if it is part of a larger activity whose purpose is to convert a wetland or other waters of the United States; to a use for which it was not previously subject (including any conversion of a wetland to a nonwetland); (2) if it will impair the flow or the circulation of waters of the United States; or (3) if it will reduce the reach of waters of the United States.

Nationwide Permits. One of the most controversial components of the Clean Water Act, the nationwide permit system, provides some of the largest loopholes in Section 404. Under the guise of nationwide permits, the Corps identifies activities that it believes have minimal impact on wetlands and other natural resources, and that, if regulated like other discharges of dredged or fill materials, would impose a heavy administrative burden on the Corps and landowners. Therefore, these activities are lightly regulated through the issuance of general permits on a nationwide or regional basis. Nationwide permits (also known as NWPs) constitute the most significant general permits, allowing landowners to conduct specific fill activities with little, if any, oversight. The Corps issues nationwide permits for over forty different categories of fill activities.62

The distinguishing feature of nationwide permits is that they are already issued. In other words, a project applicant does not have to obtain an NWP, but merely needs to establish that the proposed fill activity falls within the NWP conditions. There are exceptions to this feature. Under many NWPs, the landowner must give advance notice to the Corps. The Corps may disgualify the proposed project from the NWP process if the permit reviewer thinks the adverse impacts of the proposed fill are "more than minimal" or are "contrary to the public interest."63 In these circumstances, the Corps may require the landowner to pursue an individual permit under Section 404. Additionally, various Corps regional offices can restrict or prohibit the use of certain NWPs in their region. Aside from these exceptions, fill projects regulated by NWPs receive limited oversight.

Some nationwide permits allow significant wetland modification that could adversely affect local wetland values. In contrast to other 404 permits, NWPs are issued without regard to whether a practicable alternative exists or whether the proposed activity is water-dependent. Mitigation is not required for certain NWPs deemed to have "minimal" effect on wetlands, a loophole in the federal government's goal of "no net loss" of wetlands. Moreover, the EPA estimates that approximately 40,000 activities are authorized under nationwide permits every year.⁶⁴ In comparison, the Corps considers approximately 5,000 individual permit applications annually.⁶⁵ Finally, most NWPs do not require the landowner to notify the Corps (and therefore the public) of proposed or ongoing fill activities. This deprives local governments and citizens of important information about wetland loss in their communities.

3.2.2 Recent Changes in the Nationwide Permit System

The Corps recently made significant modifications to the NWP program, including five new NWPs, six revised NWPs, and numerous changes to the NWP conditions. The revisions, effective June 7, 2000, were repeatedly delayed and resulted in litigation almost as soon as they were published.⁶⁶ For the next several years, both old and new NWPs will be in effect while projects previously authorized under the old NWP system are carried out. This is called the "transition period."

The following examples discuss the most important of the original NWPs still in effect and, where applicable, the new or revised permits which replace them. Keep in mind that the outcome of the pending litigation could affect the NWP program in the future.

Discharges into Headwaters or Isolated

Wetlands. The broadest and most controversial nationwide permit (now replaced by five separate NWPs), NWP 26 authorized fill of up to three acres of wetlands located in headwaters and isolated areas.⁶⁷ Projects affecting less than one-third of an acre of wetlands were not required to provide any notice of the proposed fill except for a brief, post-construction report to the Corps.

Nationwide Permit 26 was the only NWP not tied to a particular activity, and its broad use attracted heavy opposition by environmentalists. New authorizations under NWP 26 are not available after June 2000, although the actual fill authorized under NWP 26 prior to that date can occur until February 2003 (in certain cases). Five new activity-specific nationwide permits – NWPs 39, 41, 42, 43, and 44 – have replaced the original NWP 26. These The Corps issues nationwide permits for over forty different categories of fill activities. The standards for issuing permits under Section 404 are often summarized as avoid, minimize, and mitigate. new permits (except NWP 41) are limited to fills of one-half acre or less, and will require notification of the Corps if the fill exceeds 1/10th of an acre. In contrast to NWP 26, the new permits are not limited to headwaters and isolated areas. They can be used anywhere except in tidal wetlands and wetlands adjacent to tidal wetlands.

The most important of these replacement permits are likely to be NWPs 39, 42, and 44. Nationwide Permit 39 authorizes fill for the construction of residential, commercial, and industrial buildings as well as "attendant features" to such buildings. These include roads, parking lots, stormwater facilities, playgrounds, and golf courses. Nationwide Permit 42 authorizes fill for recreational facilities that do not substantially change natural landscape contours. Potential examples include hiking trails, campgrounds, golf courses, and ski areas. The primary use of the recreational facilities, however, cannot involve motor vehicles, buildings, or impervious surfaces. Nationwide Permit 44 authorizes, under certain conditions, the placement of fill for mining activities, including streambed mining for aggregate rock. Generally all fill that occurs under the three new NWPs will require compensatory mitigation, but with limited safeguards to ensure such mitigation takes place.68

Outfall Structures. Nationwide Permit 7 authorizes the construction, operation, and maintenance of outfall structures and associated intake structures if the effluent from the outfall is regulated pursuant to an existing NPDES permit. Nationwide Permit 7 was slightly revised to additionally permit the removal of accumulated sediments near outfall and intake structures. To ensure placement of outfall and intake structures in a manner that protects wetland values and is consistent with other local plans and policies, local governments may wish to consider including such structures in the local wetland protection program.

Roads, Rail, and Airports. Nationwide Permit 14 authorized activities related to "linear transportation crossings" that involved fill of less than one-third of an acre and that met certain other criteria. It was revised to increase the amount of fill allowed for public transportation to one-half acre or less. Fill of less than 1/10th of an acre in jurisdictional waters does not require notification or compensatory mitigation if no wetlands or other special aquatic sites are filled.

Utility Line Backfill and Bedding. Discharges for utility line backfill, bedding, and foundations were permitted under NWP 12 for projects with no change in pre-construction contours. Utility line was broadly defined to include virtually any pipe, pipeline, cable, line, or wire, so NWP 12 covered a wide range of activities. This NWP had no acreage limit.

As revised, NWP 12 authorizes fill for creating utility line substations and access roads. The total loss of jurisdictional wetlands may not exceed one-half acre, excluding temporary losses. Compensatory mitigation and notification are generally required for fills greater than 500 linear feet (and under certain other conditions).

Bank Stabilization Programs. Nationwide Permit 13 authorizes bank stabilization erosion control discharges of up to 500 feet in length. This permit was not revised.

Boat Ramps. Nationwide Permit 36 authorizes fill for boat ramps of up to 50 cubic yards and less than 20 feet in width. The boat ramps must not fill special aquatic sites such as wetlands. This permit was not revised.

Cleanup of Hazardous and Toxic Waste. Nationwide Permit 38 authorizes activities necessary for the containment, stabilization, or removal of hazardous and toxic wastes pursuant to a government-approved cleanup program. This permit was not revised. Local governments wishing to ensure that such programs are conducted with adequate measures to protect wetland values may wish to include such activities within their wetland protection programs.

Agricultural Activities. Nationwide Permit 40 originally allowed wetland fill when constructing farm buildings. It now additionally permits fill for the purpose of "improving agricultural production." The permit has a one-half acre limit, and in many cases these fills do not require notification or compensatory mitigation.

Nationwide Permit 40 has fewer restrictions than NWP 39, which allows limited fill for residential, commercial, and industrial development. This creates a potential loophole. An agricultural operator anticipating residential development could fill his or her wetlands under NWP 40, continue operations for a few years, and then subdivide the property for urban development. Many aspects of farming are already exempt from the Section 404 program, and NWP 40 further expands this farming exemption, resulting in further loss of existing wetlands to farming operations.

Maintenance. Nationwide Permit 3 allowed fill associated with the repair or replacement of previously permitted structures or fill. As revised, NWP 3 was expanded to include removal of accumulated sediments around existing structures (such as bridge supports), placement of rip rap to protect structures, and discharges for activities associated with restoration of upland areas damaged by storms or floods. While the earlier NWP was not controversial, there is no experience with the new activities authorized by the NWP. The concern with this change is that it will have unintended environmental consequences.⁶⁹

Stream and Wetland Restoration. Nationwide Permit 27 allowed the restoration and creation of non-tidal wetlands. It was revised to include restoration of tidal waters and restoration or enhancement of non-tidal streams and open waters. This permit has no acreage limit. While the NWP was intended to reduce the administrative burden for environmentally beneficial projects, concern exists over the lack of controls to ensure that restoration projects do not harm the environment. Nationwide Permit 27 also eliminates the opportunity for public notice and comment when mitigation banks are created or expanded. (For more information on mitigation banks, see Section 5.5.2 of this handbook.)

3.3 EVALUATING PROJECT PROPOSALS

The standards for issuing permits under Section 404 are often summarized as *avoid*,

minimize, and *mitigate*. In general, the Corps will grant a Section 404 permit only if: (1) no practicable alternative exists that would avoid wetland impacts, (2) the project design minimizes wetland impacts to the extent possible, and (3) the project requires mitigation for any unavoidable wetland impacts.⁷⁰ To ensure avoidance and minimization of wetland impacts whenever possible, Section 404 applicants must demonstrate that no practicable alternative to the proposed project exists. Section 404 requires the applicant to adopt the most environmentally superior practicable alternative.

The critical factor in the alternative analysis is whether a project is "water-dependent." If, like a dock, pier, or marina, the project requires an aquatic site to fulfill its basic purpose, the Corps will likely approve the permit if it satisfies certain other criteria. If the project is not water-dependent, the Corps will presume that a practicable alternative exists that will have a less adverse effect on the environment. Project applicants wishing to overcome this presumption must clearly demonstrate the absence of a less environmentally damaging alternative.

When evaluating practicable alternatives, the Corps considers the project's basic purpose rather than the specific components proposed by the applicant.⁷¹ For example, the Corps has rejected an applicant's stated purpose of "houses on the water," and concluded instead that the project's purpose was "a very simple land use, six residential units."⁷² If only a minor component of a much larger project affects wetlands, the Corps will require an alternative analysis for the wetland component alone, rather than the entire project.⁷³

To determine whether an alternative is practicable, the Corps considers "cost, existing technology, and logistics in light of overall project purposes."⁷⁴ Because of the overriding importance of protecting wetlands, the Corps evaluates only the practicability of project alternatives. It does not balance the project's environmental costs against potential economic benefits. If a non-wetland alternative proves practicable – even if less desirable from the applicant's perspective – the Corps will not issue the Section 404 permit. Thus, a court upheld the Corps' denial of a permit for a shopping mall due to the availability of an alternative location, even though the alternaThe Corps has broad discretion in making its final decision on whether to issue a permit. In practice, this discretion tends to favor the project applicant. Therefore, local governments can – and should – impose a higher standard of wetland protection. The fundamental goal of mitigation under Section 404 is to ensure no net loss of wetland functional values. tive site had significantly poorer access, location, and visibility.⁷⁵

If avoidance is not possible, the alternative analysis helps ascertain how to minimize wetland impacts. Impacts that cannot be avoided or minimized must be mitigated. Mitigation requirements are discussed in Section 3.4 of this handbook.

If the Corps concludes that no less environmentally damaging practicable alternative exists, that the project design minimizes wetland impacts, and that all remaining impacts are adequately mitigated, it will generally issue a Section 404 permit. A permit will not be issued if the Corps concludes that the project is not in the public interest or "will cause or contribute to significant degradation of the waters of the United States."⁷⁶ The Corps' public interest review considers an extremely wide variety of factors, including:

...conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.⁷⁷

Obviously, with so many factors to consider, the Corps has broad discretion in making its final decision on whether to issue a permit. In practice, this discretion tends to favor the project applicant. For example, in 1999, the Corps issued over 2,200 individual permits and denied only 78.⁷⁸ This ratio suggests that the Corps rejects only the most harmful proposals. Therefore, local governments can – and should – impose a higher standard of protection for wetlands.

3.4 MITIGATION POLICIES

As described in Section 3.3 of this handbook, compensatory mitigation is an action of last resort. It is used only after all efforts to avoid

or minimize the proposed project's impacts have been exhausted.

The fundamental goal of mitigation under Section 404 is to ensure no net loss of wetland functional values.⁷⁹ To satisfy the "no net loss" requirement, Section 404 requires creation of new wetlands or restoration of seriously degraded wetlands (i.e., those with few existing wetland values) to offset the loss of wetlands associated with the proposed project. Unfortunately, wetland re-creation is no easy task. Many scientists doubt that any wetland system can be completely "replaced" with a man-made system. Therefore, Section 404 emphasizes avoidance and minimization as the preferred methods to protect wetlands. The Memorandum of Agreement between the Corps and EPA states that "[c]ompensatory mitigation may not be used as a method to reduce environmental impacts in the evaluation of the least environmentally damaging practical alternatives."80

Because wetland creation and restoration projects may not succeed, Section 404 generally requires creation or restoration of more wetland acreage than will be affected by the project. The Corps and EPA generally require mitigation at a 2:1 ratio (i.e., two acres created or restored for every one acre destroyed) and may require higher ratios (sometimes as high as 8:1) where the mitigation program's success is highly uncertain.

Section 404 mitigation policies also include measures to maintain wetland "functional values." The policies indicate a preference for in-kind mitigation that replaces the wetlands destroyed with wetlands of the same type and value (e.g., replacing tidal salt marsh with restored tidal salt marsh). In addition, the policies require that mitigation occur on the project site or on adjoining property to maintain the geographic distribution of wetland resources. These elements are flexible, however. Under some circumstances, it is possible to create or restore wetlands on non-adjacent sites, if necessary, to effectively maintain wetland functional values.⁸¹ Additionally, if mitigation ensuring no net loss of functional values proves infeasible, impracticable, or of questionable environmental benefit, the Corps may authorize a less comprehensive mitigation program – but only if the project as a whole

will not cause a significant degradation of wetlands.

"Life in the ocean and in the unspoiled bays of San Francisco and Monterey was ... plentiful beyond modern conception. There were mussels, clams, oysters, abalones, seabirds, and sea otters in profusion. Sea lions blackened the rocks at the entrance to San Francisco Bay and in Monterey Bay, and they were so abundant that to one missionary they seemed to cover the entire surface of the water 'like a pavement."

— The Ohlone Way, Malcolm Margolin



Chapter Four

Approaches to Local Wetland Regulation

Local wetland regulatory programs should complement, supplement, or streamline the Section 404 program. Due to the narrow focus of Section 404, local governments should consider protecting additional wetland resources and tailoring protection to local conditions.

ocal governments have numerous procedural options for regulating wetland resources in their communities. While some local governments may simply supplement their existing plans and ordinances with wetland protection measures, others may prefer to create a stand-alone ordinance that provides a separate permitting process. Many factors determine the appropriate approach for a given community. These factors include the resources' character and size and the community's existing land use regulations, as well as budgetary constraints, staff expertise, and environmental, health, and safety concerns. For example, Solano County, to meet its responsibilities under the Suisun Marsh Preservation Act, did not adopt a single, stand-alone wetland ordinance, but instead adopted a comprehensive program of policies and regulations designed to protect the Suisun Marsh. These policies include amendments to the General Plan and the relevant Area Plan, creation of new zoning designations, and substantial revisions to the flood control and grading and erosion ordinances.

This chapter begins with a discussion of the general goals to consider when shaping a local wetland protection program. The remainder of the chapter describes alternatives to a standalone local wetland regulation. The substantive policies and standards that must be included in any local wetland regulation are discussed in Chapter Five of this handbook.

4.1 THE ROLE OF A LOCAL WETLAND REGULATORY PROGRAM

Because the Clean Water Act, Section 404 looms so large in the wetland regulatory landscape, a local regulatory program cannot be developed in isolation from it. In general, local regulatory programs should complement, supplement, or streamline the Section 404 program. Even regulatory programs developed to fill gaps in Section 404's *substantive* requirements should be compatible with the Section's overall process.

When devising a wetland protection program, local governments should keep three general goals in mind:

- Promote consistency between Section 404 and the local permitting process.
- Provide added protection for important wetland resources not protected by Section 404.
- Ensure that federal, state, and private wetland protection plans are tailored to meet unique local conditions and circumstances.

These goals are discussed in greater detail in the following subsections.

4.1.1 Promote Consistency

A major goal of any local wetland protection program should be to promote consistency between local planning and permitting decisions and state and federal wetland programs. Consistency will streamline the permitting process and reduce delays and costs for landowners. Although numerous state programs impact wetlands and riparian areas including BCDC permits and DFG streambed alteration agreements - any local coordination effort (outside coastal areas) should focus on the Section 404 program. Section 404 is the most comprehensive regulatory program governing wetlands and generally sets the baseline standard for evaluating wetland impacts. Therefore, if the local wetlands program complies with Section 404 and meets all those requirements, then the state and local requirements will most likely be met.

In some circumstances a local program consistent with Section 404 standards would be insufficient. The most important instance "I have just about reached the conclusion that, while large industry is important, fresh air and clean water are more important, and the day may well come when we have to lay that kind of hand on the table and see who is bluffing."

-Barry Goldwater

At a minimum, local regulations should ensure that consultation with the Corps, Coastal Commission, BCDC, and other affected agencies occurs concurrently with the local review process ... The benefits of coordination with the Section 404 program are enormous. involves coastal areas, where local coordination efforts should focus on compliance with either the California Coastal Commission or BCDC requirements. These requirements can be more stringent than Section 404 standards.⁸² Regional HCPs under the ESA could mean another layer of restrictions, both on the coast and elsewhere in California.⁸³

4.1.2 Protect Additional Wetland Resources

Another goal of local wetland regulation involves protecting wetland resources not covered by Section 404. The CWA is not a comprehensive wetland protection law. Rather, it is a water quality statute that has been used – with some success – to further a purpose for which it was not designed. While the Corps and EPA have interpreted the Act broadly, it is less than comprehensive in two respects. First, it does not cover all wetlands. Second, it authorizes the Corps to regulate only one type of activity – *discharges* of pollutants, including dredged and fill material, into jurisdictional wetlands. This means that Section 404 has a somewhat narrow focus.

Local governments have sophisticated land use planning tools that can effectively regulate wetlands not included in Section 404. For example, a local regulatory program might fill in the following gaps. First, the Corps' jurisdiction only extends to "waters of the United States" that are related to interstate commerce. Therefore, isolated wetlands that do not fall within the Corps' jurisdiction could be regulated locally. Second, the Corps' narrow wetland definition excludes wetlands that do not possess all three physical characteristics. A local wetland program could utilize the broader wetland definition used by the FWS to protect more wetland resources. (These definitions are discussed in Section 2.4 of this handbook.) Similarly, Section 404 ignores upland areas where unregulated activities may adversely impact nearby wetlands or regional water quality. Third, Section 404 does not regulate activities that are exempt or granted summary approval through the NWP system. Regulation of these uses may be more appropriate on a local level.

4.1.3 Tailor Wetland Protection to Local Conditions

Local wetland protection programs can provide valuable direction to project proponents and regulatory officials by identifying the wetlands of greatest local importance. For example, local programs can provide:

- Information on existing wetland types in the local area.
- Guidance on how to avoid, minimize, and mitigate impacts to specific types of local wetlands.
- A framework for local wetland mitigation that coordinates mitigation efforts for projects throughout the community.

Such programs could also reduce the possibility of local government violation of federal and state endangered species laws. These violations could arise from several types of activities. Examples include: someone disturbing endangered species in wetlands owned by the local government; local governments carrying out activities in wetlands owned by others (e.g., maintaining a road easement); or local governments regulating wetlands in a way that permits activity harmful to endangered species. Government regulations that allow third parties to take actions that affect endangered species have been prohibited in several cases.⁸⁴ Therefore, local governments that permit wetland filling without regard to endangered species could expose themselves to liability.

4.2 COORDINATION WITH FEDERAL AND STATE PROGRAMS

Instead of developing its own wetland regulatory program, a local government could coordinate its existing project approval process with the federal and state permitting processes, particularly the Section 404 and state coastal permitting programs. At a minimum, local regulations should ensure that consultation with the Corps, Coastal Commission, BCDC, and other affected agencies occurs concurrently with the local review process in order to identify wetland resources as early as possible. Ideally, the local review process would incorporate the environmental standards for all state and federal wetland protection laws. The basic components of such a local wetland program are discussed in the following three subsections.

4.2.1 Coordination with Section 404

The basic components of a local program coordinated with Section 404 should include the following items.

- 1. Consultation with the Corps (and the Coastal Commission or BCDC if the community lies within their jurisdiction) must occur before the project proponent can file a development application with the local government. This ensures that wetland issues are identified early. (Note: if the application is not accepted as complete prior to this consultation, the local government will not run into Permit Streamlining Act deadlines.)
- 2. Both the Corps and the local government must approve the wetland delineation (as identified in Section 404) before the project proponent can file a development application with the local government.
- 3. The applicant must arrange and participate in joint pre-application meetings with both the Corps and the local government.
- 4. The local government must work with the Corps to prepare joint environmental review documents (e.g., an EIR) for all major projects.

For example, Union City in Alameda County requires all proponents of projects with potential wetland impacts to develop a "wetland preservation plan" that identifies specific wetland mitigation and preservation techniques for each project. As a component of this program, the City devised a permit review process that integrates the local and federal wetland programs to avoid inconsistent land use decisions and to ensure that wetland values are considered early in the planning process. Union City's review process provides for a preliminary meeting between representatives of the developer, the Corps, and the City; preapplication review of the project proposal by city staff; and submission of a wetland preservation plan (if needed) along with the development application. See **Figure 1** for a flowchart of the Union City permit review process.

The benefits of such coordination are enormous. First, coordination reduces delay and uncertainty for landowners attempting to satisfy multiple regulatory requirements. Coordination allows for concurrent permit review rather than individual review on an agency-by-agency basis. In short, coordination streamlines the process. Second, early identification of wetlands leads to greater and more cost-effective resource protection. Too often local governments (and landowners) are not fully apprised of the extent and character of wetlands located on the project site until they are well into the approval process. Coordination allows wetland protection to become an integral part of the proposed project. Additionally, early wetland identification allows landowners to discover whether the proposed project is feasible - before substantial sums are invested in project design and infrastructure construction.

Finally, local governments can significantly reduce their costs by utilizing work (such as wetland delineations) already conducted by federal resource agencies. Local governments also save time and money by avoiding the need to reconsider projects that must be redesigned to meet federal or state requirements. Coordination reduces the likelihood that staff and elected officials must revisit the contentious issues often raised by local projects.

4.2.2 Coordination with the California Coastal Act

As discussed in Chapter Two, the Corps cannot issue a Section 404 permit for a project in coastal wetlands unless the project is consistent with the California Coastal Commission's coastal zone management program. A recent court decision established stringent limits on the type of development permissible under the California Coastal Act.⁸⁵ The permitted activities primarily involve water-dependent uses and incidental public services.⁸⁶ Additionally, development in environmentally sensitive habitat areas, such as wetlands, cannot significantly disrupt habitat values. Similarly, coastal wetlands in the San Francisco Bay Area face restrictions more stringent than those found in "The [San Francisco] Baylands provide some form of food, shelter or other benefits to over 500 species of fish, amphibians, reptiles birds and mammals. In addition, there are almost as many species of invertebrates in the ecosystem as all the other animals combined. This brings to over one thousand the total number of animal species that use or call the Baylands ecosystem home."

—Baylands Ecosystem Habitat Goals
FIGURE 1

CITY OF UNION CITY PERMIT REVIEW PROCESS*





*This figure depicts the ideal permit review process, which may be altered in individual cases, at the City's discretion.

"Do not pray for easy times; pray to be stronger. Do not pray for tasks equal to your powers; pray for powers equal to yours tasks."

– John F. Kennedy

Section 404, although the definition of waterdependent activities may be somewhat looser (i.e., inclusion of airports and bridges) under the McAteer-Petris Act.⁸⁷

A local government in a coastal area may want to coordinate the standards used in its local wetland protection program with the more stringent standards used in the state coastal zone management program, rather than the more lax Section 404 standards. Failure to match or exceed the more stringent coastal standards could mean a project proponent would receive a local permit and then be denied permission to develop by the Coastal Commission or BCDC. This would defeat the goal of coordinating the permit processes. Local governments should structure their wetland protection programs so that a local permit demonstrates compliance with the environmental standards for all state and federal wetland protection laws.

4.2.3 Coordination with the Endangered Species Act

Local governments are making increasing use of the ESA's habitat conservation provisions to better manage land use and threatened and endangered species preservation. Until recently, little effort went into integrating the Section 404 requirements with the HCP planning process. This led to instances in which landowners and local governments mistakenly believed that signing onto an HCP also brought proposed projects into compliance with Section 404. The EPA and other resource agencies now recognize the importance of incorporating wetland protection into the HCP planning process, and they are working with landowners and local governments toward this end. For example, in East Contra Costa County, the HCP process will attempt to address both ESA and Section 404 issues.⁸⁸ The Draft San Joaquin County Multi-Species Habitat Conservation and Open Space Plan sets management standards for vernal pools and other wetlands. It also sets incidental take levels for numerous wetland-related species.89 Wherever possible, local governments should encourage the integration of HCP and wetland planning.

4.3 ALTERNATIVES TO A STAND-ALONE LOCAL WETLAND REGULATION

This section describes the alternatives to a local wetland protection regulation. The four major alternatives are: general plan provisions; local zoning ordinances; regulations arising from the California Environmental Quality Act; and other local measures such as floodplain ordinances, agricultural restrictions, and safety regulations.

4.3.1 General Plan Provisions

Many local governments include wetland protection policies in their general plans, which serve as each community's basic planning document or "land use constitution." Any local decision affecting land use must comply with the applicable general plan and its elements. For example, Solano County has included wetland protection measures in the following elements of its general plan: land use, circulation, open space, resource conservation, scenic roadways, and health and safety.

At a minimum, both the land use and the open space/resource conservation elements of the local government's general plan should acknowledge wetland protection issues. Wetland policies can be linked to policies for other sensitive resources such as riparian corridors, prime farmland, and endangered species. Wetland protection policies also can appear in the public safety element since wetlands are affected by fire safety, water quality, and flood control measures.

To be most effective, wetland protection policies included in general plans should be accompanied by specific implementation measures. For example, the Resource Conservation Element of the Santa Clara County General Plan provides specific implementation measures for its goal to create a comprehensive inventory of the county's habitats, natural areas, and species biodiversity. In other words, it does more than simply suggest a policy to preserve natural resources. It provides specific mechanisms to address the policy and fulfill the goal. Those implementation measures include:

1. A provision that requires County staff to develop and maintain a regional database or inventory and mapping program

of habitat types and species biodiversity. This database can be shared among local, regional, state, and federal agencies, as well as community organizations.

- 2. A provision that requires the County to delineate and adopt long-term urban growth boundaries to differentiate resource conservation areas from lands intended for urbanization.
- A provision that requires the County to study resource conservation areas, such as areas designated by the state as "significant natural areas" and "critical habitat areas" for endangered species. For such areas, the implementation policy requires that county staff identify the areas and determine the need for an HCP.⁹⁰

General plans can also use maps prepared by the FWS National Wetlands Inventory. These maps are readily available and illustrate the general location and extent of wetland resources in any given area. Although these maps are not sufficiently detailed to serve as a basis for case-by-case local regulation, they do provide a helpful starting point for local governments seeking to protect wetland resources.

4.3.2 Local Zoning Ordinances

Local governments can also include wetland protection standards in their zoning ordinances. These regulations implement the policies and standards described in the general plan (or specific plan). A zoning ordinance designed to protect wetlands could take three forms, as described below.

First, wetland protection regulations can be incorporated into the existing review process for use permits, subdivisions, planned unit developments, grading permits, building permits, or project design. In many cases, the review procedures and requirements will already include policies intended to protect sensitive areas related to wetlands.

Second, local governments can adopt an overlay zone applicable to all wetlands in the community, adding new regulations to those of the underlying zone. This overlay zone can apply solely to wetlands or it can be combined with related sensitive habitats such as floodplains, riparian areas, or sensitive habitats.

Finally, local governments can adopt a separate wetland protection ordinance that establishes a new permit process. Ideally this permit process would operate concurrently with the existing local processes. The California Coastal Conservancy has drafted a model wetland protection ordinance.⁹¹ Although the California Coastal Conservancy prepared the Draft Model Wetland Protection Ordinance in 1990, it never finalized the document or adopted it as an official project or publication. Nevertheless, the draft contains many useful ideas that local governments can use. This handbook includes several excerpts from the Draft Model Wetland Protection Ordinance. Use of this text does not imply that this constitutes the official policy of the California Coastal Conservancy.

Possibly the most important step a local government can take to simplify the regulatory process and improve the quality of wetland information is to require completion of a wetland delineation prior to acceptance of any development application. Such an assessment would describe the extent of wetlands currently found on the project site and would present baseline scientific information on the specific wetland values associated with the site (e.g., types of vegetation and wildlife and degrees of disturbance). The assessment should provide, from the outset, the information needed to evaluate compliance with all federal, state, and local regulations. This means that project applicants must conduct multiple wetland delineations if various levels of government define wetlands differently. The requirement does not increase the regulatory burden on project applicants, however, as they must develop this information at other points in the process.

The wetland delineation requirement has several key benefits. First, the delineation requirement improves the quality of wetland information, ensures that the local government has direct and easy access to that information, and generates the information earlier in the process. Additionally, the delineation information could help with decision making on related or nearby project sites. Possibly the most important step a local government can take to simplify the regulatory process and improve the quality of wetland information is to require a wetland delineation prior to acceptance of any development application. Local ordinances should operate in harmony with a local wetland protection program. As an alternative to direct regulation of wetlands, local governments can integrate wetland protection policies into their existing CEQA regulations.

Second, project planning occurs based on current wetland information. Piecemeal changes made to an existing project plan on the basis of wetland information gathered late in the process may not sufficiently protect wetlands, even if they satisfy statutory requirements. By contrast, more design solutions will be visible to the project applicant if the wetland information is available before the applicant has settled on a preferred plan. The applicant's fiscal incentive also changes because, in the absence of early wetland information, the applicant will likely find it cheaper to make minimal design changes rather than large changes that better protect wetlands. Delineating wetlands right at the outset helps to avoid fiscal and mental investment in development proposals that destroy or degrade wetland resources.

Last, the delineation requirement is a standard that project applicants should clearly understand. Applicants not only understand what is required of them, but they can clearly demonstrate compliance with the standard.

Marin County has adopted a wetland assessment requirement for its bayfront lands. Sacramento County's Department of Environmental Review and Assessment requires project applicants to provide a Corpsverified wetland delineation if wetlands are present on their project site. The County does not require, however, that an applicant complete the entire Section 404 process before applying for local permits.⁹² Local governments can also coordinate the wetland delineation requirement with the documentation required under CEQA. (see Section 4.3.3 of this handbook for more information).

No matter how local governments structure a wetland delineation requirement, local regulations should prescribe when to submit such an assessment and also indicate the level of specificity required. The cost of the program, as well as the wetland delineations, should be borne by the project applicants who utilize the process. These costs could be allocated through a comprehensive local fee structure.

4.3.3 Local Regulations Arising from the California Environmental Quality Act

As discussed in Chapter Two, CEQA provides a mechanism that identifies and analyzes impacts to wetlands. The Act also provides a means to

evaluate (and possibly adopt) project alternatives or mitigation measures that would reduce or eliminate those impacts. As an alternative to direct regulation of wetlands, local governments can integrate wetland protection policies into their existing CEQA regulations. These regulations could specify, among other things:

- Guidelines for delineating wetlands and documenting their type, function, and value.
- Requirements for analyzing all impacts, including cumulative impacts, to wetlands and for determining their significance. (Wherever possible, wetland impacts should be avoided. If avoidance is not feasible, then impacts should be minimized.)
- Criteria for determining when to prepare environmental documentation and adopt mitigation measures. (Mitigation should be used as a last resort.)
- Analysis of feasible alternatives and mitigation measures, including identification of applicable land use tools. (These tools might include cluster development, transferable development rights, and approved mitigation banks.)

Local CEQA regulations, coupled with early consultation with both the Corps and DFG, would ensure that an adequate assessment of wetland values and impacts occurs during the local regulatory process – and is not deferred to other agencies at a later stage in the project approval process.

4.3.4 Floodplain Ordinances, Agricultural Restrictions, Safety Regulations, and Other Local Measures Affecting Wetlands

Several types of local land use measures can conflict with the community's goal to preserve wetlands. For example, flood protection ordinances may allow the channeling of streams, and fire protection ordinances may provide for the removal of riparian vegetation. Similarly, agricultural regulations may allow pesticide spraying which can damage wetlands in two ways: through direct application or through drainage from uplands located in the same watershed. Ordinances such as these should operate in harmony with the local government's wetland program. Local governments should review and amend these regulations to ensure that, to the maximum extent possible, the regulations preserve the integrity of local wetlands and riparian areas. Additionally, jurisdictions should ensure that their permit processing is coordinated, so that environmental issues such as wetland preservation are raised early in the approval process. With careful and comprehensive planning, local governments can ensure that public safety projects, such as flood control devices, achieve their public safety goal without degrading important wetland values.

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."

-Aldo Leopold



Chapter Five

Elements of a Local Wetland Protection Regulation

Local governments can enhance local wetland regulation by adopting a broader wetland definition than the one defined in Section 404. Expanding the protected areas to include non-wetlands recognizes the ecological relationship between wetlands and their adjacent uplands.

This chapter describes the major components of a local wetland protection regulation and the factors to consider when drafting such a regulation. For each component, the chapter sets forth a number of possible alternatives. These alternatives range from standards that achieve a level of protection equal to Section 404, to standards broader in scope or more protective in effect than Section 404. The chapter specifically addresses opportunities for local wetland programs to provide protection where gaps exist in the federal and state regulatory schemes, focusing particularly on gaps in the Section 404 program.

The following subsections will serve as a checklist of issues to address when preparing a local wetland regulation. The major topics include: statements of purpose and findings of fact; wetland definitions; regulated activities; wetland impact evaluation; compensatory mitigation; enforcement; and takings issues. Local conditions best determine the specific format for these issues.

5.1 STATEMENT OF PURPOSE AND FINDINGS OF FACT

A local wetland protection regulation should include a general statement of purpose and legislative findings of fact to explain the regulation's rationale and benefits. A clear articulation of these elements will do several things. It will educate the community about the regulation; alert landowners to the benefits they will derive from the regulation; and aid decisionmakers, staff, and others in the construction of the regulation. It also will assist the local government in the event of a court challenge to the regulation. The specific content of the statement of purpose and legislative findings will vary from community to community, depending upon the particular circumstances giving rise to the regulation. Local governments should stress the wetland values and specify any particular wetland areas that are important to the community. However, certain general themes tend to recur in most local wetland protection regulations. The subsections below describe a sampling of goals and findings that could be used to justify a local regulation protecting wetlands and riparian areas. These models should be refined to meet local conditions.

5.1.1 Statement of Purpose and Goals

The following are examples of possible statements of purpose and goals to include in a local wetland protection regulation:

- To preserve, protect, and restore wetlands and riparian areas; to promote the community's ecological integrity; and to enhance land values by improving water quality, wildlife habitat, recreational and open space resources, erosion control, and flood protection.
- 2. To ensure no net loss of wetlands and eventually achieve a net gain in wetland acreage; to establish priorities for avoiding and mitigating adverse impacts on wetlands; to set specific goals and priorities for public acquisition of wetlands; and to create standards for the creation of wetland buffer zones.
- 3. To prevent piecemeal decision making by establishing clear criteria for evaluating development projects that may impact wetlands.

"At some point, the will to conserve our natural resources has to rise up from the heart and soul of the people – citizens themselves taking conservation into their own hands and, along with the support of their government, making it happen."

— Mollie Beattie, Former Director, U.S. Fish and Wildlife Service (Working Together for Wetlands) When crafting a definition for protected resources, two factors should be considered:

- Clarity
- Breadth of Definition

- 4. To streamline the wetland regulatory process, reduce delays and costs to landowners, ensure early identification of wetland and riparian resources, and promote early consultation and coordination with the relevant state and federal agencies.
- 5. To protect landowners and the public from economic losses caused by unnecessary development in wetland and riparian areas.
- 6. To compile a comprehensive inventory of the wetland and riparian resources found in the community. (Alternatively, to assist or coordinate with federal, state, and regional wetland inventories.)

5.1.2 Findings of Fact

The following are examples of possible findings of fact to include in a local wetland protection regulation:

- 1. Describe as specifically as possible the location of the community's wetland and riparian resources, utilizing maps if practicable. For many areas the FWS, through its National Wetlands Inventory, can provide wetland maps for areas meeting the FWS wetland definition. These may prove helpful. If relevant, describe how these resources relate geographically or ecologically to other wetland and riparian areas or waterways in the region.
- 2. Describe as specifically as possible the values associated with the community's wetland and riparian areas. Identify any particular health, safety, environmental, and economic concerns. For example, a local wetland regulation may be necessary to improve water quality, to preserve sensitive or endangered habitats, to promote aesthetic values, to assist in flood and erosion control, to save open space, to promote recreation and tourism, or to further other local concerns.
- 3. Describe the threat currently posed to local wetland and riparian resources by

activities such as dredging, filling, draining, and discharging pollutants. Quantify the extent to which those resources have been eliminated or impaired in the region, and describe the associated economic and environmental losses. The FWS can help determine the amount of lost wetland acreage. In the San Francisco Bay Area, refer to the Baylands Ecosystem Habitat Goals for information on historical wetland issues.93 Discuss if relevant, the cumulative adverse impacts posed to wetland and riparian resources in the region. Also describe the benefits derived from a comprehensive (rather than a piecemeal) planning effort.

4. Describe the need to streamline and coordinate the federal, state, and local wetland regulatory schemes. Point out the costs associated with delays resulting from lack of coordination.

5.2 DEFINITION OF THE PROTECTED RESOURCES

After providing a general statement of purpose and legislative findings of fact, a local wetland protection regulation must specify the types of natural resources to which it applies. The definition of the protected resource will determine which lands within the local government's jurisdiction must comply with the regulation.

The definition selected will depend to a large extent on concerns specific to each community. As discussed in Chapter One, wetlands encompass a wide range of physical environments, and the community must determine which of these it wants to protect. When crafting a definition for protected resources, two factors should be considered.

Clarity. The definition should be as precise as possible so that landowners, decisionmakers, and the public will understand the nature of the resource being protected. This need for clarity could cause the local government to simply adopt the Section 404 wetland definition. The Corps and EPA have developed elaborate procedures for identifying wetlands that the local government could rely upon.

However, this approach may not achieve the local government's stated goals. Wetland preservation often depends on protecting upland buffer zones that do not fall under any of the prevailing wetland definitions.

Breadth of Definition. To avoid inconsistencies with Section 404, the definition should be sufficiently broad to include those lands already subject to Section 404. In most cases, adopting a narrower definition provides little benefit and might prove a major detriment if locally approved projects were substantially modified during the subsequent Section 404 process.

Local governments should seriously consider providing protection to a broader area than that currently protected by Section 404. This can be done in two ways: (1) by adopting a broader wetland definition or (2) by recognizing the ecological relationship between wetlands and their adjacent uplands, thereby broadening the protected resource to include non-wetlands. If a local government decides to do this, it should consider using two separate definitions, such as "Section 404-Defined Wetlands" and "Additional Wetlands," and track them separately. This avoids the possibility that a local permitting system mitigates the loss of Section 404 wetlands by creating non-404 wetlands. While such mitigation may make sense in some circumstances, it would violate the Corps' "no net loss" requirement for jurisdictional wetlands.

A local wetland definition that is both clear and broad would help reverse the staggering loss of wetlands and related habitats in California. The following subsections discuss alternative approaches to defining wetlands and provide sample definitions for sensitive resource areas related to local wetland protection.

5.2.1 Approach 1: Defining Local Wetlands

As discussed in Chapter Two, three physical features characterize wetlands: standing water, hydric soils, and hydrophytic plants. These features constitute the building blocks of most federal and state agency wetland definitions and therefore should act as the starting point for any local regulation.

The primary advantage of adopting the Section 404 definition for a local wetland regulation is the scientific community's broad familiarity with the Corps' identification standards. Also, adoption of this definition streamlines the permit process and provides applicants with a degree of predictability because a single definition prevails. A local wetland protection regulation based on this definition could be administered in large part based on wetland delineations approved by the Corps in connection with the Section 404 program.

A drawback to reliance on the Section 404 definition is its relatively limited scope. As noted in Chapter One, many lands possess important wetland values. In some cases these lands do not possess all three of the physical characteristics required to be classified as a wetland under Section 404. For example, the Corps' definition does not include wetland areas from which the vegetation has been altered or removed or wetland areas that naturally have no vegetation, such as mudflats. Nor does it include some artificially created wetlands.⁹⁴ The impact of this limitation will depend on the types of wetlands prevalent in the local area.

The FWS definition includes all lands subject to Section 404 plus additional wetland areas that lack one or more of the characteristics. This approach remains compatible with Section 404 while providing an opportunity to protect a wider range of wetland resources. Although use of the FWS National Wetlands Inventory maps cannot serve as the basis for determining if a specific property contains jurisdictional wetlands, they can provide guidance to both local governments and landowners during initial site planning and design.

The California Coastal Commission has essentially adopted the FWS definition of wetlands. The California Coastal Act defines wetlands as lands within the coastal zone that may be "covered periodically or permanently with shallow water, and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats and fens."⁹⁵ Coastal Commission guidelines state that the Commission will use the FWS definition as a guide. They also provide that the Commission may use indicators such as the presence of hydrophytic plants or hydric soils to determine whether an area is covered periodically or permanently with shallow water.⁹⁶ Local governments should seriously consider providing protection to a broader area that that currently protected by Section 404. "When two environments meet, by the way, the wildlife possibilities are multiplied many times over. This is known as the edge effect. The edge of a forest is far more fruitful than the center. Other exciting places are the shores of lakes and ponds, the borders of meadow land and brush and (for birds) the billowy area where the tree canopy meets the sky."

—The Earth Manual, Malcolm Margolin The San Mateo County Local Coastal Program, as certified by the Coastal Commission, provides a good example of a user-friendly wetland definition based on the FWS model. The program states the required wetland features, gives examples of types and locations, and provides a list of plants typically found in San Mateo County wetlands. It defines wetlands as

[A]n area where the water table is at, near, or above the land surface long enough to bring about the formation of hydric soils or to support the growth of plants which normally are found to grow in water or wet ground. Such wetlands can include mudflats (barren of vegetation), marshes and swamps. Such wetlands can be either fresh or saltwater, along streams (riparian), in tidally influenced areas (near the ocean and usually below extreme high water of spring tides), marginal to lakes, ponds and man-made impoundments. Wetlands do not include areas which in normal rainfall years are permanently submerged (streams, lakes, ponds, and impoundments), nor marine or estuarine areas below extreme low water of spring tides, nor vernally wet areas where the soils are not hydric.

In San Mateo County, wetlands typically contain the following plants: cordgrass, pickleweed, jaumea, frankenia, marsh mint, tule, bulrush, narrow-leaf cattail, broadleaf cattail, pacific silverweed, salt rush, and bog rush. To qualify, a wetland must contain at least 50% cover of some combination of these plants, unless it is a mudflat.⁹⁷

The California Coastal Conservancy's Draft Model Wetland Protection Ordinance (Draft Model Ordinance) provides another example of a definition based on the FWS approach.

"Wetland" or "wetlands" mean those areas of the [local jurisdiction] that have hydric soils, are normally covered with water, and/or are inundated or saturated by ground or surface 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, commonly known as hydrophytic vegetation.⁹⁸

The Draft Model Ordinance provides three additional clarifications that a local government may wish to consider. It prohibits the piecemeal extraction of uplands from a surrounding wetland area by stating that wetlands include all lands located inside the outer-most wetland edge. It provides that if the natural vegetation has been removed, wetlands are determined by the presence of hydric soil. Finally, it includes in the wetland definition all man-made wetlands created as compensatory mitigation.

No matter what definition is ultimately selected, determining if wetland characteristics are present on a particular parcel is difficult. When a local government ventures into wetland regulation for the first time, it should utilize all available resources. The Corps and EPA have developed a detailed manual for determining whether a particular area meets the Section 404 definition – the Field Guide for *Wetland Delineation: 1987 Corps of Engineers* Manual. Even if a local government does not fully adopt the Section 404 definition, the Delineation Manual can still be helpful in determining whether basic wetland features are present. In addition, the FWS has developed a list of approximately 7,000 plants that occur in the nation's wetlands, entitled National List of Plant Species That Occur on Wetlands, and the USDA Soil and Conservation Service has prepared a list of hydric soils with corresponding maps. Numerous state agencies also have expertise in wetland identification and can provide assistance. Moreover, a local government should cite some of these references in its regulation or in a handbook that accompanies the regulation. These references would assist landowners in determining whether wetlands are present on their property.

5.2.2 Approach 2: Defining Related Areas with Wetland Protection Values

Some local governments have recognized the link between wetland preservation and protection of related habitats by adopting regulations that extend protection beyond the wetland edge.⁹⁹ Jurisdictions adopting this approach



have found that no strong wetland protection ordinance is complete without corresponding regulation of riparian areas, sensitive habitats, and appropriate buffer zones. Four examples of such local regulation are provided.

Santa Cruz County Ordinances. Santa Cruz County has two ordinances that protect a wide range of habitats related to wetland values: the Riparian Corridor and Wetland Protection Ordinance and the Sensitive Habitat Protection Ordinance. The Riparian Corridor and Wetland Protection Ordinance defines the protected "riparian corridor" as any one of the following items:

- The area within a stream channel, including the stream itself and the area between the mean rainy season (bankfull) flowlines.
- The area extending 50 feet (measured horizontally from the mean rainy season flowlines) out from each side of a perennial stream.
- The area extending 30 feet (measured horizontally from the mean rainy season flowlines) out from each side of an intermittent stream.
- The area extending 100 feet (measured horizontally) from the high watermark of a natural body of standing water.
- An area of riparian woodland, defined as a community including woody plants, that typically occurs in wet areas along marshes or streams.
- An area within an arroyo (defined as a gully, ravine or canyon created by a perennial, intermittent, or ephemeral stream, with characteristic steep slopes frequently covered with vegetation) located within the County's Urban Services Line or its Stable Urban Rural Boundary.

The Sensitive Habitat Protection Ordinance protects biotic communities that are rare or especially valuable because of their special nature or role in the ecosystem. These areas could easily be disturbed or degraded by human activities and development projects. The Ordinance provides numerous examples in its definition, including wetlands and wetlandrelated areas such as habitats of rare, endangered, or threatened species; marine and wildlife reserves; riparian corridors; and habitats for locally unique species. Additionally, the Ordinance provides protection for "area[s] *adjacent* to essential habitats of rare, endangered, or threatened species..." The complete text of both ordinances is provided in Appendices C and D, respectively.

California Coastal Conservancy Draft Model Wetland Protection Ordinance. In addition to defining wetlands broadly, as described in Section 5.2.1 of this handbook, the Draft Model Ordinance also protects wetland buffers. Wetland buffers are defined as "naturally vegetated and undisturbed, enhanced, or revegetated zone[s] surrounding a natural, restored, or newly created wetland, which protects the wetland from adverse impacts to the integrity of the wetland or its ability to provide biological or non-biological functions."¹⁰⁰

Resource Conservation Element of the Santa Clara County General Plan. The Resource Conservation Element of the Santa Clara County General Plan provides policies protecting bayland habitats, which include "the waters of the [San Francisco] Bay itself, estuaries, mud flats, salt marsh, and salt evaporation ponds." Secondly, the General Plan protects streams, riparian areas, freshwater marshes, and lentic zones (agricultural ponds, percolation ponds, and reservoirs). A copy of this general plan element is provided in Appendix E.

5.2.3 Approach 3: Creating Wetland and Other Resource Area "Overlay Zones"

Some local wetland protection regulations seek to reduce uncertainty by mapping wetlands and other sensitive areas subject to the regulation. While these so-called "overlays" provide a useful guide to the overall extent and distribution of protected areas, such planning maps are generally insufficient to precisely determine the boundaries of sensitive areas. These maps may exclude lands with important resource values that have not yet been mapped. Accordingly, overlay districts should be defined to include all areas indicated on the applicable map *as well as those lands not on the map but possessing the characteristics identified in the resource area* "Nothing springs from the ground full-blown. The experience of others prepares that ground."

-Sarah Christie

Protecting resources that remain vulnerable under Section 404 should be a primary impetus for developing a local wetland regulatory program. *definition*. For example, the City of San Rafael Wetland Overlay District Ordinance includes the following statement:

Small wetlands not shown in the Wetland Overlay District are presumed to exist in the city, are protected under all of the terms and provisions of this Chapter, and shall be rezoned when they are identified.¹⁰¹

Local governments may wish to include a provision allowing land to be withdrawn from the overlay district if it can be demonstrated that the land lacks the characteristics that the overlay district seeks to protect. A copy of the San Rafael ordinance is provided in Appendix F.

5.3 REGULATED ACTIVITIES

After defining the protected resources, the local wetland protection regulation should clearly indicate the land uses and activities that are subject to regulation. Just as important, the regulation should specify the uses that are exempt. The scope of activities regulated is a policy decision that will depend on each community's particular circumstances.

The following subsections discuss three different approaches for regulating activities in local wetlands and related habitats: (1) tailoring Section 404 to meet local needs; (2) prohibiting all activities inconsistent with wetland preservation; and (3) regulating activities already covered by existing local ordinances. The third approach works best in conjunction with overlay zoning.

5.3.1 Approach 1: Using Section 404 As a Baseline

Local governments wishing to ensure that local permit decisions are consistent with subsequent Corps determinations should, at a minimum, structure their wetland protection programs to apply to all activities subject to Section 404. As with other elements of a local wetland program, there are significant advantages to using Section 404 as a baseline and then identifying additional activities or uses that should be included or exempted from the program based on local conditions. This approach fosters cooperation with the Corps, streamlines the permitting process, and lessens confusion.

However, a local government that adopts this approach should not adopt it wholesale. Instead, each activity covered or exempted under Section 404 should be carefully scrutinized. The federal government's interests, resources, and capabilities are vastly different from those of a local government. For example, many of the NWPs cover what the Corps considers "minor" alterations that are impracticable to regulate on a nationwide basis. Taken together, these lightly regulated activities can have a range of deleterious impacts, as well as cumulative impacts, on wetland values. The regulation of such "minor" activities may be more suited to local agencies. Therefore, local governments should seriously consider regulating some of these activities.

Additionally, as mentioned in Chapter Two, Section 404 does not regulate draining, flooding, burning, land clearing, or other activities that do not result in fill or conversion of a wetland to a non-wetland. Nor does it regulate "non-invasive" activities such as grazing and pesticide application. Moreover, if these activities result in physical changes that remove one or more of the wetland characteristics (such as hydrophytic plants), the landowner may argue that future fill activities are not subject to Section 404 because the land no longer meets the wetland definition. Therefore, local governments wishing to regulate these uses should specify the additional activities to be regulated (e.g., draining, flooding, or burning). Or, if the local government wishes to regulate all or most uses affecting wetland values, it should specify that the local ordinance applies to any alteration of wetlands (e.g., any human-induced action which changes the existing condition of a wetland), as described in more detail in the next subsection.

5.3.2 Approach 2: Prohibiting Activities Inconsistent with Wetland Preservation

Protecting resources that remain vulnerable under Section 404 should be a primary impetus for developing a local wetland regulatory program. Because the CWA's primary purpose is to prohibit discharges of pollution into waterways, the Corps' regulatory authority under Section 404 is limited to *discharges*. Local governments have far more flexibility to regulate land uses due to their broad police power. This gives them the opportunity to narrowly tailor local wetland protection programs to meet the community's unique needs. Local governments can regulate activities that are excluded, exempted, or lightly regulated under Section 404.

Local governments should be as specific as possible about the activities and uses regulated. To avoid ambiguity, local governments wishing to regulate uses excluded, exempted, or lightly regulated under Section 404 should clearly state the specific activities included in the local wetland protection regulation. To ensure oversight of activities whose status under Section 404 is uncertain, jurisdictions should specify that such activities fall under its regulatory program.¹⁰² Further clarification can be provided by designating in the local regulation those activities and uses that are *not* regulated.

Local governments seeking a high level of protection for wetland resources may seek to regulate *all* activities and uses that alter wetlands or that are potentially inconsistent with the preservation of wetlands. Such regulation should include a general statement prohibiting all inconsistent uses. It also should identify examples of inconsistent activities and uses. By providing specific examples, a local government can clarify the fact that the broad prohibition on inconsistent uses applies to uses that are allowed under Section 404 or other state or federal regulatory programs. Two examples of this comprehensive approach are provided below.

California Coastal Conservancy Draft Model Wetland Protection Ordinance. The Draft Model Ordinance regulates any alteration of wetlands or wetland buffers. It defines alteration as "any human-induced action which changes the existing condition of a wetland or buffer." The Draft Model Ordinance then provides numerous examples of alterations.

Alterations include but are not limited to grading; filling; dredging; channelization; excavating; bulkheading; the driving of piles; removing vegetation; applying pesticides or herbicides; discharging waste; polluting; mining; grazing domestic animals; modifying for storm water management; changing existing drainage characteristics, surface or subsurface water levels, sedimentation patterns, water flow patterns or flood retention characteristics; relocating existing activities; engaging in construction of any kind; or other activities that change existing vegetation, hydrology, or habitat.¹⁰³

Santa Cruz County Riparian Corridor and Wetland Protection Ordinance. Santa Cruz County's Riparian Corridor and Wetland Protection Ordinance regulates all development activities that impact wetlands. The ordinance specifies that development activities include:

- Grading; excavating; filling; dredging or disposal of dredge material; mining; and installation of rip rap.
- Land clearing (i.e., the removal of vegetation down to bare soil).
- Constructing or altering any structure, including construction of parking areas.
- Topping or felling any trees or shrubs taller than eight feet.
- Depositing refuse or debris.
- Using herbicides, pesticides, or any toxic chemical substances.
- Any other activities determined by the Planning Director to have significant impacts on the riparian corridor.¹⁰⁴

5.3.3 Approach 3: Regulating Activities with Existing Local Ordinances

Local governments adopting an overlay zone for wetland and riparian areas could simply apply more restrictive standards (see Section 5.4 of this handbook) to all activities regulated by existing local ordinances. However, the local government may want to add additional use restrictions to further limit the allowable uses in the underlying zoning. For example, the City of San Rafael has adopted a Wetland Overlay District that adds four use restrictions to the restrictions already imposed by the underlying zoning. These restrictions are summarized below.

1. The only uses allowed are the construction and maintenance of water-related structures such as piers, docks, walkways, observation decks and shelters, fences, wildlife management shelters, stormwater pumps, and bridges. "Where possible natural transitions from tidal flat through tidal marsh to upland should be reestablished. There also should be natural transitions between diked wetlands and adiacent uplands. Restorina these natural transitions is critical for reestablishing bayland-edge plant communities. In all cases, buffers should be provided on undeveloped adjacent lands to protect habitats from disturbance."

—Baylands Ecosystem Habitat Goals "Water flows over these hands. May I use them skillfully To preserve our precious planet."

-Thich Nhat-Hanh

- 2. Any permits or approvals required by federal, state, or local regulations must be obtained.
- 3. Uses in, or near, wetland areas, must be controlled or designed to have minimal adverse impact on wetland habitat.
- 4. Activities located in or near wetlands should be low intensity uses such as bird watching, fishing, nature photography, wildlife observation, scientific research, and education.

5.3.4 Special Issues Related to Nationwide Permits

As discussed in Section 3.2 of this handbook, the Corps issues nationwide permits for over forty different categories of activities. Many NWPs do not require notification of fill activities. This deprives local governments and individuals of important information about wetland loss in their communities.

Given the limited wetland protection afforded by the NWPs, local governments may decide that their wetland protection program should protect against the myriad of smaller impacts that NWPs do not address. Local governments may be more familiar with and more concerned about small wetlands located in their communities than the Corps. For example, NWP 14 deals with "linear transportation crossings." Fill of less than 1/10th of an acre in jurisdictional waters does not require notification or compensatory mitigation. Since local governments regulate the siting and construction of roads, they may wish to include road crossings within the scope of their wetland protection program.

One possibility local governments should consider involves requiring a Section 404 individual permit for all proposed fill activities, no matter how minor. This would quickly resolve the problems unique to the NWP system. While this approach would have an administrative cost for the local government, the effort needed to manage relatively small fill proposals would still be less than that for large proposed fills. Alternatively, local governments could create a local-level NWP system that parallels the Section 404 NWP system. The local government could then alter its NWP system as necessary to further protect local wetlands. Local governments also should consider taking one or more of the following approaches to protect local wetlands. These additional protections could modify all NWPs, or only those that most concern the community.

- 1. Apply the same (or stronger) "general conditions" as those found in the Section 404 NWP program. The Corps placed numerous generic conditions on many of its original NWPs, and then strengthened those conditions as part of the recent revision process.¹⁰⁵ Some of the conditions require prior notification, protection of endangered species, and protection of critical resource areas. For example, NWP General Condition 25 allows only federal officials to designate critical resource areas. A local counterpart to this condition could give the local government an opportunity to use the NWP program to better protect critical local resources.¹⁰⁶
- 2. If the local government creates its own local-level NWP system, allow it the discretion to revoke local NWP eligibility when circumstances warrant doing so. This mirrors the Corps' authority to deny NWPs when circumstances indicate that an activity will have more than minimal environmental impacts.¹⁰⁷
- 3. Require pre-discharge or pre-construction notification to the local government for all activities that *might* fall under a NWP. Pre-discharge notification ensures that the community remains aware of all fill activities occurring within its borders.
- 4. Allow proposed NWP activities *only* if the activity is water-dependent. The California Coastal Commission generally prohibits filling coastal wetlands for non-water-dependent activities, while the Corps' individual permit process presumes a practicable alternative exists elsewhere. The Corps' NWP system does not make the same presumption, but a local NWP system can – and should – do so.

- 5. Require project applicants to demonstrate that no practicable alternative exists. Even water-dependent activities may have practicable alternatives with fewer or no wetland impacts.
- 6. Always require mitigation. This provision fills the hole in the Corps' "no net loss" policy. If an activity must fill any portion of a wetland, requiring a commensurate level of onsite or offsite mitigation will help slow the overall rate of wetland loss.

Sacramento County has formally adopted a policy of no net loss of wetlands and created the Wetlands Restoration Trust Fund. The policy requires mitigation in situations where the NWP program does not require mitigation.¹⁰⁸ For certain areas, the County requires mitigation whenever a project impacts one acre or less of wetlands and qualifies for a NWP without mitigation. The County also requires mitigation whenever mitigation is required by a NWP but a net loss of wetlands would nevertheless occur. The project applicant must either perform the mitigation according to an approved plan, or else pay money into the Trust Fund. The Trust Fund monies are dedicated exclusively to acquisition. creation, and maintenance of wetland habitat. A memorandum from Sacramento County describing the rules and process for paying into the Wetlands Restoration Trust Fund is located in Appendix G.

5.3.5 Exemptions

To provide certainty to landowners and others subject to the regulation, a local wetland protection program should clearly state the types of activities and uses that are not subject to regulation. These exempted uses could include the Section 404 exemptions described in Section 3.2.1 of this handbook, some or all activities authorized by the Corps' NWP system, or other activities that the local government determines present little basis for concern in light of local conditions. Many local ordinances exempt activities such as:

• Conservation of soil, water, vegetation, fish, shellfish, and other wildlife.

- Recreational activities such as bird watching, fishing, hiking, boating, swimming, horseback riding, canoeing, and bicycling.
- Harvesting of wild crops (e.g., marsh hay, berries, ferns, moss) in a manner not injurious to the natural reproduction of those crops and that does not require alteration of the wetlands by changing existing topography, water conditions, or water sources.
- Education and scientific research.
- Nature trails.
- Continued operation (but not expansion) of pre-existing agricultural uses provided that such operations were occurring before a certain date. (The date is generally set at a time before public discussion of the wetland regulation began.)
- Continued operation (but not expansion) of pre-existing non-agricultural uses under conditions similar to those applied to agricultural uses.
- Wetland and habitat restoration projects approved by the FWS, DFG, or other appropriate agency.
- Maintenance of existing public facilities and existing drainage, irrigation, and flood control facilities.

The local government can condition these exemptions to minimize impacts on wetlands. For example, the continued operation of flood control facilities may be permitted within wetlands on the condition that those facilities are not materially changed or expanded. Similarly, the jurisdiction can allow continued agricultural uses in wetland areas on the condition that no unnecessary removal of natural vegetation occurs.

Several of these commonly exempted activities destroy or degrade wetland resources. Therefore, local governments should assess these impacts based on local conditions and consider regulating some (or all) of the activities rather than exempting them from the local wetland regulation. To provide certainty to landowners and others subject to the regulation, a local wetland protection program should clearly state the types of activities and uses that are not subject to regulation. Because Section 404 requires the project applicant to account for all practicable alternatives, the alternative analysis will generally present the "range of reasonable alternatives" required by CEQA. This offers an opportunity to streamline the permit review process.

5.4 EVALUATION OF WETLAND IMPACTS

In addition to a statement of purpose, findings of fact, wetland definition, and list of regulated activities, a local wetland protection regulation also must include standards to evaluate the impacts of specific projects or proposed activities. These standards also will determine the conditions, if any, that should be imposed on those projects or activities. For local governments choosing to regulate projects affecting wetlands, the regulation's standards will determine when wetland impacts are permissible. For communities with policies primarily promoting coordination among federal, state, and local regulatory procedures or simply seeking greater information regarding a proposed project's wetland impacts, the standards can provide a benchmark for analysis consistent with federal and state regulations. This approach also ensures a complete analysis of potential impacts. The Corps and EPA have developed detailed standards that provide a useful baseline for local governments developing their own standards. These standards – and potential variations on these standards - are discussed below.

Local governments that do not specifically regulate projects affecting wetlands nonetheless may wish to consider wetland impacts during the environmental review process. This approach ensures that local decisionmakers are informed of the project's wetland impacts and can coordinate federal, state, and local permit reviews. Local governments can require that EIRs include an alternative analysis that complies not only with CEQA, but also Section 404 requirements. In addition, local governments can establish thresholds for determining when wetland impacts must be considered significant.

5.4.1 Section 404 Standards

Section 404 establishes threshold standards for local governments wishing to ensure that their approach to evaluating wetland impacts is commensurate with the federal wetland program. Application of Section 404-equivalent (or more restrictive) standards will provide permit applicants greater assurance that the Corps will not require substantially different project designs from those approved by the local government. Since permit applicants must meet federal standards in most cases, the adoption of less restrictive standards serves little purpose.

Therefore, Section 404 provides a useful baseline for development of local wetland standards. The local wetland regulation could incorporate the basic approach (or prioritization) of the federal standards, then specify local regulatory tools to implement that approach. Local policies modeled after Section 404 should reflect the three essential standards: *avoidance, minimization,* and *mitigation.*

Avoidance. A local ordinance following the Section 404 model should permit fill in wetlands only if no practicable alternatives exist that would avoid wetland impacts. The ordinance should specify the factors to consider when making the "practicable alternative" determination. The ordinance also might specify that alternatives to project components must be analyzed as well as alternatives to the entire project. For example, a local regulation could require consideration of the following factors:

- Whether the proposed use is waterdependent.
- Whether an alternative site would satisfy the project's basic purpose.
- Whether an alternative is practicable based on cost, existing technology, and logistics.

Local governments adopting the avoidance standard can specify zoning policies to implement the standard, such as clustering development to avoid impacts or allowing a transfer of development rights to another parcel.

In many cases the Section 404 alternative analysis presents an opportunity to streamline the permit review process by using it as the basis for the alternative analysis required by CEQA in the EIR. Because Section 404 requires the project applicant to account for all practicable alternatives, the alternative analysis will generally present the "range of reasonable alternatives" required by CEQA.¹⁰⁹ Similarly, because Section 404 requires the Corps to issue a permit for the least environmentally damaging practicable alternative, the alternative analysis will have the same focus as CEQA on alternatives that reduce or avoid environmental impacts.¹¹⁰ As with other aspects of Section 404, the concept of avoidance is the subject of many disagreements between project proponents and the Corps or EPA. Local ordinances can minimize, or at least focus, such disputes by providing clear guidance on the proper analytical approach to use.

Minimization. When wetland impacts are unavoidable, proposed projects should minimize the extent of those impacts. Here too, zoning policies can be effective tools to facilitate alternative designs. Measures intended to minimize impacts include the following:

- Cluster development on upland sites or the least valuable wetland areas.
- Elevate structures.
- Locate access roads, sewers, utilities, and water supply systems to avoid sensitive habitat areas.
- Use silt fences and other measures to reduce erosion and control runoff from construction sites.
- Trap sediments in detention ponds.
- Fence wetlands and floodplains to reduce human intrusion.¹¹¹

Compensatory Mitigation. Mitigation should be required for all unavoidable wetland impacts. Consistent with Section 404, mitigation should not be used as an alternative to avoidance or minimization, but only as a last resort. Specific approaches to mitigation policy are discussed in Section 5.5 of this handbook.

Public Interest Review. Section 404 also includes the more general "public interest" standard. A local government adopting this approach should require permit decisions to rest on a balancing of the proposed project's likely benefits against its foreseeable detriments.

Some have criticized the Corps' public interest review process as lacking in precision and clarity and providing too much discretion to the decisionmaker. A local government can address this issue by departing from the Section 404 grab bag approach. It can either omit public interest review completely or else limit the factors to be considered. For example, the State of Michigan's wetland program includes a public interest determination. However, it includes a precise articulation of factors to consider when making this determination. Those factors include:

- The project's expected benefits.
- The extent of public and private need for the proposed project.
- The project's impacts in relation to the cumulative effect created by other existing and anticipated activities in the watershed.
- The project's impacts on recognized historic, cultural, scenic, ecological, and recreational values, including wetlands, as well as its impacts on public health, fish, and wildlife.
- The amount of wetlands remaining in the area.
- The proximity to any waterbody.
- The project's economic value, both public and private, to the general area.¹¹²

This list could be expanded or contracted depending on the community's particular conditions or concerns.

5.4.2 More Restrictive Standards

Local wetland protection regulations also can establish standards more restrictive than those found in Section 404. Two examples of this approach are provided below.

California Coastal Conservancy Draft Model Wetland Protection Ordinance. The Draft Model Ordinance sets a clear standard of no alteration of wetlands or wetland buffers, unless the landowner can demonstrate that application of the ordinance will deny all reasonable use of the property.¹¹³ In that event, other standards ensure that the development allowed is the minimum necessary to provide economic use. For example, the landowner must demonstrate that no feasible alternative. exists, that disturbance of wetlands and wetland buffers has been minimized, and that any alterations to wetlands and wetland buffers will be mitigated. Significantly, public interest considerations have no place in this ordinance.

The Draft Model Ordinance's thrust is to restrict alteration of wetlands and wetland buffers while at the same time avoiding a "taking" of property without just compensation. A taking violates both the federal and state "There must be the ... generating force of love behind every effort destined to be successful."

-Henry David Thoreau

Compensatory mitigation is an action of last resort-to be used only after all efforts to avoid or minimize the proposed project's impacts have been exhausted. constitutions. The takings issue, often raised in the analysis of local land use ordinances, is discussed in greater detail in Section 5.7 of this handbook.

Santa Cruz County Riparian Corridor and Wetland Protection Ordinance. When compared to the Draft Model Ordinance, Santa Cruz County's Riparian Corridor and Wetland Protection Ordinance is not only broader in application, but also broader in the discretion granted to local decisionmakers. The Santa Cruz ordinance provides, with limited exemptions, that no development will occur in riparian corridors or within an arroyo's buffer area. These requirements can be waived if the local agency makes the following findings:

- That no feasible less environmentally damaging alternative exists.
- That the riparian corridor will not be reduced or adversely impacted.
- That the exception is necessary for the proper design and function of a permitted use on the property.
- That the exception will not harm the public welfare or injure neighboring or downstream property.
- That the exception is in keeping with the ordinance's purpose and with the objectives of the General Plan and the Local Coastal Program Land Use Plan.

Both ordinances provide good examples of how a local government can establish standards more restrictive than those found in the Section 404 program.

5.5 COMPENSATORY MITIGATION: RE-CREATING DISPLACED WETLANDS

In some instances, avoiding all wetland impacts proves impossible. To deal with such situations, local wetland protection regulations usually include mitigation policies. In land use terminology (and in the CEQA environmental review process), the term mitigation refers to all affirmative actions taken to lessen a proposed project's impacts on the local community and environment. However, in Section 404, and throughout the wetland regulatory field, mitigation usually has a narrower meaning. In this setting, mitigation (also called compensatory mitigation) refers primarily to the creation of new wetlands or the restoration of degraded wetlands to compensate for wetlands destroyed by an approved project.

Compensatory mitigation is an action of last resort. It is used only after all efforts to avoid or minimize the proposed project's impacts have been exhausted. This is due in part to the controversial nature of wetland mitigation. Many scientists doubt that any wetlands system can be completely "replaced" with a man-made system. All agree that it is a daunting task.

As with the standards applied when evaluating Section 404 permit applications, the Corps' mitigation policies serve as an effective baseline that can be expanded or refined to address local circumstances. Therefore, this section discusses actions local governments can take to augment or complement Section 404. This is followed by a short overview of the growing field of mitigation banking. Finally, the importance of mitigation monitoring and the role that local governments can play in that endeavor are provided.

5.5.1 The Role of Local Governments

Local governments can supplement the Section 404 mitigation policies with measures to strengthen and streamline those policies within their jurisdictions. For example, a local wetland protection regulation can identify the most common types of wetlands in the area and then establish minimum standards for inkind mitigation. Local policies can then set the geographic boundaries within which mitigation for local wetlands can occur. They can recommend specific locations for mitigation banks, perhaps pinpointing local or regional areas where degraded wetlands can be combined with existing wetlands to form a wetland complex of high habitat value. Local governments also can play an important role by requiring improved mitigation monitoring and developing a reporting system to determine the success rate for different kinds of mitigation. Working within the Section 404 framework, these approaches will further define local goals and simplify the case-by-case review process.

Union City in Alameda County provides a good example of how local jurisdictions can

supplement Section 404 mitigation measures. Its 511 Area Wetland Preservation Plan (511 Plan) requires mitigation on a greater than 1:1 basis. The 511 Plan requires that mitigation provide in-kind habitat values sufficient to offset the proposed project's impacts. In other words, the habitat values of the mitigation wetlands must match or exceed those of the lost wetlands. To achieve this objective, it is recommended that the applicant utilize the FWS Habitat Evaluation Procedures (or a related method) to conduct habitat value analysis. The method utilized must be acceptable to the Corps, FWS, and DFG.

Additionally, if the wetlands were degraded by human disturbance such as mowing, livestock grazing, or filling, the 511 Plan requires that mitigation match the altered wetland's pre-disturbance condition. The 511 Plan also requires preservation of adjacent or nearby uplands if these are necessary to maintain habitat diversity. Furthermore, mitigation cannot occur in sensitive wildlife habitat, including areas that are known or suspected to support endangered or threatened species.

The 511 Plan also provides extensive information on the different options for wetland restoration. This information includes advice on restoration approaches, a list of native plants suitable for local restoration projects, priorities for habitat types, and water supply issues.

5.5.2 Mitigation Banking

In recent years, increased attention has been devoted to mitigation banking proposals. This approach links wetland regulation, restoration, and management. Once established, these "banks" facilitate wetland mitigation efforts for certain types of projects.

In general, mitigation banks allow project sponsors to mitigate their wetland impacts by buying "credits" at existing or planned bank sites rather than developing individual mitigation programs. Under the right circumstances, mitigation banking allows creation or restoration of large, high value wetlands backed by considerable scientific expertise, while streamlining the regulatory process. Additionally, by requiring wetland creation in the mitigation bank *before* a project is built, mitigation banking can avoid the temporary loss of wetlands that would otherwise occur between project construction and completion of onsite mitigation. On the other hand, if the mitigation bank fails, then the wetland mitigation for a large number of projects fails as well.

Mitigation banking is often appropriate for projects with small, unavoidable impacts on wetlands, such as linear projects like transmission wires or pipelines. Mitigating impacts from NWP projects is another example. Banks also may be appropriate in situations where they are capable of replacing essential physical or biological functions of the aquatic resources. As with more traditional mitigation programs, the mitigation ratio required for projects relying on mitigation banking can vary greatly. A ratio of at least 1:1 (sometimes 8:1 or higher) is typically required, depending on the value of the wetlands destroyed, the value of the bank, and the degree of uncertainty regarding the bank's success.

Generally, mitigation projects should use reliable, well-understood restoration techniques that promote a self-sustaining system. Restoration of historic or substantially degraded wetlands is generally preferred. Such projects are the most likely to succeed without intensive maintenance, and they are the least likely to negatively impact other resources. On the other hand, projects that require complicated engineering feats or questionable water sources should be avoided where possible, as they are the most vulnerable to failure.

Federal Mitigation Banking Guidelines. A

number of federal agencies, including the Corps, EPA, FWS, NMFS, and National Resources Conservation Service (NRCS) worked together to develop mitigation banking guidelines. The guidelines document is entitled *Federal Guidance for the Establishment, Use and Operation of Mitigation Banks.*¹¹⁴ The guidelines provide help in determining those situations in which contributions to a mitigation bank may be an appropriate mitigation tool.

Before gaining authorization for mitigation banking, applicants must first avoid and then minimize impacts to onsite wetlands. Any unavoidable impacts must be compensated to the extent *appropriate and practicable*. While the guidelines express an explicit preference for onsite mitigation, compensation through a mitigation bank may be appropriate – depending on certain criteria – even when onsite Mitigation banking is often appropriate for projects with small, unavoidable impacts on wetlands, such as linear projects like transmission wires or pipelines. Monitoring is a critical element of any mitigation program, whether onsite, offsite, or through a mitigation bank. compensation is possible. Possible criteria include the likelihood of successfully establishing the desired habitat and the compatibility of the mitigation project with adjacent land uses. Additional considerations are the relative cost of mitigation alternatives and the feasibility of long-term monitoring and maintenance (i.e., is the effort ecologically sustainable?).

Generally, the guidelines emphasize a need to balance the impacts versus the benefits to determine whether mitigation is best accomplished onsite or through a mitigation bank. The guidelines prefer in-kind wetland mitigation. They discourage, for instance, mitigating non-tidal wetlands with tidal wetlands. Similarly, a bank's geographical service area is considered to be the area wherein a bank can reasonably provide appropriate compensation for wetland impacts. These guidelines will generally prevent mitigation outside the project site's watershed or region. However, such decisions will be made on a case-by-case basis.

The guidelines allow mitigation banking credit for preservation of existing wetlands in conjunction with additional restoration projects if such preservation will augment the function of the restored wetlands. Preservation may be used as the sole basis of credit only in exceptional circumstances. Allowing credit for preservation alone will depend on whether the proposed site performs important biological functions and whether the resource is likely to be lost, or is seriously threatened, due to land use trends. To receive mitigation bank credit for preservation of existing wetlands will generally require greater acreage than a bank that restores or creates wetland resources.

Sacramento-San Joaquin Valley Wetland

Mitigation Bank Act. In August 1993 the State committed itself to develop guidelines for wetland mitigation banks. The goal was to encourage creation of mitigation banks and to develop state guidelines consistent with the federal guidelines. The result was the Sacramento-San Joaquin Valley Wetlands Mitigation Bank Act.¹¹⁵ It authorizes DFG to qualify mitigation bank sites in the Central Valley region.

The Act requires DFG to establish standards and criteria for prospective bank sites and operators, for the evaluation of wetlands created at bank sites, and for the operation of those bank sites. Before wetlands are created at a bank site, DFG must sign a memorandum of understanding with the operator. After more than 20 acres of wetlands have been created, the operator may request DFG to classify the wetland type(s), determine the number of wetland acres, and categorize the habitat value of those acres. The bank will then be available for any Section 404 permittee to use within a forty-mile radius. Mitigation banks can be created in the Central Valley without following the Act. However, local governments can require that project proponents use DFG-qualified bank sites whenever possible.

5.5.3 Mitigation Monitoring

Monitoring is a critical element of any mitigation program, whether onsite, offsite, or through a mitigation bank. Mitigation monitoring programs are generally specified in the mitigation plan. The mitigation plan should establish performance benchmarks that can be objectively verified and should include contingency plans in the event that the preferred plan is unsuccessful. Some jurisdictions require project proponents to complete wetland mitigation prior to issuance of the building permit. Others require project proponents to post a bond sufficient to finance the mitigation program. Projects relying on mitigation banking are generally required to provide financial assurances in the event that mitigation credits are not purchased up front. Similarly, mitigation bank operators must demonstrate the long-term availability of funds for mitigation bank operation and management.

A critical element in mitigation monitoring is the role of the local government or other regulatory agency in inspecting and monitoring the progress of mitigation programs. Local governments lacking staff with expertise to monitor mitigation programs often rely on federal or state agencies to perform the monitoring function. In such cases, the local government should ensure that it is kept informed of the program's progress and its compliance with those elements of particular concern. However, local agencies should be aware that the Corps' mitigation oversight program is currently under-funded and often ineffective. For projects with no state or federal agency involvement, local governments can impose monitoring fees.

The monitoring could be conducted either by local government staff or hired consultants.

5.6 ENFORCEMENT

A local wetland regulation must have teeth in order to be effective. In the case of a new stand-alone ordinance, the local government may adopt enforcement provisions similar to those in any existing zoning ordinance. It is best to start with ordinances governing related concerns – such as erosion, grading, riparian corridors, or sensitive habitats. If a local government chooses to incorporate wetland preservation standards into an existing ordinance or land use plan (e.g., general plan or specific plan), affirmative enforcement provisions may already be present. However, the existing ordinance or plan may need tinkering to accommodate the new wetland provisions. In any event, when enforcement provisions are devised, the following components should be considered.

5.6.1 Authority

The enforcement section should specify the local agency or agencies that have authority to enforce the regulation. It also should specify the agency(s) that will enforce any permits issued under the regulation. Additionally, this section should describe the scope of the agency's power, including the power to inspect premises, issue violation notices and administrative orders, levy fines, institute legal actions, and enlist the assistance of law enforcement officials.

5.6.2 Violations

The local wetland regulation should clearly state that compliance with its requirements will not ensure compliance with federal and state wetland regulations. The regulation also should specify activities that constitute a violation of its requirements. In general those violations will fall into three categories:

- Engaging in (or in any way assisting with) a prohibited use, action, or alteration without first obtaining a permit.
- Failing to comply with the permit requirements or regulatory conditions.

• Failing to comply with a stop work order.

The regulation also should authorize local agencies to issue stop work orders. Stop work orders empower local agencies to prevent further wetland destruction after initial discovery of the violation. The issuance of a stop work order can be combined with the levying of fines. For example, Section 404 states that each day unauthorized fill remains in place in violation of a Corps-issued cease-and-desist order constitutes a separate, fineable offense.

5.6.3 Penalties

The local wetland regulation should clearly outline the possible penalties that would result from a violation of the regulations' requirements. Four types of penalties should be considered.

Fines. Fines are commonly used as enforcement tools in local ordinances. Under most ordinances, fines are assessed for each individual offense (e.g., alteration or fill), as well as on a daily basis for continuing violations. Fines vary greatly. Section 404 provides for fines of up to \$125,000. Under the CWA, Section 309, the EPA can impose civil penalties of up to \$25,000 and criminal penalties of up to \$50,000 per day for each day of violation. In contrast, Santa Cruz County's Riparian Corridor and Wetland Protection Ordinance provides for a maximum fine of \$500 (with no aggregate maximum). Generally, maximum fines in state and federal regulations are in the range of \$20,000 for each offense, but local ordinances can rarely impose fines at that level.

Restoration. Requiring violators to restore illegally altered wetlands (or create new wetlands if restoration is not possible) is the best way to ensure protection of wetland resources. Fines alone may not act as sufficient deterrent since some violators view fines simply as a cost of doing business. Local governments should consider including a provision that allows their staff to step in and take over the restoration effort, at the violator's expense, if the restoration is not completed within a reasonable time. These types of restoration projects should fully comply with the local Requiring violators to restore illegally altered wetlands (or create new wetlands if restoration is not possible) is the best way to ensure protection of wetland resources. A land use regulation is valid if it (1) substantially advances a legitimate government interest and (2) does not deprive a property owner of all reasonable, beneficial use of his or her property. regulation's mitigation provisions. This includes any approval procedures that precede project commencement.

Criminal Penalties. A local government may consider criminal penalties for egregious violations. For example, Section 404 provides for criminal penalties, including jail sentences of up to 15 years, for negligent or knowing violations of the CWA. This includes violations that cause a knowing endangerment of wetlands. The Coastal Conservancy's Draft Model Ordinance provides for misdemeanor penalties of up to six months imprisonment for certain willful or negligent violations.

While the threat of a jail sentence will increase the deterrence effect, criminal penalties for wetland violations may prove politically unpopular. Even the Corps seems reluctant to bring criminal enforcement actions. Additionally, judges and juries are often reluctant to hand down jail terms to violators of regulations.¹¹⁶ For example, from the early 1970s to the early 1990s, the Corps brought less than twenty criminal enforcement actions, with less than ten actions culminating in jail sentences.¹¹⁷

Cost of Enforcement Actions. Some local wetland regulations provide for cost of enforcement actions. This allows the local government to recover from the violator all costs and expenses connected with its enforcement activities.¹¹⁸

5.7 THE TAKINGS ISSUE

Landowners affected by a local wetland protection regulation sometimes respond by filing a lawsuit against the local government. Typically these lawsuits involve what is known as a "takings" claim. Local governments should understand the takings issue so they can respond effectively.

Under the Fifth Amendment of the United States Constitution and Article 19 of the California Constitution, the government may not "take" private property for a public purpose without paying just compensation. Courts can find that property has been taken either by an actual physical invasion of the property or through regulatory activity that restricts all reasonable, beneficial uses of the property. Although it is rare for courts to find that a taking has occurred, because wetland regulations do restrict property uses, they may be subject to taking challenges. As a result, care should be taken to ensure that local wetland regulations are constitutionally valid.

5.7.1 Legal Overview

A land use regulation is valid if it (1) substantially advances a legitimate government interest and (2) does not deprive a property owner of *all* reasonable, beneficial use of his or her property.¹¹⁹

"Substantially Advances" Test. In general, a land use regulation must attempt to alleviate the impacts caused by urban development.¹²⁰ In other words, a correlation between the regulation and the impacts it is trying to eliminate should exist. The U.S. Supreme Court clarified this issue by ruling that when a local government requires land dedication or fee payment as a condition of project approval, it also must show that the condition is *roughly proportional* to the project's impacts.¹²¹ For example, if a local government requires the developer of a project that will adversely affect wetlands to contribute fees for wetland mitigation, it should show that the fee charged approximates the costs associated with replacing or restoring the wetlands damaged by the project.122

On the other hand, regulations that simply restrict the use of wetlands, such as setback requirements, should not be subject to the rough proportionality test. These types of regulations should only be evaluated to determine whether they alleviate the impacts caused to wetlands. Generally, a local wetland regulation will not have trouble meeting this burden as long as the local government identifies in the regulation's statement of purpose and findings of fact how urban development impacts wetlands. The local government also should demonstrate that the regulation's limits on development advance the goal of protecting wetlands.

Reasonable Beneficial Use. Local wetland regulations may prohibit development in setback zones around wetland resources or they may establish density restrictions that require large lots per dwelling unit. Because these and similar regulations restrict development options, their economic impact is considered a key factor in determining their constitutionality. The U.S. Supreme Court has held that a government regulation must not render property valueless without the payment of compensation.¹²³ Although the court did not determine what renders property valueless, previous courts have looked at regulations to see whether they allow the landowner to retain some use of the property. As a general rule, an ordinance will be valid unless it eliminates *virtually all* use of the property.¹²⁴

To help determine whether a wetland regulation's economic impact is so severe that it constitutes a taking, local governments should consider four issues. First, regulations may substantially reduce property values and still not constitute a taking. For example, regulations that reduce property values by as much as 90 percent have been upheld as legitimate exercises of local regulatory authority.¹²⁵

Second, rather than focusing on decreased value, courts tend to focus on whether the regulation leaves some remaining uses of the property. Even if they prohibit particular types of development or all development in limited areas, wetland regulations will not be unconstitutional if they allow other uses of the property. For example, wetland regulations can allow agricultural uses that would constitute a remaining beneficial use.¹²⁶ Or, if the property retains some market value, the ability to sell it could constitute a beneficial use.

Occasionally, courts will look to see whether a regulation has unduly interfered with a property owner's reasonable investment-backed expectations. Because California property owners cannot rely on existing zoning, and it is difficult to obtain a vested right to develop property, landowners can rarely demonstrate a reasonable investment-backed expectation of development in this state.

Finally, courts generally evaluate a regulation's economic impact on the entire parcel of land. Even if a regulation prohibits all use of some portion of the affected property, it will be valid as long as it leaves other uses on parts of the property.¹²⁷ This is important for wetland regulations because they often prohibit development within a certain distance from the wetlands. Nevertheless, landowners have argued that regulations that prohibit all use of a segment of their property equate to a taking of that segment. Until now, the courts have not accepted this argument, but the issue may reoccur.

5.7.2 Avoiding a Taking

The following measures will help ensure that wetland regulations, if not bullet-proof, are well-insulated from a takings challenge.

Provide a Strong Factual Record. Local governments should document the need for the regulation and the reasons for selecting the methods used to protect wetland resources.

Identify Remaining Permissible Uses.

Identifying the potential remaining uses for regulated lands allows the courts to see that the regulation does not preclude all use of the property. Requiring a conditional use permit would ensure that local governments have an opportunity to review the impacts of particular projects prior to their approval.

Provide a Variance Procedure. A variance procedure protects the regulation from legal challenge, especially when it prohibits all use of the property. A variance procedure also allows local governments to balance the need for wetland protection against a particular project's impacts and the landowner's interests.

Create a Transfer of Development Rights

Program. Allowing landowners to sell their development rights from the regulated wetland property to other areas alleviates the regulation's economic impact. This also creates an additional land use that could constitute a remaining beneficial use of the property.

Courts generally evaluate a regulation's economic impact on the entire parcel of land. Even if a regulation prohibits all use of some portion of the affected property, it will be valid as long as it leaves other uses on parts of the property.



Chapter Six

Non-Regulatory Wetland Protection Measures

Non-regulatory wetland protection typically involves working with local landowners to protect wetlands on their lands. There are numerous federal, state, and private programs that provide assistance in acquiring and restoring wetlands on private property. Outreach and education are critical components of wetland protection efforts.

There are numerous opportunities for wetland protection outside the regulatory arena. Local governments can bolster their wetland protection regulations with affirmative policies designed to protect and promote wetland values. These may include providing landowners with financial incentives to protect their wetlands, developing wetland acquisition and restoration programs, and providing public outreach and education. Non-government organizations and individuals can utilize these options as well.

This chapter provides a wide range of nonregulatory tools for local wetland protection. Some tools may be undertaken in conjunction with federal or state assistance. Other tools do not require governmental involvement. Landowners, local governments, and nonprofit organizations should work together to explore these options. Good will and the freedom of choice are critical to generate the creative solutions necessary for the difficult task of wetland protection.

6.1 ECONOMIC INCENTIVES

Wetland protection is enhanced when landowners become part of the process. One way to involve landowners is to provide them with choices that are economically advantageous. The California Coastal Conservancy's *Options for Wetlands Conservation: A Guide for California Landowners* (1994)¹²⁸ is a wonderful resource. This document provides an in-depth discussion of the various incentive programs available to landowners. Land trusts can also help landowners by explaining the various options and tax benefits. (See Section 6.2.5 of this handbook for more information on land trusts.)

Lasting wetland protection requires finding common ground between landowners and those interested in wetland preservation. Highlighting the incentives available to landowners is one way to initiate the conversation about protecting wetlands on private property. Tax savings and debt relief programs can help landowners ease their tax burden. Federal, state, and private easement programs provide strong incentives for landowners to leave their wetland property undisturbed. Landowners may choose to donate or sell their wetlands to public agencies or conservation partners.

6.1.1 Tax Incentives

By providing landowners with information about tax incentives, local governments encourage community participation in wetland protection. Not only will these programs help protect wetland resources, they ease the landowner's tax burden as well.

Property and estate taxes can place enormous pressure on a landowner of large agricultural parcels. Often the landowner's only means to raise sufficient funds to pay the tax bill is to sell some or all of the land. Too often land speculators or developers step in and buy the parcel. Placing these parcels in public ownership through tax incentives is one option that protects California's rapidly shrinking agricultural lands and open space and could protect significant wetland resources.

While tax incentives for private property seem complex, they boil down to a relatively simple concept. The landowner either sells the parcel for less than it is worth and then donates

How Does Wetland Protection Benefit Landowners?

- Receive financial compensation.
- Enhance wetland values that benefit landowner and society.
- Reduce problems associated with farming potentially difficult areas.
- Practice conservation stewardship.
- Provide recreational opportunities.

These transactions can be structured in many different ways, providing flexibility to meet a landowner's particular needs. Careful tax planning and negotiation can produce a transaction that satisfies both the landowner and the purchasing agency. the rest (this is known as a "bargain sale") or else donates the parcel in its entirety. By bargain selling or donating the property to a public agency, land trust, or qualified nonprofit organization, the landowner can claim as a taxdeductible donation the difference between the appraised market value and the actual sale price (or zero if the parcel was donated). The landowner keeps the proceeds from the bargain sale.

These transactions can be structured in many different ways, providing flexibility to meet a landowner's particular needs. Careful tax planning and negotiation can produce a transaction that satisfies both the landowner and the purchasing agency. After the transaction, whether bargain selling or donating the parcel, the landowner no longer owns the property. All subsequent rights to the land transfer to the purchasing entity.

If the landowner wishes to retain ownership of the property, he or she could donate a conservation easement to receive a tax benefit. (See Section 6.1.3 of this handbook for more information about conservation easements.) Easements are recorded on the deed of title as permanent covenants and are usually enforceable by the donee organization. Internal Revenue Service (IRS) regulations detail the requirements for this deduction.¹²⁹

Another option to decrease taxes involves California's Williamson Land Conservation Act.¹³⁰ The Williamson Act lowers property taxes for lands maintained in certain open space uses. Landowners enter into a contract with either the county or city to restrict land uses on the property to ones compatible with agriculture, wildlife habitat, scenic corridors, recreational use, or open space. Each year the contract is automatically renewed for a new ten-year period, unless the landowner notifies the county or city of a changed use or a nonrenewal.

Local governments can protect wetland areas within their jurisdiction by taxing these lands at a minimal rate similar to the provisions of the Williamson Act. Preferential property tax assessments could be made for wetland areas located on private land if the landowner agrees to maintain these lands in their undeveloped condition.

6.1.2 Debt Reduction

The Farmers Home Administration (FMHA) provides reduction of borrower debt in exchange for permanent conservation easements placed on valuable habitats, including wetlands. The program applies only to FMHA loans.

Borrowers of FMHA loans can access this program in two ways. The first applies when the farmer is delinquent on payments. In exchange for restructuring the debt, the farmer places his or her wetlands in a permanent conservation easement. The FMHA purchases the easement only if the action will pull the farmer out of default and result in positive cash flow for the farmer. If the farmer is not delinquent, he or she can still utilize the program under certain circumstances. In these situations, placing a conservation easement on the property's wetlands cannot result in more than a 33 percent reduction in debt.

The FMHA and FWS jointly administer the program. Wetlands placed in easements by farmers are managed by FWS. Interested farmers should contact the Farmer Program of the FMHA state office.

6.1.3 Ownership Transfers

There are many options available to landowners, local governments, and nonprofit organizations interested in transferring property ownership to protect wetlands. This subsection provides an overview of how communities can work together to meet the needs of landowners while protecting valuable natural resources.

Outright Purchase. A fair market purchase can be expensive for the purchasing agency or organization because the landowner is paid the full market value for the land. Therefore the interested parties should explore alternatives such as donation or bargain sale, especially in situations where the landowner is committed to preserving the property or is looking for tax relief. There are also instances when a property is not available for purchase or when the purchasing party has not secured the necessary funds. In these instances, the purchasing party can employ several techniques, including options and rights of first refusal.

Options provide the purchasing party with a temporary interest in the property while funds are secured for permanent ownership. An

option is simply the right to purchase a property at a specified time and at a specified price. The purchasing party is not required to purchase the property even though an option was purchased. If the specified time is exceeded, the option interest expires and the option deposit is lost. The landowner may donate the option to a nonprofit organization.

Rights of first refusal are similar to options in that the landowner enters into an agreement with a potential purchaser. The right of first refusal means that the potential purchaser has the option to match any offer for purchase of the property before it will be sold to anyone else. The potential purchaser has a specified amount of time in which to match the offer. Both options and rights of first refusal allow the potential purchaser time to raise money and build community interest prior to actual purchase of the wetlands.

Management agreements. Management agreements are well suited for landowners who are not ready to relinquish any property rights but are still interested in enhancing their property's wetland values. Management agreements usually include an approved management plan that is developed by nonprofit or government field staff in cooperation with the landowner. The plan outlines the restoration and management practices the landowner will undertake to enhance wetland values. The landowner receives financial compensation and technical help from the partner organization.

Conservation Easements. At their core, conservation easements are agreements between landowners and qualified land trusts, conservation groups, or government agencies regarding the future uses of private property. If landowners are willing to limit their property rights, a conservation easement will pay them to protect their land from urban development. Landowners can either sell or donate the conservation easement, and they retain control over public access to their property.

Easements are based on the idea that every piece of property comes with a "bundle" of rights. The bundle typically includes the right to exclude others from the property, the right to develop the property, and the right to use the property's resources. Easements separate this bundle into individual rights, allowing each of them to be sold separately. Several federal, state, and private programs provide funding for the purchase of conservation easements on wetland areas. Easement value is usually determined by professional appraisals.

Conservation easements have become widely used by ranchers and farmers in California. Through an agricultural conservation easement, landowners can protect their property to ensure that future generations have continued opportunities to ranch and farm. At the same time, agricultural conservation easements maintain the viability of a region's agriculture, sustain biological resources, and provide vistas of working landscapes for public enjoyment. The donation of a conservation easement may significantly decrease federal and state income, estate, and inheritance taxes. The sale of a conservation easement may provide a ranching operation with a muchneeded influx of capital to pay down outstanding debt or to reinvest in the ranch.

Conservation easements create a financially competitive alternative to selling agricultural land for development purposes. Removing the development potential from farmland generally reduces its future market value. However, this may facilitate property transfer to the farmer's children and make the land more affordable to beginning farmers and others who want to buy it for agricultural purposes. Conservation easements provide landowners with liquid capital that can enhance the economic viability of individual farming operations and help perpetuate family tenure on the land.

The California Rangeland Trust (CRT) helps ranchers and farmers sort through the confusion surrounding conservation easements. It conducts baseline inventories to assess a property's agricultural, scenic, historical, and wildlife values, and helps landowners work through the numerous financial details. It also tailors the conservation easement to fit the landowner's individual situation. The CRT has prepared a Model Conservation Easement. The complete text is provided in Appendix H.

Remainder Interests. Remainder interests allow a landowner to dedicate full or partial interest in a personal residence or farm to a government agency or nonprofit organization, but provides the landowner with use of the The donation of a conservation easement may significantly decrease federal and state income, estate, and inheritance taxes. The sale of a conservation easement may provide a ranching operation with a much-needed influx of capital to pay down outstanding debt or to reinvest in the ranch.

Are conservation easements right for you?

- Is some portion of your land classified as a wetland?
- Do you plan to keep your land in farming?
- Would increased cash flow assist your farm?
- Would you like to receive a reduction in income, estate, or inheritance taxes?

"Every acquisition project has its unique aspects, and you have to tailor your efforts accordingly. But networking and creating good working relationships is always critical."

-Sarah Christie

property throughout his or her lifetime. Upon the landowner's death (and the death of any subsequent titleholders), the land is donated to the appropriate grantee, thereby providing permanent protection of the land. The landowner can use the property for the rest of his or her life while counting the property as a tax deduction. The tax deduction is the property's fair market value, after factoring in depreciation during the life of the estate and the donor's life expectancy. The IRS has regulations and a series of tables to assist taxpayers in computing the value of the life estate and remainder interests. Remainder interests are generally used by land trusts.

Undivided Interests. This approach allows coownership of a single piece of property with both owners able to exercise all property ownership rights. Each owner may donate his or her undivided interest. The donor receives tax benefits. A landowner may create several undivided interests in the property in order to donate the maximum allowed in successive years. This strategy allows the maximum amount of tax benefits over a period of time.

Limited Development. Allowing limited development on a property typically means that the development is clustered in certain areas to avoid damage to wetlands or other sensitive habitats. Controlled development may be used by landowners unable to utilize the tax benefits associated with the tools listed above. This approach tends to generate higher development profits because homes located adjacent to open space are more valuable than homes lacking adjacent open space. When used in tandem with a donation of the wetland resources, controlled development can provide the necessary incentive for landowners to protect their wetlands.

6.2 WETLAND ACQUISITION AND RESTORATION PROGRAMS

Acquiring wetlands for protection and restoration requires money and expertise. Once the wetlands are acquired, they require long-term management and planning to ensure protection and enhancement of wetland values. Communities should consider wetland acquisition and restoration as part of a long-term plan to reshape the landscape.

Nonprofit organizations often play a pivotal role in acquiring and restoring wetlands. Wetland restoration provides an excellent way to make a visible difference in the community and to work with others in a collaborative fashion. Restoration projects offer ample opportunity to create partnerships among landowners, government agencies, nonprofit organizations, and businesses. Organizations can participate in a restoration project without doing any of the actual funding or administration. There are many federal, state, and private programs that can help.

Land acquisition typically works in tandem with wetland restoration. Most land acquisition programs also provide money to restore wetlands. In addition, many programs offer cost-share agreements. Cost sharing means that the landowner provides the labor and in some cases the materials. At the project's end, the landowner submits receipts and is reimbursed by the partner organization for the cost of materials and labor.

Local governments, nonprofit organizations, and landowners should work together to leverage financing for priority projects. Restoration projects can involve multiple agencies and multiple funding sources. Local governments also can explore the possibility of creating their own programs.¹³¹ The following subsections describe some programs that may provide the necessary financial and technical expertise to get priority projects off the ground. Contact information for these programs is provided in Appendix I.

6.2.1 Federal Acquisition and Restoration Programs

The primary federal agency involved in wetland acquisition is the U.S. Fish and Wildlife Service. The Service works with willing sellers to acquire land that has significant wildlife value. Wetlands are a high priority. Landowners interested in working with FWS have two options. First, they can sell FWS a conservation easement. The Service will pay approximately 50 to 60 percent of the parcel's fair market value for high quality wetlands. The Service acquires the farming and development rights and reserves the right to flood the landowner's property to expand waterfowl habitat. The land cannot be farmed, but it can be leased for hunting. The second option is outright sale of the land to FWS. The Service will pay fair market value for the property. Lands located near national wildlife refuges tend to be the most desirable.

Numerous other federal programs are available. A brief discussion of three is provided below.

Conservation Reserve Program. The Farm Service Agency of the U.S. Department of Agriculture (USDA) administers the Conservation Reserve Program (CRP) and provides technical expertise to participants. This voluntary program encourages farmers to plant long-term, resource-conserving covers to improve soil, water, and wildlife resources and to restore wetlands. Landowners are taught resource conservation practices, and they plant trees, shrubs, native grasses, and other vegetative cover. These plantings improve farmland and create wildlife habitats, filterstrips, or riparian buffers. Landowners participating in the CRP receive annual rental payments, additional incentive payments for certain activities, and cost-share assistance to establish approved cover on cropland.

Interested farmers can apply through their local Farm Service Agency. Only land that was in agricultural production for two of the past five years is eligible for this program. Eligible acreage must be enrolled during a designated CRP sign-up period.¹³²

Wetland Reserve Program. The Wetland Reserve Program (WRP) is a voluntary program to restore and protect wetlands on private property. The USDA's Natural Resource Conservation Service (NRCS) administers the program. The WRP provides landowners with financial incentives to enhance wetlands in exchange for retiring marginal agricultural land. Landowners who choose to participate in the WRP may sell a conservation easement or enter into a cost-share restoration agreement with the USDA. The landowner voluntarily limits future use of the land, yet retains private ownership. The landowner and NRCS then develop a plan for wetland restoration and maintenance.

The program offers landowners three options: permanent easements, 30-year ease-

ments, and restoration cost-share agreements lasting a minimum of ten years. The landowner continues to control access to the land and may lease the land for recreational activities that do not require development, such as hunting, fishing, and hiking. At any time, the landowner may request that additional activities be evaluated to determine if they are compatible uses for the site. This request may include items such as livestock grazing, hay cutting, or harvesting wood products. Compatible uses are allowed if they are fully consistent with the protection and enhancement of wetlands.¹³³

The WRP is attractive because the landowner maintains all ownership rights. Easement payment (based on agricultural value) is generally higher than payment from other federal and state easement programs.

Partners for Fish and Wildlife. The U.S. Fish and Wildlife Service provides financial and technical assistance to landowners through voluntary cooperative agreements. The FWS offers advice on the design and location of potential restoration projects. It can also fund restoration projects through a voluntary cooperative agreement with the landowner. While not a requirement, a dollar-for-dollar cost-share is often achieved by working with landowners and a host of national and local entities. Under these cooperative agreements, landowners agree to maintain the restoration projects for a minimum of ten years, but otherwise they retain full control of the land. Projects with the highest priority are those that re-establish historical natural communities and provide benefits to migratory birds, anadromous fish (fish that spawn up river), and threatened or endangered species.

6.2.2 State Acquisition and Restoration Programs

The primary state agency involved in wetland acquisition is the California Department of Fish and Game's Wildlife Conservation Board (WCB). The WCB acquires interests in water and land to preserve wildlife and provide opportunities for public recreation. The WCB offers up to fair market value for a parcel. Through the Permanent Wetland Easement Program, the WCB purchases permanent conservation easements from landowners. The WCB works in partnership with landowners "In the Bay and Delta, more than 140,000 acres of wetlands are currently safeguarded by public and private entities. This represents about 22% of the Estuary's remaining wetlands."

— State of the Estuary Report 1992-1997, The San Francisco Estuary Project "Almost all who have fought for the coast remember an experience that lifted them out of loneliness into a sense of belonging to a larger community within a natural place."

-Rasa Gustaitis

and federal and state agencies to leverage funds to purchase the easements. This program is voluntary, and negotiations with willing sellers begin with the preparation of an independent appraisal. The WCB works to find a permanent transfer solution that is beneficial to both the landowner and the wetlands.

Many other state programs are available. A brief discussion of four is provided below.

California Coastal Conservancy Resource Enhancement Program. The California Coastal Conservancy acquires conservation easements and other interests in land to enhance natural resources within the coastal zone. The Coastal Conservancy enters into agreements with local governments, nonprofit organizations, and landowners. These agreements provide funding for projects identified in Conservancysponsored enhancement plans, even without the sale or donation of a conservation easement.¹³⁴

California Farmland Conservancy Program.

The California Farmland Conservancy Program (CFCP) is a voluntary program to encourage the long-term, private stewardship of agricultural lands through the use of agricultural conservation easements. The CFCP, formerly known as the Agricultural Land Stewardship Program, provides grant funding for projects that use and support conservation easements for protection of agricultural lands. Easements funded by the CFCP must be of a size and nature suitable for commercial agriculture. In addition to funding agricultural easement acquisition, up to ten percent of the CFCP grant funds go to projects that develop agricultural policy or planning as well as improvements to land already under an agricultural conservation easement (e.g., erosion control and riparian area improvements).

The CFCP's grants compensate landowners who voluntarily choose to sell their development rights. An independent real estate appraisal determines the value of the easement. This represents the difference between the fair market value and the property's restricted value (the diminished value after an easement is attached to the deed). The CFCP awards grants to local agencies such as regional open space and park districts, resource conservation districts, and nonprofit organizations.

California Waterfowl Habitat Program. Under this program, landowners receive \$20 per acre each year for entering into a wetland conservation agreement with DFG. These agreements must cover an initial period of ten years. Landowners must agree to protect and manage their wetland property for the benefit of waterfowl. Agreements include habitat management plans developed cooperatively by DFG, the landowner, and the California Waterfowl Association. Landowners must flood the land in the fall and maintain shallow water coverage until spring. The land is managed to enhance production of waterfowl food plants. Typically, landowners must also maintain upland nesting habitat and small brood ponds for local breeding waterfowl. Landowners may lease their land for waterfowl hunting or other compatible uses.

California Forest Improvement Program. The California Department of Forestry and Fire Protection offers technical and financial assistance for practices that will improve the long-term quality of forested lands in terms of timber productivity, retention of soil cover, and value for wildlife. While not specifically designed to protect wetlands, it does encourage restoration of riparian areas and other wildlife habitats.

6.2.3 Public-Private Partnerships

A range of partnerships has formed throughout California to plan and coordinate wetland conservation and restoration projects. On a regional level, these partnerships can provide a framework for land use decisions and coordination of restoration efforts. On a local level, such partnerships can provide a forum in which landowners and government agencies work together to solve resource problems without resorting to regulation. For example, 63 landowners, two private organizations, and nine resource agencies collaborated to form the Huichica Creek Land Stewardship in Napa County to address agricultural and wildlife concerns associated with a local watershed. The partnership received financial and technical assistance from various federal, state, and local agencies to develop and implement a watershed restoration and management plan specifically suited to the needs of both the affected landowners and an endangered shrimp species that lives in the watershed.¹³⁵

Two major partnerships exist in Northern California: the San Francisco Bay Joint Venture (SFBJV) and the Central Valley Habitat Joint Venture (CVHJV). In addition, the Pacific Coast Joint Venture and the Intermountain West Joint Venture cover the northern and eastern parts of the state.

San Francisco Bay Joint Venture. The SFBJV comprises a cross-section of public agencies allied with conservation organizations, development interests, and other stakeholders to restore wetlands and wildlife in the San Francisco Bay. This venture is one of 14 programs formed in the United States and Canada as part of the North America Waterfowl Management Plan. Using a non-regulatory approach, the SFBJV works to complete on-theground habitat projects that benefit wildlife populations by leveraging resources, developing new funding sources, and creating projectspecific partnerships.

Working as a coalition, the SFBJV established regional habitat goals and acreage objectives to protect, restore, and enhance a variety of Bay habitats, including tidal wetlands, seasonal wetlands, and creeks. From 1996 to 1999, the SFBJV protected 3,299 acres, restored 4,444 acres, and enhanced 3,352 acres of wetlands.

Central Valley Habitat Joint Venture. The CVHJV functions similarly to the SFBJV except that it secures and restores habitat in the Central Valley. To date, the CVHJV has protected, restored, or enhanced over 230,000 acres of wetlands. To meet the goals of the CVHJV, the WCB administers the Inland Wetland Conservation Program. This state program works with landowners to provide technical and cost-share assistance for developing and implementing management plans and habitat restoration projects.

6.2.4 Private and Nonprofit Organizations

Because public funding for acquisition of wildlife refuges and parks has declined, private conservation organizations have assumed a prominent role in protecting wetlands. Nonprofit organizations also provide technical expertise to landowners and community groups interested in restoring land or setting aside easements. Nonprofit groups can be instrumental in bringing together different sources of funding for a particular project.

The following nonprofit organizations are involved in wetland acquisition and restoration in California. In addition, local Sierra Club and National Audubon Society chapters may be involved in wetland protection efforts.

American Farmland Trust. The American Farmland Trust (AFT) is dedicated to protecting the nation's farmland resources. The Trust provides technical assistance on farmland protection programs, policies, and activities. It also accepts agricultural easements and other interests in land. In addition, the AFT web site provides comprehensive information about farmland protection tools.

The California Waterfowl Association. The California Waterfowl Association works to preserve and enhance California's waterfowl. The Association provides technical support and finds funding for landowners interested in restoring wetlands on their property. The Association also lobbies and works with government organizations to promote protection of waterfowl resources and hunting rights.

The Conservation Fund. The Conservation Fund seeks sustainable conservation solutions for the 21st century, emphasizing the integration of economic and environmental goals. Through real estate transactions, demonstration projects, education, and community-based activities, the Fund seeks innovative long-term measures to conserve land and water. The Fund uses its funding expertise to buy ecologically and aesthetically significant land and water, and it moves quickly on behalf of public agencies to secure prime acres in the face of imminent threats.

Ducks Unlimited. Ducks Unlimited is dedicated to conserving wetland habitat for waterfowl. This organization works with landowners and agencies to encourage habitat creation on public and private lands. It also secures funding for habitat creation projects "Wildlife projects will give you the chance to get reacquainted with animals, to deal with them as they really are, to consider their needs, to experience their vitality, and perhaps to rekindle in yourself a sheer childlike delight in their very existence."

— The Earth Manual, Malcolm Margolin Restoring local wetlands requires vision, patience, and hard work. Providing local experts from within the community can help establish the level of trust necessary to alter the existing landscape and return it to a more natural condition. and conducts biological research. Ducks Unlimites and the California Department of Water Resources are currently involved in cooperative projects that increase wetland acreage and wildlife habitat. The MARSH Program (Matching Aid to Restore States Habitat) actively acquires and restores habitat in California.

The Nature Conservancy. The Nature Conservancy's mission is to preserve the world's diverse plants, animals, and natural communities by protecting their habitats. The Conservancy achieves this by purchasing the threatened land and waters that support fragile ecosystems and endangered species.

Save The Bay. As the organization devoted to protecting and restoring the San Francisco Bay-Delta Estuary, Save The Bay is highly involved in wetland restoration. The organization campaigns for specific restoration projects, sponsors community-based restoration efforts, promotes policies that encourage restoration, and builds alliances and partnerships to advance restoration throughout the region.

Trout Unlimited. Trout Unlimited conserves, protects, and restores cold-water fisheries and their watersheds. Trout Unlimited assists landowners in planning and building stream improvement projects. This group also works with government agencies to secure fishfriendly legislation.

Trust for Public Land. Trust for Public Land (TPL) works exclusively to acquire land for human enjoyment and well being. This organization pioneers new ways to finance parks and open space, promotes the importance of public land, and helps communities establish land-protection goals. It also works to preserve wilderness in the west. In addition, TPL provides training and technical assistance to other land trusts and refers landowners to the nearest land trust.

The Urban Creeks Council of California. The Urban Creeks Council (UCC) is a nonprofit creek protection group. The UCC helps citizens organize creek clean-ups and restoration efforts, monitor water quality, obtain grants, work with government agencies, and increase creek access. The Council also partners with local governments to develop strategies for lowcost, low-technology, bio-engineered restoration and flood control projects. The UCC advocates using school children, local conservation corps, and community volunteers for creek restoration work.

6.2.5 Local Programs

Restoring local wetlands requires vision, patience, and hard work. Providing local experts from within the community can help establish the level of trust necessary to alter the existing landscape and return it to a more natural condition. Listed below are local agencies and programs that provide physical, technical, or financial assistance for wetland acquisition and restoration.

Conservation Corps. Local conservation crews, present throughout the state, are modeled after the California Conservation Corps. These crews can be contacted for help with wetland restoration projects. Restoration is laborintensive work, and the availability of inexpensive but able conservation crews has made many restoration projects possible. Many corps specialize in restoration projects, and their experience dovetails with volunteer efforts. Funding for local conservation corps comes from a variety of sources, including state, county, and municipal appropriations; fee-for-service contracts; foundations and corporations; federal job training programs; and community development block grants.

Flood Control Districts. Local flood control districts are often combined with another local agency, such as a public works department or water district. Flood control districts are responsible for controlling and conserving flood and storm waters to reduce potential flood damage. These districts also preserve water supplies, monitor water quality, and import, purify and distribute water for municipal, industrial, and agricultural uses. Many flood control districts are beginning to participate in wetland restoration efforts. For example, the Santa Clara Valley Water District's stream stewardship program has included stream restoration projects, fish barrier removal, and efforts to reduce pollution in both the San Francisco and Monterey Bays. The



District strives to ensure that its projects enhance the natural qualities and recreational opportunities of local riparian corridors.

Land Trusts. Most Bay Area counties have local land trusts. These organizations protect land for many purposes, such as preservation of open space, wildlife habitats, agriculture, urban buffers, and historic resources. The trusts vary in the types of land conservation activities they employ. However, most land trusts work with landowners to negotiate conservation easements. Land trusts are known for crafting innovative solutions to local land use conflicts. The California Coastal Conservancy publishes The Nonprofit Primer: A Guidebook for Land *Trusts.*¹³⁶ This publication provides a thorough discussion of land trusts and the various methods available to them for preservation of land and water resources.

Mosquito and Vector Control Districts.

Mosquito and vector control districts keep mosquito populations below threshold levels of disease transmission to humans and reduce nuisance problems that can impact recreational, economic, and agricultural activities. Mosquitoes occur in seasonally ponded wetlands with inadequate water control or poor water management, and in densely vegetated tidal areas that hold water between tides. The design of wetland restoration and enhancement projects should include input from the local mosquito abatement district to prevent the build-up of mosquito populations. Additionally, the Contra Costa Mosquito and Vector Control District and other districts have designed, created, and managed wetland projects in their districts to improve wildlife habitat and control mosquito populations.

Open Space Districts. Open space districts are local public agencies that protect open space by acquiring land (or interests in land) from willing sellers. The focus of the district may vary from recreational access to agriculture. The districts are governed by special district laws and receive their funding from a variety of sources. Also, the governing body of the open space district varies from county to county. In the Bay Area, the most well known open space district is the East Bay Regional Parks District. The District is funded through property taxes and is overseen by an elected commission.

Resource Conservation Districts. A resource conservation district (RCD) provides technical support and expertise to foster sensitive use of local natural resources. Many RCDs have organized technical support from a variety of private and public sources, including the Soil Conservation Service. The RCDs assist landowners in several ways: provide advice on incentive programs; connect landowners with technical help; establish demonstration projects; and provide ongoing support to landowners by answering questions, fielding concerns, and listening to ideas.

Wastewater Treatment Plants. Use of wetlands for wastewater treatment is spreading throughout the United States and is even more popular in Europe, where the technique originated. For nearly twenty years, the City of Arcata in Humboldt County has used the Arcata Marsh wetland project to treat wastewater, rather than develop an expensive and risky system of pumping wastewater into the ocean. Arcata developed the wetlands treatment system using a combination of federal, state, and local funding. This wetlands treatment program won Arcata a prestigious award for Innovation in Government and attracted international attention. For similar reasons, the City of San Francisco has proposed creating wetlands on Treasure Island, located in the San Francisco Bay. The Treasure Island Redevelopment Plan proposes creating wetlands as part of its stormwater treatment process.137

University of California Cooperative

Extension Service. The U.C. Cooperative Extension was developed to apply the resources of the University to the needs of local communities. It serves every county in the state and provides technical assistance on a variety of conservation-related topics, including wildlife enhancement on farms, design of range systems to minimize effects on watersheds, and development of soil and water conservation practices.

Land trusts are known for crafting innovative solutions to local land use conflicts.

Organizations that don't ask for money will not receive it.

6.3 FUNDING

Public and private funding sources are readily available for wetland acquisition and restoration, but care and time must be spent writing grants, cultivating donors, and asking for money. Individuals tend to give money to people rather than to faceless organizations. Therefore, anyone interested in securing funding for wetland acquisition and restoration must develop relationships with people and foundations that care about wetland protection.

To receive money from foundations, governmental sources, and most individuals, organizations need to acquire nonprofit Section 501(c)(3)status from the IRS. Most governmental agencies and established nonprofit organizations already have this status. Organizations must research the activities allowed under Section 501(c)(3) to ensure that their activities will not violate the requirements.

6.3.1 Fundraising Basics

Research is critical for individuals and organizations hoping to find funding for wetland acquisition and restoration. While numerous potential funding sources exist, not all of them focus on environmental issues. Therefore, one must cultivate potential donors by contacting, educating, and persuading them to support wetland preservation and restoration efforts. To succeed at fundraising, follow these steps:

- 1. Establish clear fundraising goals. How much money is needed for all aspects of the project? What elements need to be funded first?
- 2. Identify potential funding sources. Find funders whose goals match those of the organization.
- 3. Develop contacts and track the relevant information. Essential information includes *how much* the funders give, *what* organizations they give to, and *when* they give. Volunteers can help with this effort.
- 4. Follow through with the funding sources by writing proposals and request letters. *Organizations that don't ask for money*

will not receive it. Enlist the organization's most dynamic supporters to ask for money.

6.3.2 Identifying Funding Sources

The California Coastal Conservancy's *Options* for Wetlands Conservation: A Guide for California Landowners (1994)¹³⁸ discusses funding sources and provides contact information. Contact the Coastal Conservancy for more information on the availability of these funding sources. In addition, the Conservation Fund provides a list of government funding sources. This document is provided in Appendix J.

There are several other fundraising resources. The Foundation Center in San Francisco offers a library of funders and a large fundraising database. The Fundraising School, based at Indiana University, offers classes on the essentials of fundraising throughout the United States. The Management Center of San Francisco offers classes and workshops on fundraising, as well as extensive coursework in managing a nonprofit organization.

6.3.3 Preparing the Proposal

To solicit money from virtually any funding source, organizations must submit a proposal. Every proposal should follow these guidelines:

- 1. Always solicit funders whose goals match those of the organization. The best proposal in the world will not receive funding if the funder's focus is different from that of the proposed project.
- 2. Persuade the reader that the proposed project is important, timely, and likely to succeed. A logical proposal is evidence of a well-planned project.
- 3. Answer the funder's questions in a comprehensive yet succinct manner.
- 4. Proposals should be easy to read. Use bullet points and short paragraphs that describe the proposed project in clear, concise language.

By the end of the proposal the reader should be able to describe the project, the steps

involved in its accomplishment, and the time frame to completion.

6.3.4 Working with Major Donors

Major donors are individuals who can donate large sums of money to an organization. In the United States, 90 percent of all charitable donations come from individuals. Therefore, organizations should first look within their own organization for major donors. Next, they should look at similar nonprofit organizations. A review of their annual report and fundraising literature should help identify potential supporters. Organizations should prepare a prospect list that provides the following information:

- The prospect's contact information.
- Reasons for choosing the prospect.
- The likelihood of success (i.e., rank the prospects).
- Other information about the prospect.

Once the prospect list is prepared, the organization must determine how to contact each prospect. A cold-call to a prospect is not the best strategy. Therefore, the organization should send a letter of introduction from a mutual friend or acquaintance. Next, it should send a preliminary proposal and arrange a meeting with the prospect. Finally, several members must meet with the prospective donor and make the funding request.

Donor meetings should use the donor's time efficiently. Organizations should include someone in the meeting who knows the project well and can sell the concept. One of the organization's current donors should also be present. As a general rule, not more than three people should meet with a prospective donor. In the meeting, one of the organization's representatives should explain the organization's background and the proposed program. He or she should emphasize the organization's track record and highlight its volunteers and other funders. The agenda should allow plenty of time to hear what the donor is interested in funding, and someone should take notes for future reference. Everyone should leave the meeting with a clear sense of the steps to proceed. No matter what the outcome of the meeting, the organization should send a note thanking the prospective donor.

6.4 PUBLIC OUTREACH

Public outreach is an essential part of any wetland protection program because it raises the overall awareness of wetland values and cultivates public support. Local governments, conservation groups, and other entities can conduct their own outreach campaigns and support related programs.

Before beginning a public outreach campaign, the organization must identify who the audience will be and what message will be most effective in reaching that particular audience. Messages tailored to different audiences can be used simultaneously. Likely target audiences include landowners, developers, hunters, school children, and the general public.

Public outreach programs begin by providing information about wetland functions and values, relevant wetland policies (including legislation and regulatory guidelines), and possible wetland incentive programs. The next step involves encouraging public involvement in the planning, regulation, and management of wetland resources. Outreach efforts should also provide examples of effective restoration, protection, and management techniques used within or near the community.

Through education and outreach, an organization can be pivotal in shaping the way people think and act towards wetlands. Starting volunteer weekends or getting press coverage of local restoration projects are powerful ways to increase the organization's visibility and expand the community's involvement in wetland issues. The tools and resources described below can aid wetland preservation and restoration efforts through public outreach and education.

6.4.1 Media

The media is a powerful tool for public education and outreach that can be used by any individual or organization. The trick is to grab the media's attention as often as possible. There are several ways of grabbing the media's attention. The following steps will help focus an organization's use of the media to its best advantage.

Step 1: Develop a media contact book. The organization should create a list of local media sources, including radio, print, television, and Internet sources. The list must include phone

"Nothing is so contagious as enthusiasm ... it is the genius of sincerity, and truth accomplishes no victories without it."

—Edward George Earle Bulwer-Lytton
"Come forth into the light of things. Let Nature be your teacher."

-William Wordsworth

numbers and addresses as well as the person's name at each media outlet who should be contacted for conservation news. Be creative in finding media outlets, and be sure to list small newsletters published by other conservation groups and business or trade groups.

Step 2: Develop personal relationships with

the media. At least one member of the organization should visit the key media outlets and meet the reporters who will cover stories of interest. The visitors should bring fact sheets to provide background information and contact information for key individuals within the organization. Invite the reporter(s) to meet at a local wetland area for a walk, and show them what the organization is fighting to protect.

Step 3: Use news releases sparingly. Issue a news release only when the organization has something newsworthy to say. Fewer, better news releases will garner more coverage than a weekly news release without much content. A news release is most useful when it covers the four Ws: Who, What, When, and Where. Include a good news lead that will catch the editor's eye and conveys the essential message. Every news release should contain the name of the organization's contact person, telephone number, and release date. Releases should be one page, single-sided, and double-spaced.

Step 4: Prepare for the news. Prepare the media contact list and mailing labels *before* the news breaks. Follow up news releases with telephone calls to answer questions and emphasize essential parts of the story. Make extra copies of speeches given by organization representatives and have them handy for news stories. Reporters may use quotes from these speeches if they have them verbatim from the source and in print.

Step 5: Use free media. The organization should take advantage of public access television and radio or television interviews. Community access cable stations often provide free training and use of their video production equipment to produce educational programming that can then be used in the community. A letter to the editor that follows up on a news article is an excellent way to frame community discussion in the best possible light. Writing an op-ed piece for a local newspaper also allows the organization to voice its wetland protection goals. Other environmental organizations may publish periodic newsletters. Television and radio media can also be employed to make public service announcements.

6.4.2 Environmental Education

Environmental education programs based on local environmental issues have proven effective in increasing student test scores, lowering absenteeism, and increasing student enthusiasm for learning.¹³⁹ Local wetlands, no matter how small, provide an excellent opportunity to learn about the natural world and to connect both students and adults to their community. Connecting individuals with their watershed provides a forum in which to discuss local history, patterns of development, agriculture, literature, and art. The California Coastal Commission provides an excellent reference to environmental education entitled Marine and Coastal Education Resources Directory, San Francisco and Monterev Bav Areas (1996).¹⁴⁰ Below is a brief discussion of several education programs that focus on wetlands in the San Francisco Bay.

Aquatic Outreach Institute. This organization serves kindergarten through twelfth grade teachers, college professors, museum staff, docents, and other facilitators involved in environmental education by providing them with training and materials that can be used to increase their students' understanding of the use, protection, and management of our aquatic resources. The Aquatic Outreach Institute offers a broad range of workshops and provides curriculum materials. Kids in Marshes, Kids in Creeks, and Kids in Gardens are just a few examples of the workshops provided.

Marine Science Institute. This organization provides interdisciplinary science programs to kindergarten through twelfth grade students on a 90-foot research vessel. Students capture and examine plankton, collect water samples, and identify fish. The Marine Science Institute offers dock and tide pool programs. Its mobile Bay program brings the Bay into the classroom. **River of Words.** The River of Words Project is an international environmental poetry and art contest, now in its fifth year. It nurtures respect and understanding of the natural world by encouraging children to learn their "ecological address" and to describe through poetry and art their own "place in space." Co-sponsored by the International Rivers Network, the Library of Congress Center for the Book, and United States Poet Laureate, Robert Haas, the project fosters responsibility, imagination, and action in young people, and publicly acknowledges their creativity and concerns. Children between the ages of five through nineteen may enter the contest.

Save The Bay. Save The Bay's Canoes in Sloughs program takes upper elementary, middle, and high school students onto the Bay. The program uses canoes to access local wetlands where students study birds, test water quality, sample mud, and then describe these activities in poetry and art. Students learn about their local marsh and how they are connected to it through the watershed. Save The Bay also offers a kindergarten through twelfth grade classroom curriculum that meets California education standards. Save The Bay offers one-day and one-week teacher institutes focusing on the San Francisco Bay watershed.

San Francisco National Wildlife Refuge. The Refuge maintains three environmental education centers – one each in the towns of Alviso and Fremont, located in the South Bay, and one on Mare Island in the North Bay. Teachers are provided training and classroom materials so they can teach their students about wetlands and lead them on a field trip in the Refuge. Students learn about wetland mud dwellers, plankton, birds, and plants found in the Refuge. Programs offered by the Refuge are free.

Shorebird Nature Center. Shorebird Nature Center at the Berkeley Marina is used to teach estuary science to local school children. Located in the Nature Center is a 100-gallon salt-water aquarium that displays creatures found in San Francisco Bay. The Center also contains a touch table and a cormorant exhibit. The Center offers one-day field trips to the Bay shoreline and one-day research vessel trips on the Bay.

6.4.3 Workshops and Field Trips

Numerous organizations conduct workshops to educate local officials, landowners, and activists about wetland protection programs. Workshops that are cooperatively sponsored by different entities can have wide appeal to different target groups and can help build wetland protection and restoration coalitions. Workshops can range from short breakfast discussions to multi-day comprehensive courses.

When planning workshops, provide compelling speakers and plenty of variety. Consider using discussion panels, brainstorming sessions, and other interactive formats to break up the lectures. Provide time in the agenda for small group discussion on relevant topics. Contacts made in these small groups can be the basis for future community involvement. Also schedule time for speakers who don't stick to the agenda and for coffee breaks so people can talk with one another.

Incorporating field visits into a workshop can enhance attendance and lead to a greater understanding of wetland resources. Field visits should be accessible to people of all physical conditions. Field visits can range from a quick adventure at a single site to a series of trips to view a restoration project progress from beginning to end. Examples of potential field trips include visits to a landowner's restored wetlands or to a recently acquired public parcel. Providing individuals with first-hand knowledge of local wetland restoration projects is an effective way to galvanize community support for wetland protection.

6.4.4 Community and Volunteer-Based Restoration

Conservation groups are actively involved in recruiting volunteers to help preserve wetlands. The Sierra Club and the National Audubon Society conduct educational outings and programs that increase the appreciation and understanding of wetlands. In addition, many local groups actively seek volunteers for their ongoing restoration projects. Volunteers propagate and plant native species, remove nonnative and invasive species, and conduct bird counts and other monitoring activities. Participation in local creek groups is an excellent way to get involved in community-based restoration. A sample of local groups doing

"Daylighting" Strawberry Creek

Many Bay Area residents do not realize that creeks flow under their feet through culverts buried beneath parking lots, roads, and buildings. Creeks were originally directed into these culverts to transport water more quickly, but these cement channels often become clogged with trash and debris. Allowing water to flow through natural creek beds not only improves water flow and recreational opportunities, but it can improve water quality because the restored wetlands trap sediments and filter pollutants. Thus, a movement has begun to "daylight" urban creeks—exposing creeks once again to the light of day. For example, Berkeley's Parks and Recreation Commission allowed a landscape architect to dig up approximately 200 feet of underground culverts beneath an abandoned rail yard to expose Strawberry Creek. Strawberry Creek now runs freely through Strawberry Creek Park. The park is so popular with Berkeley residents that the city is considering daylighting another three-block section in downtown Berkeley.

Restoring Paradise Creek and Sweetwater Marsh

When fifth graders from Kimball Elementary School in National City in San Diego County went to visit the creek that flowed past their school, all they saw was trash. Paradise Creek, a part of the Sweetwater marsh complex that flows into San Diego Bay. was in need of help. Margaret Godshalk (the students' fifthgrade teacher), her husband Ted (a city planning commissioner), students from Kimball Elementary, teachers, and community members worked together for five years cleaning up the creek. They improved the quality and flow of water going into Sweetwater Marsh, a wildlife refuge. Initial grants and support were received from the city redevelopment agency and the local school district. Larger grants were secured from the Coastal Conservancy and the National Park Service's Rivers, Trails, and Conservation Assistance Program. In 1999, they received sufficient funding to create an educational park focused on tidal creek habitat, complete with observation stations and shade structures for picnic areas. The Paradise Creek restoration is an outstanding example of what dedicated community members can do to beautify schools and recreation areas in their neighborhoods.

community-based restoration is described below. These may serve as models for other communities, and they provide experts to new community-based restoration projects.

Alameda County Clean Water Program.

Under the Public Works Agency, the Clean Water Program is a consortium of local groups throughout the county doing creek and other restoration work. The program provides information about local groups and how to contact them.

Campaign to Restore Crissy Field. The Golden Gate National Parks Association (GGNPA) sponsors the Crissy Field Restoration Project. The GGNPA is the nonprofit partner of the Golden Gate National Recreation Area. Major site restoration work began at Crissy Field in September 1998, and has involved hundreds of volunteers in planting and restoring the area to native vegetation.

Friends of Sausal Creek. The Friends of Sausal Creek maintain a native plant demonstration garden in Oakland's Dimond Park and conduct monthly water quality and wildlife surveys of the creek and surrounding watershed. The Friends of Sausal Creek participate in many community events to promote watershed awareness.

Izaak Walton League of America. The Izaak Walton League is dedicated to conservation of America's soil, air, woods, water, and wildlife. As part of its Wetlands Conservation and Sustainability Initiative, the League has published the *Handbook for Wetlands Conservation and Sustainability.* This handbook provides useful information to help citizens become wetland stewards.

National Audubon Society. The Audubon Society sponsors a national campaign to restore wetlands, and it provides opportunities for community-based restoration. Bay Area chapters, particularly the Marin Chapter, have been very effective in acquiring and restoring wetlands. Local chapters also provide bird walks, workdays, and other opportunities to get involved in wetland restoration. **Save The Bay.** Save The Bay protects and restores wetlands throughout the Bay Area. Community-based restoration is part of an overall campaign to return diked baylands to tidal wetlands. Save The Bay's restoration work includes propagating and planting native species, removing non-native and invasive species, enhancing upland buffers, and monitoring sediment and water quality changes at restoration sites.

Steps for Success

What does a community group need to save a threatened landscape? A recipe for success includes:

- A core group of volunteers willing to step in and work.
- A committed, organized leader.
- A clearly articulated vision.
- A willingness to work with landowners to address their concerns.
- Solid relationships with local government officials.
- Access to studies and documents that detail the area's natural resources and species biodiversity.
- Access to real estate expertise from groups such as Trust for Public Land and the Coastal Conservancy.
- The presence of mind to always say "thank you," no matter what the outcome.
- Integrity and commitment.



Chapter Seven

Conclusion

P or centuries wetlands were considered insect-ridden, unattractive, and dangerous areas waiting to be drained and filled. Now, as we enter a new millennium, we recognize wetlands as beautiful and valuable places that serve a vital ecological role. This new understanding has taught us the urgency of protecting those wetlands we still have, as well as the benefits of restoring degraded wetlands where we can. Throughout California, enormous opportunities for reclaiming and restoring wetlands await those with the necessary skills.

But skills alone are not enough. Wetland preservation also requires energy and determination. It requires ordinary people who are willing to extend themselves beyond ordinary limits. It requires people who are willing to dream, and then pursue their dreams until they become a reality.

Wetland protection and restoration success stories are full of individuals who fought for a particular site, usually close to home. With amazing energy, ingenuity, and patience, they defended places they loved against destruction and gathered the support required to save them, for everyone's benefit and enjoyment. Anyone can do this, but few actually do. The wetlands of California desperately need more people willing to take the plunge. This handbook provides the methods and the means for newcomers to wade into wetlands and save them for future generations.

SAVE THE BAY'S CENTURY OF RENEWAL

The San Francisco Bay-Delta Estuary has suffered 150 years of degradation and destruction. As the organization devoted to protecting and restoring the Estuary, Save The Bay has assumed a leadership role in the Bay Area's wetland preservation and restoration efforts. Our vision for the Bay includes:

• Up to 200,000 acres of protected, enhanced, and restored wetlands and

creeks. This will enlarge the Estuary so that it is healthier and can support more birds, fish, and wildlife.

- The elimination of pollutants and toxic "hot spots." The Bay should once again be safe for fishing and swimming.
- Increased fresh water flows through the Delta into the Bay. This will reduce salinity and restore our formerly abundant fisheries.
- The return of sea otters, oysters, and other native species to the Bay. These and numerous threatened and endangered species should thrive in the Bay's rich ecosystem.
- A completed Bay Trail. A trail system encircling the Bay would improve public access to the shoreline and increase recreational opportunities for everyone.

This shared vision for the Estuary has enormous power. Together we can renew this national treasure – the symbol of our region – and keep it healthy and beautiful for future generations. We hope this handbook provides the encouragement and the essential tools for that undertaking. "Never doubt that a small group of dedicated individuals can change the world. Indeed, it's the only thing that ever has."

-Margaret Mead

Endnotes

Chapter 1

- 1 Baylands Ecosystem Habitat Goals: A Report of Habitat Recommendations Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project, US Environmental Protection Agency and San Francisco Bay Regional Water Quality Control Board (1999). To obtain a copy of this report, contact the San Francisco Estuary Project c/o the San Francisco Bay Regional Water Quality Control Board, 1515 Clay Street, Suite 1400, Oakland, CA 94612. Or call (510) 622-2465.
- 2 *Id.* at S-1.
- 3 See J. Allen, M. Cunningham, A. Greenwood, and L. Rosenthal, The Value of California Wetlands: An Analysis of their Economic Benefits (The Campaign to Save California Wetlands, August 1992).

Chapter 2

- 4 33 USC 1251, et seq. Section 404 is found at 33 USC 1344.
- 5 33 USC 1311, 1344, 1362(6), and 1362(7).
- 6 33 CFR 328.3 and 40 CFR 230.3.
- 7 33 USC 1344(a).
- 8 United States v. Riverside Bayview Homes, 471 U.S. 121 (1985).
- 9 The Corps' power to regulate wetlands stems from the U.S. Constitution's grant of power to the federal government to regulate interstate commerce. This provision has been interpreted broadly. For example, potential use of wetlands by migratory birds or endangered species has been considered sufficient to show an effect on interstate commerce, justifying federal jurisdiction. For more information, see W. Want, Law of Wetland Regulation, Section 4.05 (1999).
- 10 For a full definition of "waters of the United States," see 33 CFR 328.3(a) and 40 CFR 230.3(s).
- 11 33 USC 1344 and 33 CFR 330. For more information, see Section 3.2.1 of this handbook.
- 12 33 CFR 325.2(d).
- 13 40 CFR 230.10(a).
- 14 40 CFR 230.10(d).
- 15 33 CFR 320.4(a).
- 16 40 CFR 230.75(d).
- 17 33 USC 1344(c).
- 18 EPA Wetlands Fact Sheet #12.
- 19 33 USC 1344(m).
- 20 33 USC 401, et seq.
- 21 42 Fed. Reg. 37, at 122 (July 19, 1977).
- 22 Under federal law, navigable waters are those waters that have a past use, present use, or potential use for interstate or foreign commerce. See 33 CFR 329.4. This contrasts with the Clean Water Act's regulation of "all waters of the United States," which generally includes wetlands.
- 23 16 USC 1531, et seq.
- 24 For more information on the ESA, see D. Rohlf, The Endangered Species Act: A Guide to Its Protections and Implementation (Stanford Environmental Law Society, 2000).
- 25 16 USC 1536.
- 26 16 USC 1538.
- 27 See Loggerhead Turtle v. City Council of Volusia City, 148 F.3d 1231, at 1251-53 (11th Cir. 1998); Defenders of Wildlife v. Administrator, Environmental Protection Agency, 882 F.2d 1294 (8th Cir. 1989).
- 28 Cal. Fish & Game Code 2050, et seq.
- 29 For information specific to the CESA, see T. Mueller, Guide to the Federal and California Endangered Species Laws (Planning and Conservation League Foundation and Natural

"The real voyage of discovery consists not in seeking new landscapes, but in having new eyes."

-Marcel Proust

Heritage Institute, 1994). Copies of this publication can be ordered online at *http://www.n-h-i.org/Publications/pubs_list.html*.

- 30 Cal. Pub. Res. Code 21000, et seq.
- 31 Cal. Pub. Res. Code 21002.1.
- 32 Guidelines for the California Environmental Quality Act, 14 CCR 15064.7(a).
- 33 Guidelines for the California Environmental Quality Act, 14 CCR 15000, et seq., Appendix G.
- 34 *Mountain Lion Foundation v. Fish & Game Com.*, 16 Cal. 4th 105 (1997). See also, Guidelines for the California Environmental Quality Act, 14 CCR 15065.
- 35 Mira Monte Homeowners Association v. County of Ventura, 165 Cal. App. 3rd 357 (1985).
- 36 Cal. Pub. Res. Code 30000, et seq.
- 37 Cal. Pub. Res. Code 30103.
- 38 16 USC 1451, et seq.
- 39 33 CFR 325.2(b)(2)(ii).
- 40 Cal. Pub. Res. Code 30600 30600.5.
- 41 For more information on the California Coastal Commission and its permitting program, see K. Manaster and D. Selmi, California Environmental Law and Land Use Practice, Sections 66.10 - 66.12 and 66.40 - 66.58.
- 42 Cal. Gov. Code 66632(a).
- 43 The McAteer-Petris Act of 1965, Cal. Gov't. Code 66600, et seq. Obtain a copy of the Act online at http://ceres.ca.gov/bcdc/faq/faq.htm#5. For more information on BCDC's jurisdiction, see Cal. Gov't. Code 66610.
- 44 For more information on BCDC, see K. Manaster and D. Selmi, California Environmental Law and Land Use Practice, Section 67.01, *et seq.*
- 45 Cal. Fish & Game Code 1601 and 1603.
- 46 See *Mendocino Environmental Ctr. v. Cal. Dept. of Fish and Game*, No. CV 76761, (filed Feb. 3, 1999). See also, proposed amendments to 14 CCR 757(b).
- 47 33 USC 1342.
- 48 Clean Water Act, Section 401, 33 USC 1341.
- 49 For more information on the state and regional boards, see K. Manaster and D. Selmi, California Environmental Law and Land Use Practice, Section 30.01, *et seq*. See also, P. Cylinder, *et al.*, Wetlands Regulation, at 74-75 (1995).
- 50 For more information about the TRPA and land use issues within the Tahoe Basin, see K. Manaster and D. Selmi, California Environmental Law and Land Use Practice, Section 69.01, *et seq*.
- 51 Cal. Pub. Res. Code 29000.
- 52 Cal. Pub. Res. Code 29005.
- 53 More information on the various wetland definitions is available online at *http://ceres.ca.gov/wetlands/introduction/defining_wetlands.html*.
- 54 U.S. Army Corps of Engineers, Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual (Wetland Training Institute, Inc., 1995).

Chapter 3

- 55 The procedures for determining whether an area possesses these characteristics are described in the *Field Guide for Wetland Delineation: 1987 Corps of Engineers Manual.* See *id.*
- 56 See W. Want, Law of Wetland Regulation, Section 4.02 4.05 (1999).
- 57 See W. Want, Law of Wetland Regulation, Section 4.06(5) 4.06(6) (1999).
- 58 See National Mining Association v. US Army Corps of Engineers, 145 F.3d 1399 (D.C. Cir. 1998).
- 59 U.S. Congress, Office of Technology Assessment, Wetlands: Their Use and Regulation, at 7 (1984).

- 60 See Save Our Community v. US EPA, 971 F.2d 1155, 1165 (5th Cir. 1992). See also, Orleans Audubon Society v. Lee, 742 F.2d 901 (5th Cir. 1984) and W. Want, Law of Wetland Regulation, Section 4.06(4) (1999).
- 61 33 CFR 323.4.
- 62 33 CFR 330.
- 63 This language is from General Condition 13(d) in the newly modified NWP conditions. See Endnote 66 for more information on the new NWPs.
- 64 Press Release: U.S. Army Corps of Engineers Announces Replacement Nationwide Permits, U.S. Army Corps of Engineers, Washington, D.C. (Mar. 6, 2000). Another 40,000 fill activities are permitted through regional-level general permits.
- 65 Id.
- 66 For the new nationwide permit text as well as an extensive discussion by the US Army Corps of Engineers on the changes, see Final Notice of Issuance and Modification of Nationwide Permits, 65 Fed. Reg. 12,818 (2000). For information regarding the National Association of Homebuilders lawsuit against the new NWPs, see http://www.nahb.com/news/wetsuit.htm.
- 67 "Headwaters" are the upper parts of watercourse systems of non-tidal rivers and streams, and their associated wetlands, where the watercourse has an average annual flow of less than five cubic feet per second. "Isolated waters" are waters and wetlands that are not part of, or adjacent to, a tributary of interstate or navigable waters of the United States. See 33 CFR 330.2.
- 68 The other NWP 26 replacements are NWP 41, allowing the reshaping of existing drainage ditches, and NWP 43, authorizing construction of stormwater management facilities.
- 69 See http://www.audubon.org/campaign/wetland/nwpcomments.html.
- 70 40 CFR 230.10(a). See also, Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines (February 7, 1990). Available online at *http://www.epa.gov/OWOW/wetlands/regs/mitigate.html*.
- 71 The regulations state, "[W]hile generally focusing on the applicant's statement, the Corps will, in all cases, exercise independent judgment in defining the purpose and need for the project from both the applicant's and the public's perspective," 33 CFR 325, App. B(9)(c)(4).
- 72 Korteweg v. United States Army Corps of Engineers, 650 F. Supp 603, at 604 (D. Conn. 1986).
- 73 See W. Want, Law of Wetland Regulation, Section 6.05(2)(d) (1999).
- 74 40 CFR 230.10(a)(2). Similarly, CEQA defines feasible in terms of "economic, environmental, legal, social and technological factors." 14 CCR 15364.
- 75 Bersani v. United States Environmental Protection Agency, 674 F. Supp 405, 417 (N.D.N.Y 1987).
- 76 40 CFR 230.10(c).
- 77 33 CFR 320.4(a)(1).
- 78 Telephone interview with Corps' Regulatory Branch Office, Washington, D.C. (February 15, 2000).
- 79 See Memorandum of Agreement between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation under the Clean Water Act Section 404(b)(1) Guidelines (February 7, 1990). Available online at http://www.epa.gov/OWOW/wetlands/regs/mitigate.html.
- 80 Id. at Part II-C.
- 81 The outside limit for offsite mitigation projects is generally recognized to be 40 miles. See S. Hori, *Protecting Wetlands: Agency Approaches to Mitigation*, 1 Land Use Forum 243, at 244 (1992).

Chapter 4

82 See Section 4.2.2 of this handbook for more details.

- 83 See Section 4.2.3 of this handbook for more details.
- 84 In *Defenders of Wildlife v. Administrator, Environmental Protection Agency* (882 F.2d 1294 (8th Cir. 1989)), the EPA violated the law by listing the pesticide strychnine as legal for use by third parties, when it had the incidental effect of poisoning the endangered black-footed ferret. In *Strahan v. Coxe* (127 F.3d 155, (1st Cir. Mass. 1997)), Massachusetts violated the ESA by allowing the use of certain fishing equipment that drowned the endangered right whale. And in *Loggerhead Turtle v. City Council of Volusia County* (148 F.3d 1231 (11th Cir. 1998)), Volusia County was found potentially liable for violating the ESA if its beachfront lighting and beach driving regulations permitted third-party actions that killed endangered sea turtles. The case also found potential liability because the county chose to regulate some beaches in its jurisdiction, but expressly exempted others from regulation.
- 85 Bolsa Chica Land Trust v. Superior Court, 71 Cal. App. 4th 493 (1999).
- 86 See Cal. Pub. Res. Code 30233(a) for a complete list of the permitted activities.
- 87 See Cal. Gov't Code 66605(a).
- 88 For more information, contact John Kopchik in the Contra Costa County Planning Department at (925) 335-1227 or contact Rebecca Tuden in the U.S. Environmental Protection Agency at (415) 744-1987.
- 89 For more information, visit the San Joaquin Council of Government's web site at *http://www.sjcog.org/*.
- 90 See Santa Clara County General Plan, Resource Conservation Element, pp. H-23 to H-26. Text is provided in Appendix E.
- 91 The complete text of this draft ordinance can be found on Save The Bay's web site at *www.savesfbay.org.*
- 92 See Sacramento County Planning and Community Development Department, Letter to Interested County Resident Regarding Rules and Process for Paying into the Wetland Restoration Trust Fund (February 2, 2000). Or call the Department at (916) 874-6141. Document is provided in Appendix G.

Chapter 5

- 93 Baylands Ecosystem Habitat Goals: A Report of Habitat Recommendations Prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project, US Environmental Protection Agency and San Francisco Bay Regional Water Quality Control Board (1999). See Endnote 1 for contact information.
- 94 See *Friends of Payette v. Horseshoe Bend Hydroelectric Co.*, 988 F.2d 989 (9th Cir. 1993). In this case the court upheld the Corps' determination that it did not have jurisdiction over wetlands in an irrigation ditch that would revert to uplands if the water diversion program were discontinued. This is a controversial area. For more information, see P. Cylinder, *et al.*, Wetlands Regulation, at 21 (1995).
- 95 Cal. Pub. Res. Code 30121.
- 96 California Coastal Commission Statewide Interpretive Guidelines, Appendix D, at 78-79.
- 97 San Mateo County, Local Coastal Program Policies, Section 7.14, at 7.5 (June 1998). Available online at *http://amaty.simplenet.com/gen/ca/smagov2m.htm*.
- 98 H. Gieben, Model Wetland Protection Ordinance, California Coastal Conservancy, Section 2, at 10 (Draft, 1990). See Endnote 91 for web address.
- 99 State law also recognizes the value of protecting related habitats in the form of buffer zones. The BCDC jurisdiction includes all land within 100 feet of the San Francisco Bay shoreline, whether or not the land is a wetland. The DFG Streambed Alteration Agreement program considers the effect of alterations on riparian habitat and requires mitigation where appropriate. The California Coastal Commission also protects riparian habitats and a 100-foot wide buffer on the landward side of a riparian area. For more information, see P. Cylinder, *et al.*, Wetlands Regulation, at 29-33 (1995).
- 100 H. Gieben, Model Wetland Protection Ordinance, California Coastal Conservancy, Section 2, at 10 (Draft, 1990). See Endnote 91 for web address.

- 101 San Rafael Municipal Code 14.13.010, et seq., at 13-2 (September 21, 1992).
- 102 For a discussion of uses that are vulnerable to legal challenge under Section 404, see W. Want, Law of Wetland Regulation, Section 4.06 (1999).
- 103 H. Gieben, Model Wetland Protection Ordinance, California Coastal Conservancy, Section 2, at 5 (Draft, 1990). See Endnote 91 for web address.
- 104 See Santa Cruz County Code 16.30.010, et seq. Text is provided in Appendix D.
- 105 These new general conditions were issued in the final rule approving the new NWPs. See Final Notice of Issuance and Modification of Nationwide Permits, 65 Fed. Reg. 12,818 (2000).
- 106 See http://www.audubon.org/campaign/wetland/nwpcomments.html.
- 107 See 33 CFR 330.1.
- 108 See Sacramento County General Plan, Conservation Element CO-62 and CO-83. See also Sacramento County Board of Supervisors Resolution No. 91-0858 (filed May 29, 1991) which establishes the Trust Fund. For more information, contact the Sacramento County Planning and Community Development Department at (916) 874-6400.
- 109 14 CCR 15126.6(d).
- 110 CEQA defines feasible in terms of "economic, environmental, legal, social and technological factors." 14 CCR 15364.
- 111 See D. Burke, et al., Protecting Non-tidal Wetlands, at 39 (1988).
- 112 Natural Resources and Environmental Protection Act, Mich. Comp. Laws 324.30311.
- 113 An ordinance could go still further, banning any development that would constitute a public nuisance regardless of whether it eliminates all economic use of the property. Possible examples include projects that cause pollution or increase flooding risks. To avoid a constitutional takings claim, the project's effect as a nuisance must be clearly documented. For more information, see Section 5.7 of this handbook.
- 114 60 Fed. Reg. 58605 58614 (1995). The Federal Mitigation Bank Guidelines are available online at *http://www.epa.gov/OWOW/wetlands/mitbankn.html*.
- 115 Cal. Fish & Game Code 1775, et seq.
- 116 See D. Burke, et al., Protecting Non-tidal Wetlands, at 47 (1988).
- 117 EPA Wetlands Fact Sheet #13.
- 118 For example, see Cal. Gov't Code 38773.5.
- 119 Agins v. City of Tiburon, 447 U.S. 255 (1980).
- 120 Nollan v. California Coastal Commission, 483 U.S. 825 (1987).
- 121 Dolan v. City of Tigard, 512 U.S. 374 (1994).
- 122 For a detailed discussion of the Supreme Court's decision, see *Dolan v. City of Tigard: The Supreme Court's Rough Proportionality Standard Is Still Rough Around the Edges*, California Environmental Law Reporter, at 1 (August 1994).
- 123 Lucas v. South Carolina Coastal Council, 505 U.S. 1003 (1992).
- 124 *Keystone Bituminous Coal Association v. DeBenedictus*, 480 U.S. 470 (1987). For a detailed discussion of the *Lucas* decision, see *Lucas v. South Carolina Coastal Council*, California Environmental Law Reporter, at 1 (August 1992).
- 125 Haas & Co. v. City and County of San Francisco, 605 F.2d 1117 (9th Cir. 1979).
- 126 Barancik v. County of Marin, 872 F.2d 834 (9th Cir. 1988).
- 127 Penn Central Transportation Corps v. New York City, 438 U.S. 104 (1978).

Chapter 6

- 128 For copies of this publication, contact the California Coastal Conservancy at 1330 Broadway, Suite 1100, Oakland, California, 94612. Or call (510) 286-0470.
- 129 26 CFR 1.170A-14.
- 130 Cal. Gov't. Code 51200, et seq.
- 131 For general information about such programs, contact the EPA Wetlands Hotline at (800) 832-7828.

- 132 For more information, see *http://www.fsa.usda.gov/dafp/cepd/crpinfo.htm*, or contact the Fish and Wildlife Service at (916) 978-4420.
- 133 For more information, see http://www.wl.fb-net.org/ca.htm.
- 134 For more information, see http://www.coastalconservancy.ca.gov/index.htm.
- 135 For information about the stewardship concept and how it worked in Napa and other communities that are developing this approach, contact the California Association of Resource Conservation Districts at (916) 447-7237 and the Napa County Resource Conservation District at (707) 252-4188.
- 136 To obtain a copy of this publication, contact the California Coastal Conservancy at 1330 Broadway, Suite 1100, Oakland, California, 94612. Or call (510) 286-0470.
- 137 For more information on wetlands as wastewater treatment systems, see http://sorrel.humboldt.edu/~ere_dept/marsh/ and http://www.epa.gov/cookbook/page90.html (both are specific to Arcata Marsh). For more general information, see http://abcnews.go.com/sections/tech/DailyNews/arcatamarsh990702.html and http://www.acnatsci.org/erd/ea/wetland.html#5 (includes cautionary information on how treatment wetlands can be mismanaged).
- 138 For copies of this publication, contact the California Coastal Conservancy at 1330 Broadway, Suite 1100, Oakland, California, 94612. Or call (510) 286-0470.
- 139 G. Lieberman and L. Hoody, *Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning*, State Education and Environmental Round Table.
- 140 To receive a copy of this publication, call the Coastal Commission's Public Outreach Department at (415) 904-5210.

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Appendix A

Acronyms

- AFT American Farmland Trust
- BCDC (San Francisco) Bay Conservation and Development Commission
- CEQA California Environmental Quality Act
- **CFCP** California Farmland Conservancy Program (formerly the Agricultural Land Stewardship Program)
- CRP Conservation Reserve Program
- CVHJV Central Valley Habitat Joint Venture
 - CWA Clean Water Act
 - DFG (California) Department of Fish and Game
 - EIR Environmental Impact Report
 - EIS Environmental Impact Statement
 - EPA (U.S.) Environmental Protection Agency
 - ESA Endangered Species Act
- FMHA Farmers Home Administration
- FWS (U.S.) Fish and Wildlife Service
- HCP Habitat Conservation Plan
- **IRS** Internal Revenue Service
- MARSH Matching Aid to Restore States Habitat
- NMFS National Marine Fisheries Service
- NPDES National Pollutant Discharge Elimination System
- NRCS National Resources Conservation Service
- **NWP** Nationwide permits issued by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act
- PDN Pre-discharge notification
- RCD Resource Conservation District
- SFBJV San Francisco Bay Joint Venture
- SWRCB (California) State Water Resources Control Board
 - TPL Trust for Public Land
 - TRPA Tahoe Regional Planning Agency
 - USDA U.S. Department of Agriculture
 - WCB Wildlife Conservation Board, an agency of the California Department of Fish and Game
 - WRP Wetland Reserve Program

Appendix B

Wetland-Related Internet Sites

Please note that content often changes on web sites

GENERAL INFORMATION RELATED TO CALIFORNIA WETLANDS

Save the Bay: http://www.savesfbay.org/

Baykeeper and Deltakeeper: http://www.baykeeper.org/

National Audubon Society: http://www.audubon.org/campaign/wetland/

Society of Wetland Scientists: http://www.sws.org/

Maps of California wetlands and GIS databases: http://maphost.dfg.ca.gov/wetlands

GOVERNMENT AGENCIES AND REGULATORY GUIDANCE

Clean Water Act, Section 404: http://www.epa.gov/OWOW/wetlands/regs/sec404.html

- U.S. Army Corps of Engineers (regulatory program): http://www.usace.army.mil/inet/functions/cw/cecwo/reg/
- Environmental Protection Agency (wetland program): http://www.epa.gov/owow

Processing Section 404 Permits: http://www.usace.army.mil/inet/functions/cw/cecwo/reg/33cfr325.htm

Differing Wetland Definitions: http://ceres.ca.gov/wetlands/introduction/defining_wetlands.html

- Memorandum of Agreement Concerning Mitigation of Wetland Losses: http://www.usace.army.mil/inet/functions/cw/cecwo/reg/moafe90.htm
- **California Resources Agency/California Wetland Information System:** http://ceres.ca.gov/wetlands/
- Bay Conservation Development Commission: http://ceres.ca.gov/bcdc/

California Coastal Conservancy: http://www.coastalconservancy.ca.gov/index.htm San Joaquin Council of Governments (with links to San Joaquin Habitat Conservation Plan): http://www.sjcog.org/

MITIGATION AND MITIGATION BANKING

Section 404(b)(1) Guidelines: http://www.usace.army.mil/inet/functions/cw/cecwo/reg/moafe90.htm

Federal Mitigation Banking Guidance: http://www.epa.gov/OWOW/wetlands/mitbankn.html

Article on Wetland Mitigation Banks (from Comstock's Magazine, April 1996): http://ceres.ca.gov/topic/banking/comstocks.html

Catalogue of California Conservation Banks:

http://ceres.ca.gov/topic/banking/catalogue_index.html

How to Start a Marsh System:

http://sorrel.humboldt.edu/~ere_dept/marsh/ownmarsh.html

FUNDING FOR WETLAND PRESERVATION AND RESTORATION

Environmental Protection Agency Grants: http://ceres.ca.gov/wetlands/epa_grant/ epa_grant_summary.html

Department of Agriculture Conservation Programs:

http://www.nrcs.usda.gov/NRCSProg.html#Anchor-CRPConservation

California Wetland Reserve Program:

http://www.wl.fb-net.org/ca.htm

California Williamson Act:

http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=51001-52000&file=51200-51207

MISCELLANEOUS WETLAND-RELATED SITES

Model Wetland Ordinance for Indiana Communities: http://home.Switchboard.com/IndianaWetlands

The Arcata Marsh and Wildlife Sanctuary:

http://sorrel.humboldt.edu/~ere_dept/marsh/

Using Wetlands for Wastewater Treatment:

http://www.acnatsci.org/erd/ea/wetland.html

For an interesting site with a number of good photos and wetland links, see: http://www.mindspring.com/%7Elshull/wetlands.html

For a wide variety of wetland web pages, including photos, see: http://dir.yahoo.com/science/ecology/ecosystems/wetlands/

Appendix C

Santa Cruz County Code

Riparian Corridor and Wetlands Protection

The County of Santa Cruz Planning Department

Section:

 16.30.010
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16.30.010 PURPOSE

The purpose of this chapter is to eliminate or minimize any development activities in the riparian corridor in order to preserve, protect, and restore riparian corridors for: protection of wildlife habitat; protection of water quality; protection of aquatic habitat; protection of open space, cultural, historical, archeological and paleontological, and aesthetic values; transportation and storage of floodwaters; prevention of erosion; and to implement the policies of the General Plan and the Local Coastal Program Land Use Plan. (Ord. 2460, 7/19/77; 3335, 11/23/82)

16.30.020 SCOPE

This chapter sets forth rules and regulations to limit development activities in riparian corridors; establishes the administrative procedure for the granting of exceptions from such limitations; and establishes a procedure for dealing with violations of this chapter. This chapter shall apply to both private and public activities including those of the County and other such government agencies as are not exempted therefrom by state or federal law. Any person doing work in nonconformance with this chapter must also abide by all other pertinent local, state and federal laws and regulations. (Ord. 2460, 7/19/77; 3335, 11/23/82; 4027, 11/7/89; 4166, 12/10/91)

16.30.025 AMENDMENT

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program such revision shall be processed pursuant to the hearing and notification provisions of Chapter 13.03 of the County Code and shall be subject to approval by the California Coastal Commission.

16.30.030 DEFINITIONS

All definitions shall be as defined in the General Plan or Local Coastal Plan glossaries, except as noted below:

Agricultural use

Routine annual agricultural activities such as clearing, planting, harvesting, plowing, harrowing, disking, ridging, listing, land planning and similar operations to prepare a field for a crop.

Arroyo

A gully, ravine or canyon created by a perennial, intermittent or ephemeral stream, with characteristic steep slopes frequently covered with vegetation. An arroyo includes the area between the top of the arroyo banks defined by a discernible break in the slope rising from the arroyo bottom. Where there is no break in slope, the extent of the arroyo may be defined as the edge of the 100 year floodplain.

Body of standing water

Any area designated as standing water on the largest scale U.S. Geological Survey Topographic map most recently published, including, but not limited to, wetlands, estuaries, lakes, marshes, lagoons, and man-made ponds which now support riparian biota.

Buffer

The area abutting an arroyo where development is limited in order to protect riparian corridor or wetland. The width of the buffer is defined in Section 16.30.040 (b).

Development activities

Development activities shall include:

1. Grading

Excavating or filling or a combination thereof; dredging or disposal of dredge material; mining; installation of riprap.

2. Land clearing

The removal of vegetation down to bare soil.

3. Building and paving

The construction or alteration of any structure or part thereof, including access to and construction of parking areas, such as to require a building permit.

4. Tree and shrub removal

The topping or felling of any standing vegetation greater than 8 feet in height

5. The deposition of refuse or debris

- 6. The use of herbicides, pesticides, or any toxic chemical substances.
- 7. Any other activities determined by the Planning Director to have significant impacts on the riparian corridor.

Disturbed area

An area determined by the Planning Director to have experienced significant alteration from its natural condition. Such disturbance may typically consist of clearing, grading, paving, landscaping, construction, etc.

Director

The Planning Director or his or her designee.

Emergency

A sudden unexpected occurrence involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services.

Ephemeral stream

A natural watercourse or portion thereof which flows only in direct response to precipitation, as identified through field investigations.

Intermittent stream

Any watercourse designated by a dash-and-dots symbol on the largest scale U.S. Geological Survey Topographic map most recently published, or when it has been field determined that a watercourse either:

1. Has a significant waterflow 30 days after the last significant storm; or

2. Has a well-defined-channel, free of soil and debris.

Minor proposal

Building remodels or additions less than 500 square feet or grading less than 100 cubic yards which takes place within a previously developed or disturbed area; tree removal or trimming for the purpose of mitigating hazardous conditions or allowing solar access; drainage structures (e.g. culverts, downdrains, etc.); erosion control structures (e.g. retaining walls, riprap, checkdams, etc.); emergency measures requiring prompt action; resource management programs carried out under the auspices of a government agency; development activities within buffer zones which do not require a discretionary permit; other projects of similar nature determined by the Planning Director to cause minimal land disturbance and/or benefit the riparian corridor.

Perennial stream

Any watercourse designated by a solid line symbol on the largest scale U.S. Geological Survey Topographic map most recently published or verified by field investigation as a stream that normally flows throughout the year.

Riparian corridor

Any of the following:

- 1. Lands within a stream channel, including the stream and the area between the mean rainy season (bankfull) flowlines;
- 2. Lands extending 50 feet (measured horizontally) out from each side of a perennial stream. Distance shall be measured from the mean rainy season (bankfull) flowline;
- 3. Lands extending 30 feet (measured horizontally) out from each side of an intermittent stream. Distance shall be measured from the mean rainy season (bankfull) flowline;
- 4. Lands extending 100 feet (measured horizontally) from the high watermark of a lake, wetland, estuary, lagoon or natural body of standing water;

5. Lands within an arroyo located within the Urban Services Line, or the Rural Services Line;

6. Lands containing a riparian woodland.

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Riparian vegetation/woodland

Those plant species that typically occur in wet areas along streams or marshes. A woodland is a plant community that includes these woody plant species that typically occur in wet areas along streams or marshes. Characteristic species are: Black Cottonwood (Populus trichocarpa), Red Alder (Alnus oregona), White Alder (Alnus rhombifolia), Sycamore (Plantanus racemosa), Box Elder (Acer negundo), Creek Dogwood (Cornus Californica), Willow (Salix).

Vegetation

Any species of plant. (Ord. 2535, 2/21/78; 2536, 2/21/78; 2800, 10/30/79; 3335, 11/23/82;3441,8/23/83; 3601, 11/6/84; 4346, 12/13/94)

16.30.040 PROTECTION

No person shall undertake any development activities other than those allowed through exemptions and exceptions as defined below within the following areas:

- (a) Riparian corridors.
- (b) Areas within the Urban Services Line or Rural Services Line which are within a buffer zone as measured from the top of the arroyo. All projects located on properties abutting an arroyo shall be subject to review by the Planning Director. The width of the buffer shall be determined according to the following criteria.

CRITERIA FOR DETERMINING BUFFER FROM ARROYOS

			-			
	Riparian	Vegetation	l	live Oak or	Other Wo	odland
Average slope within 30 feet of edge	20-30%	10-20%	0-10%	20-30%	10-20%	0-10%
Buffer Distance (feet)						
from: Perennial Streams, Wetlands, Marshes, Bodies of Water	50	50	50	50	40	30
Buffer Distance (feet)						
from Intermittent Streams	50	40	30	30	30	20
Buffer Distance (feet) from Ephemeral Streams	30	30	20	20	20	20

Character of Vegetation in Buffer

The buffer shall always extend 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation as determined by the dripline, except as provided for in Section 16.30.060. Once the buffer is determined, a 10-foot setback from the edge of buffer is required for all structures, to allow for construction equipment and use of yard area.

See allowable density credits within the General Plan.

CRITERIA FOR DETERMINING BUFFER FROM ARROYOS

Average slope within 30 feet of edge	Grassland or Other		Buffer area is developed or otherwise disturbed (does not include recent clearing)			
	20-30%	10-20%	0-10%	20-30%	10-20%	0-10%
Buffer Distance (feet)						
from:	50	30	20	30	20	20
Perennial Streams,						
Wetlands, Marshes,						
Bodies of Water						
Buffer Distance (feet)						
from Intermittent Streams	30	20	10	20	10	10
Buffer Distance (feet)						
from Ephemeral Streams	20	10	10	20	10	10

Character of Vegetation in Buffer

The buffer shall always extend 50 feet from the edge of riparian woodland and 20 feet beyond the edge of other woody vegetation as determined by the dripline, except as provided for in Section 16.30.060. Once the buffer is determined, a 10-foot setback from the edge of buffer is required for all structures, to allow for construction equipment and use of yard area.

See allowable density credits within the General Plan. (Ord. 2460, 7/19/77; 3335, 11/23/82; 4346, 12/13/94)

16.30.050 EXEMPTIONS

The following activities shall be exempt from the provisions of this chapter.

- (a) The continuance of any preexisting nonagricultural use, provided such use has not lapsed for a period of one year or more. This shall include change of uses which do not significantly increase the degree of encroachment into or impact on the riparian corridor as determined by the Planning Director.
- (b) The continuance of any pre-existing agricultural use, but not establishment or expansion of any Biomedical Livestock Operation, provided such use has been exercised within the last five years. (Ord. 4474-C, 5/19/98)
- (c) All activities done pursuant to a valid County timber harvest permit.
- (d) All activities listed in the California Food and Agricultural Code pursuant to the control or eradication of a pest as defined in Section 5006, Food and Agriculture Code, as required or authorized by the County Agricultural Commissioner.
- (e) Drainage, erosion control, or habitat restoration measures required as a condition of County approval of a permitted project. Plans for such measures shall be reviewed and approved by the Planning Director. (Ord. 2460, 7/19/77; 2537, 2/21/78; 3335, 11/23/82)
- (f) The Pajaro River Sediment Removal Project, under the Army Corps of Engineers Permit No. 21212537, issued May, 1995, or as amended. (Ord. 4374, 6/6/95)

16.30.060 EXCEPTIONS

Exceptions and conditioned exceptions to the provisions of this Chapter may be authorized in accordance with the following procedures:

(a) **Application**

Application for an exception granted pursuant to this chapter shall be made in accordance with the requirements of Chapter 18.10, Level III or V, and shall include the following:

- 1. Applicant's name, address, and telephone number.
- 2. Property description: The assessor's parcel number, the location of the property and the street address if any.
- 3. Project description: A full statement of the activities to be undertaken, mitigation measures which shall be taken, the reasons for granting such an exception, and any other information pertinent to the findings prerequisite to the granting of an exception pursuant to this section.
- 4. Two sets of plans indicating the nature and extent of the work proposed. The plans shall depict property lines, landmarks and distance to existing watercourse; proposed development activities, alterations to topography and drainage channels; mitigation measures, including details of erosion control or drainage structures, and the extent of areas to be revegetated. Plans shall be a minimum size of 18" x 24", except that plans for minor proposals may be a minimum size of 8 1/2" x 11".
- 5. Applicant's property interest or written permission of the owner to make application.
- 6. Requested Information: Such further information as the Planning Director may require.
- 7. Fees: The required filing fee, set by resolution of the Board of Supervisors, shall accompany the application.

(b) Notice

Notices of all actions taken pursuant to this chapter shall be in accordance with the requirements of Chapter 18.10.

(c) Action

Proposals for minor riparian exceptions may be acted upon at Level III and proposals for major riparian exceptions may be acted upon at Level V pursuant to chapter 18.10.

(d) Findings

Prior to the approval of any exception, the Approving Body shall make the following findings:

- 1. That there are special circumstances or conditions affecting the property;
- 2. That the exception is necessary for the proper design and function of some permitted or existing activity on the property;
- 3. That the granting of the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located;

- 4. That the granting of the exception, in the Coastal Zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative; and
- 5. That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the Local Coastal Program Land Use Plan.

(e) Conditions

The granting of an exception may be conditioned by the requirement of certain measures to ensure compliance with the purpose of this chapter. Required measures may include, but are not limited to:

- 1. Maintenance of a protective strip of vegetation between the activity and a stream, or body of standing water. The strip should have sufficient filter capacity to prevent significant degradation of water quality, and sufficient width to provide value for wild life habitat, as determined by the Approving Body.
- 2. Installation and maintenance of water breaks.
- 3. Surface treatment to prevent erosion or slope instabilities.
- 4. Installation and maintenance of drainage facilities.
- 5. Seeding or planting of bare soil.
- 6. Installation and maintenance of a structure between toe of the fill and the high water mark.
- 7. Installation and maintenance of sediment catch basins.

(f) Concurrent Processing of Related Permits

An application for exception may be processed concurrently with applications for discretionary permits required for the activity in question. No ministerial permit(s) for the activities in question shall be issued until an exception has been authorized. All discretionary permits for the activity in question shall include all conditions included in the exception. Where associated discretionary permits are authorized by the Planning Commission or Board of Supervisors, that body shall be authorized to act in place of the Zoning Administrator in considering an application for an exception if the applications are considered concurrently.

(g) Expiration

Unless otherwise specified, exceptions issued pursuant to this chapter shall expire one year from the date of issuance if not exercised. Where an exception has been issued in conjunction with a development permit granted pursuant to Chapter 18.10, the exception shall expire in accordance with the provisions of Chapter 18.10. (Ord. 2460, 7/19/77; 2506,11/22/77; 2800, 10/30/79; 3335, 11/23/82; 3441,8/23/83)

16.30.070 INSPECTION AND COMPLIANCE

The Planning Director may conduct inspections to ensure compliance with this chapter.

(a) Inspection

The following inspections may be performed by the Director:

- 1. A pre-site inspection to determine the suitability of the proposed activity and to develop necessary conditions for an exception.
- 2. A final inspection to determine compliance with conditions, plans and specifications.

These inspections may take place concurrent with inspection required by any permits necessary for the activities in question.

(b) Notification

The permittee shall notify the Director 24 hours prior to start of the authorized work and also 24 hours prior to the time he or she desires a required inspection.

(c) Right of Entry

The application for exception constitutes a grant of permission for the County to enter the permit area for the purpose of administering this chapter from the date of the application to the termination of any erosion control maintenance period. If necessary, the Director shall be supplied with a key or lock combination or be permitted to install a County lock. (Ord. 2460, 7/19/77; 2506, 11/22/77; 2800, 10/30/79; 3335, 11/23/82; 3441, 8/23/83)

16.30.080 VIOLATIONS

- (a) It shall be unlawful for any person to do cause, permit, aid, abet, suffer or furnish equipment or labor for any development activity within a riparian corridor as defined in Section 16.30.030 unless either (1) a development permit has been obtained and is in effect which authorizes the development activity as an exception; or (2) the activity is exempt from the requirement for a development permit by the provisions of Section 16.30.050 of this chapter.
- (b) It shall be unlawful for any person to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any development activity within a buffer zone of an arroyo as defined in Section 16.30.030 and as prescribed by the provisions of subsection 16.30.040(b) unless either (1) a development permit has been obtained and is in effect which authorizes the development activity as an exception; or (2) the activity is exempt from the requirement for a development permit by the provisions of Section 16.30.050 of this chapter.
- (c) It shall be unlawful for any person to exercise a development permit authorizing development activity as an exception without complying with all of the conditions of such permit.
- (d) It shall be unlawful for any person to knowingly do, cause, permit, aid, abet or furnish equipment or labor for any work in violation of a stop work notice from and after the date it is posted on the site until the stop work notice is authorized to be removed by the Planning Director. (Ord. 2460, 7/19/77; 2506, 11/22/77; 2800, 10/30/79; 3335; 11/23/82; 3451-A, 8/23/83)

16.30.081 (Repealed 4/2/96, Ord. 4392A)

- <u>16.30.090</u> (Ord. 2460, 7/19/77; 2506, 11/22/77; 2800, 10/30/79; 3335, 11/23/82; 3451-A, 8/23/83; Repealed 4/2/96, Ord. 4392A)
- <u>16.30.100</u> (Ord. 2460, 7/19/77; 2506, 11/22/77; 2800, 10/30/79; 3335, 11/23/82; 3451-A, 8/23/82; Repealed 4/2/96, Ord. 4392A)

<u>16.30.103</u> (Repealed 4/2/96, Ord. 4392A)

16:30.107 (Repealed 4/2/96; Ord. 4392A)

<u>16.30.110 APPEALS.</u> All appeals of actions taken pursuant to the provisions of this Chapter shall be made in conformance to the procedures of Chapter 18.10. (Ord. 2460, 7/19/77; 2506, 11/22/77; 2800, 10/30/79; 3335, 11/23/82; 3451-A, 8/23/83) (v001)

Appendix D

Santa Cruz County Code

Sensitive Habitat Protection

The County of Santa Cruz Planning Department

Sections:

16.32.010	Purposes
16.32.020	Scope
16.32.030	Amendment
16.32.040	Definitions
16.32.050	General Provisions
16.32.060	Approval Required
16.32.070	Assessments and Reports Required
16.32.080	Report Preparation and Review
16.32.090	Approval Conditions
16.32.095	Project Density Limitations
16.32.100	Exceptions
16.32.105	Exemption
16.32.110	Inspection
16.32.120	Appeals
16.32.130	Violations
16.32.131	Notification of Violation
16.32.132	Stop Work Notice
16.32.134	Penalties
16.32.140	Fees

16.32.010 PURPOSES

The purposes of this chapter are to minimize the disturbance of biotic communities which are rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activity; to protect and preserve these biotic resources for their genetic, scientific, and educational values; and to implement policies of the General Plan and the Local Coastal Program Land Use Plan. (Ord. 3342, 11/23/82; 3442, 8/23/83)

16.32.020 SCOPE

This chapter sets forth rules and regulations for evaluating the impacts of development activities on sensitive habitats; establishes the administrative procedures for determining whether and what type of limitations to development activities are necessary to protect sensitive habitats; and establishes a procedure for dealing with violations of this chapter. This chapter shall apply to both private and public activities including those of the County and other such government agencies where not exempted therefrom by state or federal law. Any person doing work in conformance with this chapter must also abide by all other pertinent local, state and federal laws and regulations. (Ord. 3342, 11/23/82; 3442, 8/23/83; 4027, 11/7/89; 4166, 12/10/91)

16.32.030 AMENDMENT

Any revision to this chapter which applies to the Coastal Zone shall be reviewed by the Executive Director of the California Coastal Commission to determine whether it constitutes an amendment to the Local Coastal Program. When an ordinance revision constitutes an amendment to the Local Coastal Program such revisions shall be processed pursuant to the hearing and notification provisions of Chapter 13.03 of the County Code and shall be subject to approval by the California Coastal Commission. (Ord. 3342, 11/23/82; 3342, 8/23/83)

16.32.040 DEFINITIONS

All terms used in this chapter shall be as defined in the General Plan and Local Coastal Program Land Use Plan and as follows:

Area of Biotic Concern

Any area in which development may affect sensitive habitat, as identified on the Local Coastal Program Sensitive Habitats maps, the General Plan Resources and Constraints maps and other biotic resources maps on file in the Planning Department, or as identified during inspection of a site by Planning Department staff.

Biotic Assessment

A brief review of the biotic resources present at a project site prepared by the County Biologist.

Biotic Permit

A permit for development in an area of biotic concern issued pursuant to the provisions of this chapter.

Biotic Report

A complete biotic investigation conducted by an approved biologist from a list maintained by the county, including but not limited to the following:

- 1. Identification of the rare endangered, threatened and unique species on the site;
- 2. Identification of the essential habitats of such species;
- 3. Recommendations to protect species and sensitive habitats. When a project is found to have a significant effect on the environment under the provisions of the Environmental Review Guidelines, the biotic report shall be made a part of the Environmental Impact Report.

Building Envelope

A designation on a site plan or parcel map indicating where structures and paving are to be located.

Decision-Making Body

The Zoning Administrator, Planning Commission, or Board of Supervisors, whichever body is considering the development permit, when biotic review is concurrent with review of a development permit. When a biotic permit is required, the decision-making body shall be the Planning Director.

Disturbance

Any activity which may adversely affect the long term viability of a rare, endangered, threatened, or locally unique species or any part of a sensitive habitat.

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Development/Development Activity

On land, in or under water, the placement or erection of any solid material or structure; discharge or disposal of any dredged material or of any gaseous, liquid, solid, or thermal waste; grading, removing, dredging, mining, or extraction of any materials; change in the density or intensity of use of land, including but not limited to subdivision pursuant to the Subdivision Map Act (commencing with Section 66410 of the Government Code), and any other division of land, including lot splits, except where the land division is brought about in connection with the purchase of such land by a public agency for public recreational use; change in the intensity of use of water, or of access thereto; reconstruction, demolition, alteration or improvement of any structure in excess of 50 percent of the existing structure's fair market value, including any facility of any private, public or municipal utility; the removal or harvesting of major vegetation other than for agricultural purposes, kelp harvesting, and timber operations which are in accordance with a timber harvesting plan submitted pursuant to the provisions of the Z'berg-Nejedly Forest Practice Act of 1973; the disturbance of any rare, endangered, or locally unique plant or animal or its habitat.

Environmental Coordinator

The Planning Department staff person assigned to review applications and make determinations based upon the County Environmental Review Guidelines adopted pursuant to Chapter 16.01 of the Santa Cruz County Code.

Environmentally Sensitive Habitat Area

See Sensitive Habitat.

Essential Habitat See Sensitive Habitat.

Feasible

Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social and technological factors, as determined by the County.

Impervious Surface

Any non-permeable surface, including roofs and non-porous paving materials such as asphalt or concrete, but not including directly permeable surfaces such as decks that allow the passage of water or gravel driveways less than five inches thick.

Person

Any individual, firm, association, corporation, partnership, business, trust company, a public agency as specified in Section 53090 of the California Government Code, or the state or a state agency.

Rare and Endangered Species

A plant or animal species designated as rare, endangered or threatened by the State Fish and Game Commission, the United States Department of Interior Fish and Wildlife Service, or the California Native Plant Society.

Resource Dependent Use

Any development or use which requires utilization of a natural resource and must be sited within a sensitive habitat in order to be able to function at all, such as a fish hatchery.

Restoration

Restoring native vegetation, natural drainage, and water quality, including but not limited to replanting native vegetation, removing garbage, and protecting the habitat from the inflow of polluted water or excessive sedimentation.

Sensitive Habitat

An area is defined as a sensitive habitat if it meets one or more of the following criteria:

- (a) Areas of special, biological significance as identified by the State Water Resources Control Board.
- (b) Areas which provide habitat for locally unique biotic species/communities including but not limited to: oak woodlands, coastal scrub, maritime chaparral, native rhododendrons and associated Elkgrass, indigenous Ponderosa Pine, indigenous Monterey Pine, mapped grassland in the Coastal Zone and sand parkland; and special forests including San Andreas Oak Woodlands, indigenous Ponderosa Pine, indigenous Monterey Pine and ancient forests.
- (c) Areas adjacent to essential habitats of rare, endangered or threatened species as defined in (e) and (f) below.
- (d) Areas which provide habitat for species of special concern as listed by the California Department of Fish and Game in the Special Animals list, Natural Diversity Database.
- (e) Areas which provide habitat for rare or endangered species which meet the definition of Section 15380 of the California Environmental Quality Act guidelines.
- (f) Areas which provide habitat for rare, endangered or threatened species as designated by the State Fish and Game Commission, United States Fish and Wildlife Service or California Native Plant Society.
- (g) Nearshore reefs, rocky intertidal areas, seacaves, islets, offshore rocks, kelp beds, marine mammal hauling grounds, sandy beaches, shorebird roosting, resting and nesting areas, cliff nesting areas and marine, wildlife or educational/research reserves.
- (h) Dune plant habitats.
- (i) All lakes, wetlands, estuaries, lagoons, streams and rivers.
- (j) Riparian corridors.

Structure

Anything constructed or erected which requires a location on the ground or in the water, including but not limited to any building, retaining wall, driveway, telephone line, electrical power transmission or distribution line, water line, road or wharf.

Toxic Chemical Substance

- 1. Any chemical used for killing insects, fungi, rodents, etc., including insecticides, acaricides, fungicides, herbicides, rodenticides, and nematocides.
- 2. Any chemical which would be deleterious to a sensitive habitat.

Water Purveyor

Any agency or entity supplying water to five or more connections. (Ord. 3342, 11/23/82; 3442, 8/23/83; 4346, 12/13/94)

16.32.050 GENERAL PROVISIONS

- (a) No toxic chemical substance shall be used in a sensitive habitat in such a way as to have deleterious effects on the habitat unless an emergency has been declared by a federal, state, or county agency, or such use has been deemed necessary by the California Department of Fish and Game to eliminate or reduce a threat to the habitat itself, or a substantial risk to public health will exist if the toxic chemical substance is not used.
- (b) Pursuant to California Administrative Code Section 2452, the Agricultural Commissioner, in reviewing an application to use a restricted material, shall consider the potential effects of the material on a sensitive habitat, and mitigation measures shall be required as necessary to protect the sensitive habitat. No approval shall be issued if adverse impacts cannot be mitigated. (Ord. 3342, 11/23/82; 3442, 8/23/83)

16.32.060 APPROVAL REQUIRED

- (a) Except as provided in Subsection (b) below, no person shall commence any development activity within an area of biotic concern until a biotic approval has been issued unless such activity has been reviewed for biotic concerns concurrently with the review of a development or land-division application pursuant to Chapter 18.10, Level III. (Ord. 3342, 11/23/82; 3442, 8/23/83; 4030, 11/21/89)
- (b) A biotic assessment shall not be required for repair or reconstruction of a structure damaged or destroyed as a result of a natural disaster for which a local emergency has been declared by the Board of Supervisors, when:
 - 1. the structure, after repair or reconstruction, will not exceed the floor area, height or bulk of the damaged or destroyed structure by 10%; and
 - 2. the new structure will be located in substantially the same location. (Ord. 4030, 11/21/89; 4160, 12/10/91)

16.32.070 ASSESSMENTS AND REPORTS REQUIRED

A biotic assessment shall be required for all development activities and applications in areas of biotic concern, as identified on maps on file in the Planning Department or as identified during inspection of the site by Planning Department staff. A biotic report shall be required if the Environmental Coordinator determines on the basis of the biotic assessment that further information is required to ensure protection of the sensitive habitat consistent with General Plan and Local Coastal Program Land Use Plan policies. If the Environmental Coordinator determines that the project will have a significant effect on the environment under the provisions of the Environmental Review Guidelines, the biotic report shall be part of the Environmental Impact Report. (Ord. 3342, 11/23; 3442; 8/23/83)

16.32.080 REPORT PREPARATION AND REVIEW

(a) Submittals Required

When a biotic assessment or biotic report is required, the applicant shall submit an accurate plot plan showing the property lines and the location and type of existing and proposed development and other features such as roads, gullies, and significant vegetation. Any other information deemed necessary by the Planning Director shall be submitted upon request.

(b) Report Preparation

The biotic assessment shall be conducted by the County Biologist. The biotic report shall be prepared by a biologist from a list maintained by the Planning Department, at applicant's expense, and shall be subject to acceptance as specified in this section. All biotic assessments and reports shall conform to county report guidelines established by the Planning Director.

(c) Report Acceptance and Review

All biotic assessments and reports shall be found to conform to county report guidelines by the Environmental Coordinator. When technical issues are complex, the report may be reviewed and found adequate by a biologist retained by the County. All biotic reports shall be referred to the California Department of Fish and Game for review and comment, and shall be available for review by other interested parties.

(d) Report Expiration

A biotic assessment shall be valid for one year and a biotic report shall be valid for five years following acceptance of the assessment or report, except where a change in site conditions, development proposal, technical information, or county policy significantly affects and thus may invalidate the technical data, analysis, conclusions, or recommendations of the report. (Ord. 3342, 11/23/82; 3442, 8/23/83)

16.32.090 APPROVAL CONDITIONS

- (a) Conditions of approval shall be determined by the Environmental Coordinator through the environmental review process. These conditions may be based on the recommendations of the biotic assessment or biotic report and shall become conditions of any subsequent approval issued for the property. Such conditions shall also apply to all development activities engaged in on the property. Any additional measures deemed necessary by the decision-making body shall also become development permit conditions.
- (b) The following conditions shall be applied to all development within any sensitive habitat area:
 - 1. All development shall mitigate significant environmental impacts, as determined by the Environmental Coordinator.
 - 2. Dedication of an open space or conservation easement or an equivalent measure shall be required as necessary to protect the portion of a sensitive habitat which is undisturbed by the proposed development activity or to protect a sensitive habitat on an adjacent parcel.

- 3. Restoration of any area which is a degraded sensitive habitat or has caused or is causing the degradation of a sensitive habitat shall be required, provided that any restoration required shall be commensurate with the scale of the proposed development.
- (c) All development activities in or adjacent to a sensitive habitat area shall conform to the following types of permitted uses, and the following conditions for specific habitats shall become minimum permit conditions unless the approving body pursuant to Chapter 18.10 finds that the development will not affect the habitat based on a recommendation of the Environmental Coordinator following a biotic review pursuant to Section 16.32.070.

A. ENVIRONMENTALLY SENSITIVE HABITAT AREAS

Only resource-dependent-uses shall be allowed within any environmentally sensitive habitat area.

Type of Sensitive Area	Permitted or Discretionary uses	Conditions
1. All Essential Habitats	Nature study & research, hunting, fishing and equestrian trails that have no adverse impacts on the species or habitat; timber harvest as a conditional use.	Preservation of essential habitats shall be required.
2. Kelp Beds	Nature observation, mariculture, scuba diving.	No development shall be allowed which might result in a discharge to the marine environment, whether within or without the sensitive habitat, which might adversely affect this habitat type.
3. Rocky Intertidal Areas	Nature observation, Scientific research, educational instruction, take of marine organisms consistent with Depart- ment of Fish & Game regulations.	
4. Marine Mammal Hauling Grounds	Scientific research.	
5. Shorebird Nesting Areas	Scientific research.	
6. Davenport Pier Rock Cliffs and Rock Outcrops offshore which are Seabird/ Shorebird Resting Areas and Roosting Sites	Scientific research.	
7. Sandy Beaches which are Sea- bird/Shorebird Resting Areas and Roosting Sites	Seasonal beach recreation.	
8. Dunes and Coastal Strand	Scientific research, educational instruction.	Wooden boardwalks for trails through dunes shall be required.

A. ENVIRONMENTALLY SENSITIVE HABITAT AREAS (continued)

Type of Sensitive Area	Permitted or Discretionary uses	Conditions
9. Cliff Nesting Areas	Scientific research.	Fifty-foot buffer from blufftop at or above nesting area shall be required.
10. Coastal Scrub	Blufftop viewing, hiking, nature observation.	Land clear- ing shall be minimized.
11. Wetlands, Estuaries, & Lagoons	Educational instruction, scientific research, managed nature observation, wetland restoration,	One hundred-foot buffer measured from the high water mark shall be required.
	maintenance to existing public utilities, aquaculture, recreational fishing subject to Department of Fish and Game regulations.	Distance between structures and wetland shall be maximized.
12. Rivers and Streams (includes Anadromous Fish Spawning Areas)	Scientific research, educational instruction, aquaculture.	
13. Intermittent Wetlands	Limited grazing, uses within wetlands (above), existing agriculture.	
14. Reservoirs & Ponds	Water storage and diversion, aquaculture.	

Only resource-dependent-uses shall be allowed within any environmentally sensitive habitat area.

No new development shall be allowed adjacent to marshes, streams, and bodies of water if such development would cause adverse impacts on water quality which cannot be mitigated or will not be fully mitigated by the project proponent.

B. AREAS ADJACENT TO THE ESSENTIAL HABITATS OF RARE AND ENDANGERED SPECIES

Type of Habitat	Permitted or Discretionary Uses	Conditions
Santa Cruz Long-Toed Salamander	nature study & research, residential - uses at urban low densities as conditioned, where designated on LCP Land Use Maps, existing agriculture.	Site disturbance before revegetation (i.e. total site coverage) shall not exceed 25% of lot.
		Site disturbance after revegetation (i.e., total site coverage) shall not exceed 15% of lot.
		Impervious surface shall not exceed 10% of lot. The objective of this requirement is to reduce the amount of erosion and siltation impacts; therefore, it does not apply to sites lying outside the drainage basin.
		Conservation easement over undisturbed portion of site shall be dedicated to Department of Fish and Game.

Type of Habitat	Permitted or Discretionary Uses	Conditions
		Step or pole foundations shall
		be required on slopes over 15%.
		Pole foundations shall be
		required on slopes over 30%.
		All curbs and gutters
		shall be rounded.
		Seepage pits shall be required
		where feasible.
		No grading shall be allowed
		between October 15 and April 15.
		Grading and removal of vegeta
		tion shall be minimal and shall
		be restricted to areas where
		it is necessary to maintain
		existing agricultural use and
		for the construction of build-
		ings, driveways, and septic
		systems.
		Grading or filling within drip
		line of 24" or larger diameter
		trees shall be avoided.
		A landscape plan consisting of
		native shrubs and/or trees
		shall be submitted with
		building plans for areas of
		vegetation removal.
		Native trees shall be retained
		to the maximum extent possible.
		Disturbed areas shall be revea-
		etated promptly with native or
		approved species.
		For the nurnoses of calculating
		site disturbance and impervi-
		Ous surface coverage when
		the project is an addition
		to an existing development.
		the existing development and
		the addition shall be consid-
		ered as a new development.
		Except for new foundations
		which may not feasibly be con-
		structed according to the stan-
		dards additions to existing
		developments shall conform
		to other Local Coastal Plan
		performance standards.
Santa Cruz Cypress Groves	Scientific research,	A minimum 50 foot buffer
	educational instruction.	between cypress communities
		and location of development
		shall be required.

B. AREAS ADJACENT TO THE ESSENTIAL HABITATS OF RARE AND ENDANGERED SPECIES (continued)

C. HABITATS OF LOCALLY UNIQUE SPECIES

Type of Habitat	Permitted or Discretionary Uses	Conditions
1. Special Forests (San Andreas, Live Oak, Wood land/Maritime Chaparral. Ponderosa Pine	Forest preserve, nature observation, educational instruction residential uses, meeting performance criteria.	Structures shall be clustered, and/or located near to any existing structure.
Forest, and Indigenous Monterey Pine Forest)		Landscaping plans shall include characteristic native species.
		Applicants shall enter into a "declaration of restric- tion" allowing the develop- ment and utilization of a prescribed burning program or other means to mimic the effects of natural fires.
		For residential development, site disturbance shall not exceed 1/4 acre per unit or 25% of the parcel, whichever is less.
2. Grassland in the Coastal Zone	Nature observation, educational instruction, grazing, viticulture, consistent with Local Coastal Plan policies; residential uses meeting performance criteria.	Structures shall be clustered and located outside the grassland where feasible.

(Ord. 3342, 11/23/82;3442, 8/23/83)

16.32.095 PROJECT DENSITY LIMITATIONS

The following requirements shall apply to density calculations for new building sites created in habitats of locally unique species through minor land divisions, subdivisions, planned development, or planned unit development:

(a) Special Forests

Prohibit land divisions within designated Special Forests unless the area to be divided is removed from the mapped special forests habitat area by General Plan - Local Coastal Program amendment. On parcels with existing mapped special forest areas which contain developable land outside those areas, allow development at the lowest density of the land use designation and require that development be clustered and located outside the habitat areas. Allow one single family dwelling unit per existing parcel of record. Where property owners upgrade special forest areas on their parcels, outside of mapped areas, through resource management activities, the prevailing General Plan densities shall not be reduced.

(b) Grasslands

Prohibit land divisions of native and mixed native grassland habitat mapped in the Coastal Zone unless the area to be divided is removed from the mapped grassland habitat area by General Plan -Local Coastal Program amendment. On parcels with existing mapped native and mixed native grasslands and which contain developable land outside those habitats, allow development at the lowest density of the land use designation and require that

development be clustered and located outside the habitat areas. Allow one single family dwelling unit per existing parcel of record. Where property owners upgrade grasslands on their parcels, outside of mapped areas, through resource management activities, the prevailing General Plan densities shall not be reduced. (Ord. 4346, 12/13/94)

16.32.100 EXCEPTIONS

Exceptions to the provisions of Section 16.32.090 may be approved by the decision-making body.

- (a) In granting an exception, the decision-making body shall make the following findings:
 - 1. That adequate measures will be taken to ensure consistency with the purpose of this chapter to minimize the disturbance of sensitive habitats; and
 - 2. One of the following situations exists:
 - (i) The exception is necessary for restoration of a sensitive habitat; or
 - (ii) It can be demonstrated by biotic assessment, biotic report, or other technical information that the exception is necessary to protect public health, safety, or welfare.
- (b) Notwithstanding the above, the decision-making body may grant an exception for development within the essential habitat of the Santa Cruz Long-Toed Salamander as follows:
 - 1. Upon receiving a development application for an undeveloped parcel within the essential habitat, the County shall notify the California Coastal Commission, the Coastal Conservancy, the California Department of Fish and Game, and the U.S. Fish and Wildlife Service. The County or other agency shall have one year to decide whether acquisition of the parcel is to proceed. If the County and other agencies decide not to acquire the parcel and development potential in the essential habitat has not been otherwise permanently eliminated by resubdivision, easement, or other recorded means, the decision-making body may grant an exception to allow the development to proceed provided that it finds that the proposed development cannot be accommodated on the parcel outside the essential habitat, and that it will be consistent with the standards for the area adjacent to the essential habitat and other LCP policies.
 - 2. The permittee shall provide a cash deposit, Time Certificate of Deposit, or equivalent security, acceptable to the County. This security shall be payable to the County, in an amount not less than \$5000 or greater than \$10,000, to be determined by the County on a case-by-case basis, depending on site-specific circumstances. The purpose of this security shall be to ensure compliance with the development standards for the area adjacent to the essential habitat, and shall not be returned unless and until all required standards and improvements are met. All expenditures by the County for corrective work necessary because of the permittees failure to comply with the provisions of the permit and this Chapter shall be charged against the security deposit. (Ord. 3342, 11/23/82; 3442, 8/23/83)
16.32.105 EXEMPTION

Existing commercial agricultural operations and related activities shall be exempted from the provisions of Section 16.32.060. Any development activity which has received a riparian exception approved according to the provisions of Chapter 16.30 (Riparian Corridors and Wetlands. Protection) may be exempted from the provisions of this chapter if the Planning Director determines that such development activity has received a review, in connection with the granting of the riparian exception, equivalent to the review that would be required by this chapter. (Ord. 3342, 11/23/82; 3442, 8/23/83)

16.32.110 INSPECTION

The Planning Director may cause sufficient inspections to be made of the permit area to assure compliance with the provisions of this Chapter. Upon completion of any inspection, the property owner or lessee shall be given written notice of any violations observed at the time of inspection for correction thereof. (Ord. 3342, 11/23/82; 3442, 8/23/83)

16.32.120 APPEALS

Any person whose interests are adversely affected by any act or determination of the decisionmaking body under the provisions of this chapter may appeal that act or determination to the Planning Commission and subsequently the Board of Supervisors in accordance with Chapter 18.10 of the Santa Cruz County Code. For this purpose, the procedure therein set forth is incorporated herein and made a part of this Chapter. (Ord. 3342, 11/23/82; 3442, .8/23/83)

16.32.130 VIOLATIONS

- (a) It shall be unlawful for any person at any time to do, cause, permit, aid, abet, suffer or furnish equipment or labor for any development activity within an area of biotic concern as defined in Section 16.32.040 unless (1) a development permit has been obtained and is in effect which authorizes such development activity; or (2) the development activity has been reviewed for biotic concerns concurrently with the discretionary review of an approved permit required by Title 13 or Title 14 of the Santa Cruz County Code, within such area; or (3) the activity is exempt from the requirement for a development permit by the provisions of Section 16.32.105 of this Chapter and from the requirements for a coastal permit by the provisions of Chapter 13.20.
- (b) It shall be unlawful for any person to exercise a development permit which authorizes development activity within an area of biotic concern without complying with all of the conditions of such permit.
- (c) It shall be unlawful for any person to use, cause, permit, aid, abet, suffer or furnish equipment or labor to use any toxic chemical substance in a sensitive habitat in such a way as to have a deleterious effect on the habitat unless (1) an emergency has been declared by a federal, state, or county agency, or (2) such use has been deemed necessary by the California Department of Fish and Game to eliminate or reduce a threat to the habitat itself; or (3) a substantial risk to public health will exist if the toxic chemical substance is not used.

- (d) It shall be unlawful for any person to refuse or fail to carry out measures as required by a notice of violation issued by the Planning Director under the provisions of Section 16.32.131 of this Chapter.
- (e) It shall be unlawful for any person to knowingly do, cause, permit, aid, abet or furnish equipment or labor for any work in violation of a stop work notice from and after the date it is posted on the site until the stop work notice is authorized to be removed by the Planning Director. (Ord. 3451, 8/23/83)

16.32.131 NOTIFICATION OF VIOLATION

In the event the Planning Director determines that a violation of this Chapter exists, the Planning Director may notify in writing the owner(s) of the property or other person in control of the property on which the violation exists. Such written notification may require restoration of the site as a means of correcting the violation or other measure to mitigate the violation, and specify a time period for completing such actions. (Ord. 3451, 8/23/83)

16.32.132 STOP WORK NOTICE

If the Planning Director determines that activities are being carried out in violation of this Chapter or an approved development permit which authorizes development activity within an area of biotic concern, the Planning Director may stop all work until corrective measures have been completed. The site shall be posted with a "Stop Work" notice. (Ord. 3451, 8/23/83)

16.32.134 PENALTIES

All violations of this Chapter shall be misdemeanors punishable as provided in Sections 1.08.010-1.08.050 of the Santa Cruz County Code. (Ord. 3451, 8/23/83)

16.32.140 FEES

Fees for biotic assessments, biotic reports, and review of technical reports shall be set by resolution by the Board of Supervisors. (Ord. 3342, 11/23/82; 3442, 8/23/83)

Appendix E

Santa Clara County General Plan Part 2: Countywide Issues And Polices

Resource Conservation Chapter

Santa Clara County Department of Planning and Development December 1994

Habitat & Biodiversity

BACKGROUND

Habitat Types, Significance, and Trends

Major Types and Importance of Habitats

Santa Clara County contains many distinct types of habitat, supporting a variety of plant and animal species, some of which are threatened or endangered by extinction. Predominant among the county's major habitat types are the following, and within each of these major classifications are many more sub-types, each supporting a particular mix of interdependent species:

- the various Bay wetland habitats;
- freshwater streams, or "riparian" areas;
- grassland/savanna habitats; and
- chaparral, mixed woodland, and evergreen forest areas.

Some habitat types are more rich in the diversity of species they support than others. In California and the western U.S. as a whole, riparian areas more so than perhaps any other type of habitat contain the greatest diversity of species, providing not only a critical water supply to many species, but greater density of vegetation for adequate cover, protection, and food sources. Riparian areas are indeed a "mother lode" of species diversity, to borrow a phrase.

Habitats such as riparian areas perform many other important functions, as well. Prominent among these other benefits is soil retention. Vegetation reduces soil erosion and minimizes the related adverse impacts of erosion. If soil erosion is excessive, the regenerative capability of a habitat is impaired. For an area such as Santa Clara County, where steep slopes, landslide potential, and other related geologic hazards are prevalent, erosion control is even more important.

Riparian systems also function to:

- preserve water quality by filtering pollutants from runoff before it enters surface waters;
- minimize sediment buildup in reservoirs;
- preserve stream banks from collapse;
- reduce flows and store flood waters; and
- provide aesthetic and recreational enjoyment.

Therefore, habitat conservation is of critical importance not only for ecological reasons, but also for the role it plays in such matters as protecting water supply resources and investments for urban populations.

The Emerging Emphasis on Biodiversity Preservation

"Biodiversity" is a term used to describe the diversity of earth's plant and animal species. It encompasses the diversity of regions and ecosystems, of individual species, and even of genetic diversity and potential. Preserving habitat and biodiversity is important for many reasons, some being of fundamental importance to our own survival:

- it is integral to maintenance of basic processes such as oxygen-carbon dioxide exchange, oceanic currents, and hydrologic cycles;
- all species are dependent upon genetic diversity in order to adapt to changing conditions and survive;
- science does not know enough about the tremendous variety of species that exist, which ones are being lost, or their significance, in order to understand and predict the cumulative impacts of increasing rates of extinction; as well as
- understanding of the medicinal values of many plant species is steadily increasing.

Adaptation, extinction, and emergence of new life forms are integral aspects of nature and evolution. However, over the last few decades, plant and animal extinctions have been increasing at an accelerating rate, due mostly to the cumulative impacts of human activities upon habitats. Attention has focused largely on such areas as equatorial rainforests, but habitat loss of varying scales is of concern everywhere there are human impacts on habitat (see endnotes).

Attempts to prevent extinction to date have primarily focused on saving individual species most imminently "threatened" or "endangered" with extinction (see Endangered Species Act and Local Implementation). However, in light of the rising rate of extinctions and the limitations of species-by-species approaches, what is needed is an approach that will not only improve the chances of survival for species already in trouble, but one which will also help prevent other species from becoming endangered.

The emerging emphasis on preserving biodiversity attempts to do just that, by focusing upon conservation of habitat areas and functioning ecosystems. Ultimately, this more encompassing strategy should prove more successful overall and more cost-effective than species-by-species rescue and recovery attempts.

In California, it is estimated there are over 270 distinct habitat types. However, some are more protected than others. 95% of all alpine habitats, for example, are deemed secure due to their remote locations; whereas, only 1% of most of the state's richest habitat type, riparian areas, are adequately protected. A major implication for local governments and agencies is the need to develop more effective strategies, policies and protection measures for the resources within their jurisdictions.

Meeting the Challenges to Preserving Habitat and Biodiversity

Major Threats and Challenges

The major threats to habitat and biodiversity in Santa Clara County and the region are the result of both natural and human causes, including:

- degradation of habitat quality or "integrity," from natural factors, such as drought, or from human activity;
- wholesale loss due to urbanization or development activities, and in some cases due to natural causes; and
- fragmentation of habitat areas.

"Threatened and Endangered Species in Santa Clara County, 1992"

Animal Species

American Peregrine falcon Southern Bald Eagle Californian black rail (bird) California brown pelican California clapper rail (bird) Bank swallow California least tern Least Bell's vireo (bird) Bay checkerspot butterfly Salt marsh harvest mouse San Joaquin kit fox

Status

Status

Endangered (US & CA) Endangered (US & CA) Threatened (CA) Endangered (US & CA) Endangered (US & CA) Threatened (CA) Endangered (US & CA) Endangered (US & CA) Threatened (US) Endangered (US & CA) Endangered (US & CA)

Plant Species

Coyote ceanothusProposed Endangered (US)S.C. Valley dudleyaProposed Endangered (US)Hoover's button celeryProposed Endangered (US)Mann dwarf flaxProposed Threatened (US)Metcalf Cyn, jewelflowerProposed Endangered (US)

Other factors of lesser impact include:

- the particular vulnerability of some species to various impacts compared to the adaptability of others; and
- introduction of unnaturally occurring, or "exotic" species which upsets the balance of nature.

Strategies at the State and Regional Level

On the national, state and regional level, the most pragmatic approach to protecting habitat and biodiversity involves preserving the largest possible areas of habitat and intact natural communities. Secondly, there is a need to provide increased protection to the types of habitat which are either under-represented or not currently found within parks and preserves. To this and related ends, various California agencies involved with habitat and endangered species have adopted "The Agreement on Biological Diversity," an official memorandum of understanding (MOU) between these agencies and departments which establishes preservation of biodiversity as a "preeminent goal in their protection and management policies."

One example of multi-jurisdictional efforts to achieve biodiversity preservation on a regional scale is the state's Natural Communities Conservation Planning Program (NCCPP), which initially focused upon preserving natural areas of coastal sage scrub in portions of San Diego, Orange, Riverside, Los Angeles, and San Bernadino Counties. The planning area involved covers approximately 6,000 acres, and the goal of the program for this area is twofold, (1) to preserve native habitat for many threatened and endangered species indigenous to the region through the designation of multi-species reserves, and (2) not to preclude compatible and appropriate land use and development.

Although still under development, the program is gaining national recognition for involving numerous regulatory and land management jurisdictions (State, Federal, and local), as well as conservation groups and private landowners to develop a coherent program of conservation planning from what otherwise would have been a highly fragmented, divisive situation. A number of other similar regional endeavors are also under development around the state of California.

Finally, federal, state, and regional government agencies are requiring more than ever before that local governments and departments participate in rigorously enforcing laws and regulations

to preserve habitat. These requirements will likely increase over time rather than diminish, as efforts are increased at the state and federal level, also.

[See "Endangered Species Acts and Local Implementation"]

The Future of Habitat Management in Santa Clara County

In Santa Clara County, habitat types and species which are most threatened include riparian areas, oak and grassland savannas, and baylands, to mention a few. Serpentine soils and associated habitat also figure prominently in local and regional preservation efforts. These habitats are the bases of survival for most of the species of plants and animals now listed or proposed for listing as threatened or endangered with extinction in Santa Clara County.

Many more species will be listed or proposed for listing during 1993 and 1994 as a result of judicial rulings. At least four more plant species are among those identified for listing in Santa Clara County. All four depend upon serpentine soils. [For more complete inventories, refer to the Rural Unincorporated Area Issues & Policies portion of the General Plan, or to the EIR].

Many of these species are found in locations designated by the state as "Significant Natural Areas," (SNAs) areas characterized by the existence of extremely rare species, groups or ensembles of species, high diversity of species, or which represent the best known example of a type of natural community. Twenty-eight (28) SNAs are currenfly identified by the California Dept. of Fish and Game (CDFG) within Santa Clara County, but not all of the County, much less the state, has been studied.

As more information is compiled from sources such as the Native Plant Society, environmental assessments of proposed development, and other sources, the inventory of SNAs will be updated by the state. [Refer to the Rural Unincorporated Area Issues & Policies portion of the General Plan for the full list of SNAs].

Efforts to conserve habitat on a countywide (sub-regional) and regional basis cannot necessarily cope with all types of threats and challenges, much less address the entire scale of biodiversity, including ecologies, species and genetic diversity. Nonetheless, localities will benefit from a systematic, unified approach that consists of several key strategies, outlined below.

Endangered Species Act and Local Implementation

The Federal Endangered Species Act was passed in 1973 and has since been amended and reauthorized at various times. Its primary purposes are to conserve ecosystems on which endangered species depend and to provide a program for the conservation of each such endangered or threatened species. The California Endangered Species Act (CESA) was passed in 1984 to provide the state Dept. of Fish and Game the authority to review projects for impacts upon species listed by the California law. It augments federal law with more stringent requirements and standards. Lists of threatened and endangered species are updated periodically.

Jurisdictions, agencies and individuals are affected by these Acts if listed species occur on a property proposed for a development project. Projects which could adversely impact such species must either (a) be modified to avoid any "taking" of a species by harming it or its habitat, or (b) obtain state and federal permits to allow the project and any "incidental take" deemed unavoidable. Violations of either law may result in fines and imprisonment.

The permits involved may be issued pursuant to the development of a "Habitat Conservation Plan" (HCP) for the project area. Such plans may be specific to an individual property or to a larger area. It should describe the area and the boundaries of the HCP, the species in question, mitigation and monitoring aspects, and funding necessary to implement the plan.

Both state and federal agencies involved with habitat preservation have made a more concerted effort in recent years to require local governments to more rigorously enforce the provisions of these laws. Local governments may do so in two basic ways: (1) ensuring governmental agencies and individuals do not violate the provisions of the Acts by providing adequate project review; and (2) developing Habitat Conservation Plans on a sub-regional and regional scale to address habitat preservation needs. These plans are developed with the involvement of lead federal and state agencies.

[For more information concerning implementation of the Endangered Species Acts as specifically related to rural areas, refer to the Rural Unincorporated Area Issues & Policies section of the General Plan].

STRATEGIES, POLICIES, AND IMPLEMENTATION

Habitat and biodiversity for Santa Clara County can be maintained and enhanced through the following set of strategies:

Strategy #1: Improve Current Knowledge and Awareness of Habitats and Natural Areas; Strategy #2: Protect the Biological Integrity of Critical Habitat Areas; Strategy #3: Encourage Habitat Restoration; and Strategy #4: Evaluate Effectiveness of Environmental Mitigations.

The emerging statewide consensus for growth management reflects among other things a balancing of two critical needs, the need to designate areas of sufficient development potential to accommodate urban population and areas of critical resource value which must be provided long term if not permanent protection. The current jointly adopted growth management strategy of the cities and County of Santa Clara is consistent with that emerging statewide consensus, and the strategies for preserving habitat and biodiversity further build upon that basis.

There is significant concern that the next 20-25 years will be crucial if California and the nation are to adequately preserve remaining habitat and biodiversity, rather than having to rely on restoration measures. If we are truly at such a turning point, implementing the strategies and policies most appropriate at the local and regional level will not only make a major contribution to efforts at the state and national level, but will be more cost-effective and enhance overall quality of life.

Policies and Implementation

C-RC 27

Habitat types and biodiversity within Santa Clara County and the region should be maintained and enhanced for their ecological, functional, aesthetic, and recreational importance.

C-RC 28

The general approach to preserving and enhancing habitat and biodiversity countywide should include the following strategies:

- 1 Improve current knowledge and awareness of habitats and natural areas;
- 2 Protect the biological integrity of critical habitat areas;
- 3 Encourage habitat restoration; and
- 4 Evaluate the effectiveness of environmental mitigations.

Strategy #1: Improve Current Knowledge and Awareness of Habitats and Natural Areas Strategy 1 recognizes the need for better general knowledge of habitat types and their distribution. Furthermore, even if perfect knowledge were available of the types and locations of habitats, there is much we don't know about the interactions and natural processes within habitats. Habitats and natural communities are more than the sum of their individual member species, nor are they static. Fuller understanding of key relationships is needed to ensure an adequate basis for planning.

Policies and Implementation

C-RC 29

Multi-jurisdictional coordination necessary to adequately identify, inventory, and map habitat types should be achieved at the local, regional, state, and federal levels.

Implementation Recommendations

RC(i)9

Develop and maintain a regional database/inventory and mapping program of habitat types and biodiversity which can be shared among local, regional, state and federal agencies, as well as local community organizations (e.g. Natural Diversity Data Base, Lands and Natural Areas Program, CDFG).

Strategy #2: Protect the Biological Integrity of Critical Habitat Areas

On the countywide level, the growth management strategy of the cities and County figures prominently in preserving the integrity of habitats by differentiating lands intended for resource conservation from lands suitable and intended for urbanization. Current joint urban development policies mandate that critical resource areas should be excluded from cities' Urban Service Areas, helping to delineate urban from non-urban areas oriented to resources conservation.

The latter areas are often referred to generally as "resource conservation areas," and the rationale for excluding them from cities' Urban Service Areas also includes:

- avoidance of prevalent natural hazards,
- limited accessibility,
- steepness of terrain, and
- · limited feasibility of providing adequate levels of urban services, among other factors.

If current Urban Service Area policies were augmented by development and adoption of long term urban growth boundaries (UGB), areas not included within the UGB would be provided an additional measure of protection. Therefore, at the countywide, or multi-jurisdictional level, preservation of habitat integrity could be furthered by adoption and implementation of the UGB concepts. However, there are additional aspects to habitat preservation which should be addressed, on both the countywide level and as related specifically to rural unincorporated land use policy.

Natural areas and communities of regional and state significance may be identified and designated for their uniqueness or the diversity of threatened or endangered species dependent upon these areas. The geographic extent of such areas may span more than one jurisdiction. An example is the serpentine soils habitat that is found through much of the eastern Diablo Range and foothills. For such areas, Regional Habitat Conservation Plans, or RHCPs, may help conserve habitats and ensure consistency between jurisdictions which have regulatory authority over these habitat areas. Types and intensities of various land uses within areas covered by habitat conservation plans should not be allowed to degrade the integrity of wildlife habitat and vegetation.

Recognizing that large scale preserves are not always possible, and that many areas of habitat may already be fragmented, another aspect of protecting the integrity of critical habitat involves preserving linkages between habitat areas. Such linkages, or "corridors" provide the effect of having larger intact preserves by permitting travel and interaction of species between non-contiguous areas. They also reduce the isolation of small populations of a species threatened with local extinction. Wildlife migration and movement patterns, the particular types of vegetation and habitat in a given area, and the type of land use and development that is permitted all factor in determining the location and type of linkages that are appropriate. In Santa Clara County, further

study of the usefulness of preserving wildlife factors, corridors or linkages between protected areas would be most useful.

[Note: Refer to the Rural Unincorporated Area Issues & Policies part of the General Plan for further elaboration and more detailed policies].

Policies and Implementation

C-RC 30

Habitat and other resource areas not suitable or intended for urbanization should be excluded from urbanization, and non-urban development which occurs within resource conservation areas should minimize impacts upon habitat and biodiversity

C-RC 31

Areas of habitat richest in biodiversity and necessary for preserving threatened or endangered species should be formally designated to receive greatest priority for preservation, including baylands and riparian areas, serpentine areas, and other habitat types of major significance.

C-RC 32

Land uses permitted in resource conservation areas should not be allowed to degrade the integrity of natural habitat.

C-RC 33

Linkages and corridors between habitat areas should be provided to allow for migration and otherwise compensate for the effects of habitat fragmentation.

Implementation Recommendations

C-RC(i)10

Augment existing countywide growth management (Urban Development Policy) by delineation and adoption of long term urban growth boundaries (UGBs) to more clearly differentiate resource conservation areas from lands intended for urbanization.

C-RC(i)11

Develop, as resources permit, "Regional Habitat Conservation Plans" (RHCPs) through joint effort of the County, cities, U.S. Dept. of Fish and Wildlife, and the state Dept. of Fish and Game.

C-RC(i)12

Develop in conjunction with "Regional Habitat Conservation Plans" educational programs and or materials for the public and landowners regarding sensitive resources within their area and available best management practices appropriate for preserving biotic resources.

C-RC(i)13

Acquisition of areas of significance through the County's Open Space Authority, MROSD, County Parks, National Wildlife Refuge, and other agencies and non-profit organizations for permanent preservation

C-RC(i)14

Evaluate inventories of natural areas and habitat types to determine the need for linkages of various types, given the land use and development patterns, and other factors.

Strategy #3: Encourage Habitat Restoration

Strategy 3 promotes restoration of ecologies and habitats which have been degraded to the point that regeneration must be assisted. Although restoration efforts have much to recommend them,

such measures should be viewed as the option of last resort in comparison to the more cost effective, preventive strategies. Flood control projects that incorporate natural flood plain features, wetlands for augmenting waste water purification, and reforestation are three examples of restoration endeavors which have been found to be effective and cost-efficient, combining good resource and financial management objectives.

Policies and Implementation

C-RC 34

Restoration of habitats should be encouraged and utilized where feasible, especially in cases where habitat preservation and flood control, water quality, or other objectives can be successfully combined.

Implementation Recommendations

C-RC(i)15

Explore opportunities for restoration of habitat, particularly with respect to wetland, riparian, and other habitat types rich in diversity or needed to protect threatened and endangered species. {Implementors: Cities, County, RWQCB, state agencies}

Strategy #4: Evaluate Effectiveness of Environmental Mitigations

Over the long term, many efforts to preserve habitat and biodiversity will prove successful, whereas others may not. Monitoring of changing conditions and the effectiveness of mitigations required of development projects will provide the information needed to improve upon existing strategies and programs. Although resources can be scarce for such needed follow-up studies, over time, evidence of the effectiveness of some mitigations and programs, such as riparian restoration will accumulate and instruct future habitat conservation efforts.

Policies and Implementation

C-RC 35

The status of various threatened and endangered species and the effectiveness of strategies and programs to preserve biodiversity should be monitored and evaluated on an ongoing basis.

C-RC 36

Specific project mitigations for the purpose of preserving habitat should be monitored for a period of time to assure the likelihood of their effectiveness.

(Note: for more detailed policies and implementation recommendations regarding habitat and biodiversity preservation applicable specifically to rural areas, refer to the Rural Unincorporated Areas Issues & Policies part of the General Plan)

ENDNOTES: SOURCES USED

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- Hudson, Wendy E., ed. *Landscape Linkages and Biodiversity*. Island Press, Washington, D.C., 1991.
- State of California, The Resources Agency. *Memorandum of Understanding: California's Coordinated Regional Strategy To Conserve Biological Diversity.* September 19, 1991.

- Jones & Stokes Associates, Inc. *Sliding Towards Extinction: The State of California's Natural Heritage*. A report prepared at the request of the California Senate Committee on Natural Resources and Wildlife. 1987.
- Jensen, Deborah; Tom, Margaret; and Harte, John. *In Our Own Hands: A Strategy for Conserving Biological Diversity in California*. California Policy Seminar (CPS) Brief, Vol. 2, No. 5, April, 1990.

Appendix F

San Rafael Municipal Code Title 14 Zoning Division III Overlay District Regulations

Division III Overlay District Regulations Chapter 14.13 Wetland Overlay District (-WO)

City of San Rafael September 21, 1992

*Used by permission from the City of San Rafael

14.13.010 Specific Purposes
14.13.020 Criteria for Establishment of Wetland Overlay District for Identified and Unidentified Wetlands
14.13.030 Land Use Regulations (-WO)
14.13.040 Property Development Regulations (-WO)
14.13.050 Application for a Use Permit
14.13.060 Conditions of Approval
14.13.070 Findings
14.13.080 Wetland Restoration and Creation
14.13.090 Wetland Management Plan
14.13.100 Enforcement

14.13.010 SPECIFIC PURPOSES

Wetlands are indispensable and fragile natural resources subject to flooding, erosion, soil-bearing capacity limitations and other hazards. Destruction of or damage to wetlands threatens public safety and the general welfare. In addition to the general purposes listed in Section 14.01.030 and the purposes of the underlying zoning district, the purposes of the Wetland Overlay District include the following:

- A. To preserve and enhance the remaining wetlands in San Rafael by encouraging their use only for purposes compatible with their natural functions and environmental benefits;
- B. To prohibit in wetlands and discourage at adjacent upland sites those development activities that may adversely affect wetlands;
- C. To design development to avoid or minimize adverse impacts on wetland habitat;
- D. To encourage restoration of wetland sites;
- E. To prevent loss of life, property damage, and other losses and risks associated with flooding by providing floodwater passage for stormwater runoff and floodwaters that coincide with high tides;
- F. To protect property values by preventing damage from erosion from storms and high tides;
- G. To contribute to improved water quality by preventing or reducing increases in pollution caused by any means;
- H. To protect and enhance wildlife habitat, including that of rare, threatened and endangered plant and animal species;
- I. To provide sites for education and scientific research;
- J. To provide opportunities for recreational activities compatible with wetland habitat. (Ord. 1625 § 1 (part), 1992).

14.13.020 CRITERIA FOR ESTABLISHMENT OF WETLAND OVERLAY DISTRICT FOR IDENTIFIED AND UNIDENTIFIED WETLANDS

These regulations shall apply to all lots which have wetlands located within the City of San Rafael. The Wetland Overlay District on the Zoning Map is placed on those lots which have wetlands which have been identified. A list of lots with wetlands is available in the Planning Department.

Small wetlands not shown in the Wetland Overlay District are presumed to exist in the city, are protected under all of the terms and provisions of this Chapter, and shall be rezoned when they are identified. Submerged and tidelands lots are within the Water District, which requires compliance with the requirements of the Wetland Overlay District, except that such lots need not be rezoned to the Wetland Overlay District. (Ord. 1625 § 1 (part), 1992)

14.13.030 LAND USE REGULATIONS (-WO)

P: Permitted by right; C: Conditional Use Permit; Blank: Not allowed.

TABLE 14.13.030

Type of Land Use	WO	Additional Use Regulations
Underlying Zoning District Uses	С	(A), (B), (C), (D)
Open Space/Parks/Recreation		
Agriculture, cultivation of crops	С	
Open space, private		
Uses allowed in a public open space	С	(A), (B), (C), (D)
Uses allowed in a private covenant	С	(A), (B), (C), (D)
Open space, public		
Animal grazing	Р*	*As permitted by the Open Space Management Plan and/or Park Plan conforming with the wetland use regulations. If a plan has not been adopted, then use regulations (A), (B), (C) and (D) apply with a use permit.
Animal husbandry	P*	
Horse keeping	P*	
Riding stables	P*	
Picnic areas	P*	
Trails	P*	
Public parks, playgrounds and recreation facilities	P*	
Private concessions in public parks	P*	
Recreation facilities, private (indoors and outdoors)	С	(A), (B), (C), (D)
Wildlife preserves or sanctuaries	С	(A), (B), (C), (D)
Public/Quasi-Public Uses		
Public facilities		
Public and utility facilities (pump stations, utility substations, storm drainage, ponds, water tanks, transmission facilities)	Р*	
Public improvements (bridges, roads and levees)	P*	
Sewage or water treatment facilities, including wastewater ponds and irrigation areas	P*	
Schools		
Parochial, private	С	(A), (B), (C), (D)
Public	С	(A), (B), (C), (D)

- (A) In wetlands, the only uses allowed are the construction and maintenance of water-related structures such as piers, docks, walkways, observation decks and shelters, fences, wildlife management shelters, stormwater pumps and bridges.
- (B) Provided that any and all necessary permits or approvals required by local, State or Federal law shall be obtained.
- (C) Uses in, or near, wetland areas, shall be controlled or designed to have minimal adverse impact on wetland habitat.
- (D) Recreation/scientific activities in or near wetlands should be low intensity uses, such as bird watching, fishing, nature photography and study, wildlife observation, and scientific research and education. (Ord. 1625 § 1 (part), 1992)

14.13.040 PROPERTY DEVELOPMENT REGULATIONS (-WO)

Development standards shall be those of the underlying zoning district with which a Wetland Overlay District is combined, provided that the following requirements shall be in addition and shall govern where conflicts arise.

- A. **Structures in Wetlands.** Any structures allowed in wetland areas (see Section 14.13.030(A)) must minimize adverse impacts on wetlands through construction on pilings to allow unobstructed flow of water, preserving the natural contour of the wetland and minimizing impairment, alteration, or loss of wetlands.
- B. Wetland Setbacks. The wetland setback shall be measured from the edge of a wetland, as determined consistent with the procedures in Section 14.13.05(A) (Determination of wetland boundaries) to any structure. The setback from a creek or drainageway wetland, or from the San Rafael Canal, shall be established consistent with the provisions of Section 14.16.080 (Creeks and other watercourses). For wetlands which are neither creeks nor drainageways, the wetland setback shall be a minimum of fifty feet (50'). A wetland setback up to one hundred feet (100') may be required on lots larger than two (2) acres in size, as determined through development review. Exception: An exception to the wetland setback may be granted if the Planning Commission makes the finding that:
 - 1. The proposed setback adequately protects the value of the wetland habitat to the satisfaction of the City after review by the appropriate public wildlife agencies and the public; or,
 - 2. The strict application of the setback requirement would substantially interfere with economically viable use of the property.
- C. **Buffer Areas.** Within wetland setback areas, appropriate measures, such as fencing, landscaping, setbacks for roads and parking lots, and natural habitat areas are required in the wetland setback to minimize adverse impacts on wetlands and wetland habitat.
- D. Landscaping. Landscaping which is non-invasive to wetland habitat shall be used in required wetland setbacks. Additionally, vegetation which enhances wetland habitat values and the use of native plants indigenous to the area is encouraged.
- E. **Erosion and Sedimentation Control.** During construction, every precaution shall be taken to prevent the disruption of adjacent wetlands. The Planning Department shall require

best-management practices to minimize siltation, sedimentation and erosion, subject to approval by the Department of Public Works. To ensure that sediment remains on the site and is not transported into wetlands, erosion and sediment controls shall be left in place until the site is stabilized with permanent vegetation.

- F. **Stormwater Runoff.** Stormwater runoff systems shall be designed to minimize the increase in volume of stormwater runoff to a wetland from a development over the existing volume of runoff, as well as ensure that stormwater runoff is substantially free of debris, pollutants and silt. Stormwater runoff management proposals shall be submitted and are subject to approval by the Planning Department and the Department of Public Works.
- G. Fill. Loss of wetlands due to filling shall be strictly avoided. Any request for a use permit for fill must demonstrate that the proposed fill cannot be avoided by a reduction in the size, scope, configuration or density of the development, or by changing the design of the development in a way that would avoid or result in fewer adverse effects on the wetland. If fill is unavoidable, the Planning Commission may approve a use permit for fill, provided that there shall be a minimum of two (2) acres of wetlands created or restored, on-site or off-site, for every acre of wetland lost, consistent with the provisions of Section 14.13.080(C) (Required wetland restoration or creation) and Section 14.13.070 (Findings.) Exception: An exception to the fill regulations may be granted if the Planning Commission makes the finding that:
 - 1. The strict application of the regulations prohibiting fill would substantially interfere with economically viable use of the property; or,
 - 2. The wetland is isolated and an acre or less in size, and there is no net loss in quantity or quality of wetlands.
- H. **Incentives for Wetland Creation.** To encourage the creation of new wetland areas, an exception to the property development regulations of the underlying zoning district pertaining to setbacks, height, landscaping, and usable outdoor area may be granted, consistent with Section 14.13.080(A) (Incentives for wetland creation.)
- I. Wetland Vegetation. Removal of wetland vegetation or changing of drainage characteristics by private parties which adversely affects wetlands shall be avoided and requires a Use Permit (see Section 14.13.070, Findings). (Ord. 1625 § 1 (part), 1992)

14.13.050 APPLICATION FOR A USE PERMIT

- A. **Determination of Wetland Boundaries.** The specific boundaries of a wetland shall be determined by one (1) of the following methods:
 - 1. The U.S. Army Corps of Engineers will, at the request of the applicant, make a jurisdictional determination delineating wetland boundaries; or,
 - 2. A qualified wetland expert, at the request of the applicant, may identify the wetland boundary in accordance with the procedures specified in the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*, as most recently adopted. The Corps shall verify the accuracy of, and may render adjustments to, the boundary delineation. The wetland boundaries shall be those with which the Corps concurs. Corps concurrence shall occur prior to issuance of a building and/or grading permit. Should

there be an adjustment by the Corps to a wetland boundary which affects wetland setbacks or a use permit for fill, a use permit amendment shall be required, consistent with Chapter 22 (Use Permits.)

- 3. For development where no fill of wetlands is proposed, a qualified wetland expert, at the expense of the applicant, may identify the wetland boundary in accordance with the procedures specified in the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands*, as most recently adopted. In lieu of Corps verification of the delineation, the applicant may pay the City for the hiring of an independent, qualified wetlands biologist to verify and, if necessary, modify the wetland boundaries.
- B. Agency/Organization Consultations. The applicant for a use permit is strongly encouraged to consult with the U.S. Army Corps of Engineers, as well as the U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, California Department of Fish and Game, California Coastal Conservancy, California State Lands Commission, San Francisco Bay Conservation and Development Commission, San Francisco Bay Regional Water Quality Control Board, Marin-Sonoma Mosquito Abatement District and any other appropriate agencies or organizations early in the planning process. The application for a use permit should include a record of the persons consulted in each of the appropriate agencies or organizations.
- C. **Required Information.** In addition to the above requirements, the following information shall be submitted by an applicant for a use permit in the Wetland Overlay District.
 - 1. **Project description** with an assessment of impacts of the proposed use and development on wetlands and associated wildlife, including adjacent wetlands and adjacent uplands. For development which proposes a wetland setback less than one hundred feet (100') on a lot larger than two (2) acres in size, and/or a setback from a drainageway, include a description of how the proposed setback adequately protects the value of the wetland habitat. For development which proposes fill in a wetland, include the following:
 - a. An explanation of why the proposed development cannot be accomplished by a reduction in the size, scope, configuration, or density of a development.
 - b. A biological assessment of the current habitat values of any wetlands proposed to be lost including local and regional habitat values.
 - c. Identify mitigation site(s) and how it would be permanently protected.
 - 2. **Project purpose**, stating the general function and objectives of the development, and showing that, if achieved, the proposed avoidance or mitigation measures would result in no net loss of wetlands.
 - 3. Wetland map drawn to scale, delineating the extent of the wetland(s) on the site; indicating the jurisdictional boundaries of the Corps and other public agencies; mapping soil and vegetation types according to the classification system outlined in the *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* as most recently adopted; and, showing water sources with a general characterization of the wildlife habitat.
 - 4. **Site plan** showing the location and dimensions of all existing and proposed structures, roads, and other installations within two hundred feet (200') of the wetland

boundaries, both on-site and off-site; and the relationship of the proposed activity and any potentially affected wetland to the entire site owned by the applicant.

- 5. **Grading and drainage plan** showing elevations of the site and adjacent lands within a minimum of two hundred feet (200') of the wetland boundaries, both on-site and offsite, at one (1) foot contour intervals; water sources; the location and specifications for all proposed filling, grading, and vegetation removal, including the amounts and methods; and drainage patterns. Demonstrate acceptable erosion and sedimentation control, appropriate stormwater runoff management and adequate wildlife habitat protection during the construction period.
- 6. **Construction schedule** of the proposed construction sequence, showing when each stage of the development will be completed, including the total area of soil surface to be disturbed during each stage and estimated starting and completion dates. In no case shall the existing natural vegetation be destroyed, removed or disturbed more than fifteen (15) days prior to initiation of the construction activities.
- D. **Modifications to List of Required Information.** The Planning Director may, prior to determination of completeness date, waive the submission of listed information, or may require additional information when necessary to verify compliance with the provisions of this Chapter, or to evaluate the proposed use. (Ord. 1625 § 1 (part), 1992).

14.13.060 CONDITIONS OF APPROVAL

In approving a use permit, the Planning Commission may impose reasonable conditions. If a use adversely affects existing wetlands, such as altering hydrological conditions, the use permit application may be denied, or mitigation measures may be required. Where fill is proposed, Wetland Restoration or Creation shall be required, accordant with Section 14.13.080(C) (Required wetland Restoration or Creation.) Where applicable, and as a condition of approval prior to issuance of a building permit, the following may be required by the planning department:

- A. Verification of Corps concurrence with the applicant's determination of wetland boundaries; and/or,
- B. A Section 404 or Section 10 permit (or its equivalent successor) from the U.S. Army Corps of Engineers; and/or,
- C. A letter from the California State Department of Fish and Game stating compliance with its Wetlands Policy; and/or,
- D. A Certificate of Conformance With Water Quality Standards issued by the State Water Resources Control Board; and/or,
- E. A permit from the Bay Conservation and Development Commission. (Ord. 1625 § 1 (part) 1992).

14.13.070 FINDINGS

A. **Uses Within a Wetland.** The Planning Commission may approve an application for a use permit for a proposed use within a wetland as allowed in Section 14.13.030 (Land Use

Regulations), if it is found that the proposed use is consistent with the purposes of Section 14.13.010 (Specific purposes) and that the proposed use:

- 1. Is a water-related structure as identified in Section 14.13.030 (Land Use Regulations); and,
- 2. Minimizes impairment to the wetland's functional characteristics, existing contour and wildlife habitat; and,
- 3. Complies with all wetland regulations contained herein; and,
- 4. Cannot be accomplished by a reduction in the size, scope, configuration or density of the development as proposed, or by changing the design of the development in a way that would avoid or result in fewer adverse effects on the wetland.
- B. Uses Outside of a Wetland. The Planning Commission may approve an application for a use permit for a proposed use outside a wetland as allowed in Section 14.13.030 (Land Use Regulations), if it is found that the proposed use is consistent with the purposes of the base district, and:
 - 1. Minimizes impairment to the adjacent wetland's functional characteristics and wildlife habitat; and,
 - 2. Complies with all wetland regulations contained herein. (Ord. 1625 § 1 (part), 1992)

14.13.080 WETLAND RESTORATION AND CREATION

- A. **Incentives for Wetland Creation.** Where a property owner proposes to expand an existing on-site wetland, and where no fill in an existing wetland is proposed, the Planning Commission may grant an exception to the property development standards of the underlying base district. An exception shall not be granted for wetlands created as a condition of approval for fill in a wetland, and is limited to the following site development regulations:
 - 1. **Setbacks.** The minimum setbacks from the lot lines of the underlying zoning district may be decreased where the proposed setback is in character with the surrounding development, and where such decrease will not unreasonably affect abutting sites nor reduce wetland setbacks.
 - 2. **Height.** The maximum allowed building height for a residential structure may be increased to no greater than thirty-six (36) feet where scenic views or solar access on surrounding properties are not affected, and where the proposed height is in character with the surrounding development.
 - 3. **Landscaping.** Wetlands may be included as fulfilling part of the landscaping requirements, except that the requirement for parking lot landscaping shall be met.
 - 4. Usable Outdoor Area. Wetlands may be included as fulfilling part of the usable outdoor area requirements of this Title where the building and landscape design is such that the residents of the building may participate in passive outdoor recreational activities such as bird watching, fishing, and nature photography.

- B. The Planning Commission may approve an exception to the property development standards of the underlying base district, if it finds that:
 - 1. The proposed development is consistent with the intent of the provisions of the underlying zoning district development regulations and with other applicable provisions of this Title;
 - 2. The proposed development adequately protects the value of the wetland habitat; and,
 - 3. There is a net gain in wetland quality and no fill in or damage to existing wetlands on the site.
- C. **Required Wetland Restoration or Creation.** The purpose of this section is to prevent a loss of wetlands by ensuring new wetlands when fill is proposed. Wetland restoration or creation shall be required for fill in a wetland, per Section 14.13.040(G) (Fill). Wetland restoration or creation shall meet the following minimum standards and shall occur pursuant to an approved Wetland Management Plan (Section 14.13.090).
 - 1. **On-site Wetland Restoration or Creation.** The restoration or creation of wetlands shall be of at least equal quality and of a similar type to that of the existing wetlands, and on or adjacent to the site, where possible.
 - 2. Off-Site Wetland Restoration or Creation. Where the applicant has demonstrated to the Planning Commission that restoration or creation on-site or adjacent to the site is infeasible due to technical constraints, such as lot or wetland size or wetland type, or that a wetland of a different type or location is strongly justified based on regional needs or the functional value of the impacted wetland, the Planning Commission may accept or recommend an alternative proposal for restoration or creation of a wetland off-site.
 - 3. Timing of Wetland Restoration or Creation. Restoration or creation of wetlands should be completed prior to construction of the development. Where implementation of a development would adversely affect mitigation efforts, construction activities may be started prior to restoration or creation of wetlands. (Ord. 1625 § 1 (part), 1992)

14.13.090 WETLAND MANAGEMENT PLAN

An applicant for a use permit for fill shall be required to submit a Wetland Management Plan prepared by a qualified wetlands expert. An applicant for a use permit for a conditional use in a wetland, or as part of environmental review under the California Environmental Quality Act may be required to prepare a Wetland Management Plan.

- A. **Required Information.** A Wetland Management Plan shall include any or all of the following items as deemed necessary by the Planning Director:
 - 1. **Goals and objectives**, including a description of the functional relationships sought in the new wetland, such as habitat areas, topography and soil characteristics, water flow patterns and water levels, and upland buffers;
 - 2. Wetland preservation, restoration, and creation techniques and standards, identifying the location and size of wetland areas to be preserved, restored or created, and including:

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- a. Water-quality parameters, water source, water depths, water-control structures, and water-level maintenance practices needed to achieve the necessary ambient water conditions and characteristics;
- b. Planting plans (identifying target wildlife species) specifying plant species, quantities, locations, size, spacing or density; source of plant materials or seeds; timing, season, water, and nutrient requirements for planting; and, plant protection measures;
- c. Site preparation specifications for, if needed, soil amendments, removal of unsuitable fill, and for weed control;
- d. Wetland protection measures for minimizing impacts during grading and construction, and for minimizing disturbances to wildlife habitat;
- e. Mosquito management, demonstrating ecological mosquito control developed in consultation with the Marin-Sonoma Mosquito Abatement District; and,
- f. For wetland creation, identification of disposal area for any dredged material.

3. Implementation and monitoring plan, providing:

- a. Specific criteria for evaluating whether or not the goals of the Wetland Management Plan are being achieved at various stages in the development.
- b. Specifications for irrigation as needed, removal of exotic and nuisance vegetation, and maintenance.
- c. Responsibility for monitoring the hydrology, vegetation and wildlife of the wetland with a specified monitoring time frame (five [5] years recommended for tidal marshes, and ten [10] years recommended for other wetlands).
- d. Provision for correction of design defects in the Plan and any needed plant replacement.
- e. Identification of method(s) used to ensure that the wetland will be protected in perpetuity.
- 4. **Management organization**, demonstrating fiscal, administrative and technical competence of sufficient standing to successfully execute the overall development.
- 5. **Cost estimate**, sufficient to cover the cost of implementing and maintaining the wetland. In addition, bonds ensuring fulfillment of the development may be required.
- B. **Approval of a Wetland Management Plan.** A Wetland Management Plan may be approved, approved with conditions, or disapproved by the Planning Commission, with the Commission's decision appealable to the City Council, upon finding that it is consistent with the purposes of this Chapter. (Ord. 1625 § 1 (part), 1992)

14.13.100 ENFORCEMENT

In the event of illegal fill or similar activity, such as grading, dredging, removal of wetland vegetation by private parties, or changing of drainage characteristics by private parties which adversely impacts a wetland, the City Council shall have the power to order wetland restoration and creation measures for the damaged or destroyed wetland area by the person or agent responsible for the violation, consistent with the fill regulations in Section 14.13.040(G) (Fill). If the responsible person or agent does not complete such measures within a reasonable time following the order, the City may undertake to restore the affected wetland to its prior condition and/or create or restore other wetlands for the purpose of offsetting losses sustained as a result of the violation. Covered expenses include all wetland restoration or creation actions, the Planning Department shall have the power to order the property owner and/or the person or agent responsible for the violation to develop a plan as described in Section 14.13.090 (Wetland Management Plan). (Ord. 1625 § 1 (part), 1992)

Appendix G

Rules and Process for Paying into the Wetland Restoration Trust Fund

County of Sacramento Planning and Community Development Department August 17, 2000

To: Interested County Resident

From: The Sacramento County Planning And Community Development Department Subject: Rules and Process for paying into the Wetland Restoration Trust Fund

BACKGROUND

In May of 1991 the Sacramento County Board of Supervisors adopted a No-Net-Loss of Wetlands Policy (Conservation Element CO-62 and CO-83). As a result the Wetland Restoration Trust Fund (Resolution 91-0858) was implemented to provide financial compensation as mitigation for the loss of wetlands, due to development, not covered under Section 404 of the Federal Clean Water Act. Such losses are typically less than 1/3 of an acre. Compensation for lost wetlands is calculated at \$35,000 per acre, or fraction thereof. Monies paid into the trust fund are used to manage, acquire and/or preserve wetlands elsewhere in Sacramento County.

WHEN MUST I MITIGATE FOR THE LOSS OF WETLANDS UNDER THE COUNTIES NO NET LOSS POLICY?

- If the project affects less than one acre of wetland, and therefore qualifies for a Nationwide General Permit with no federal mitigation or compensation required, or;
- If the project affects one to ten acres of wetland, and thus qualifies for a Nationwide General Permit, however; the mitigation required by the Army Corps of Engineers would allow a net loss in wetland acreage.

Then you must mitigate for the loss of wetlands by either paying into the fund or by conventional mitigation means.

HOW MUCH DO I PAY?

You may pay to the County of Sacramento an amount based on a rate of \$35,000.00 per acre for the unmitigated/uncompensated wetlands.

WETLANDS PERMITING PROCESS

Project Application

The applicant submits a project application to the Planning Department and pays initial fees for planning analysis and for the Department of Environmental Review and Assessment's (DERA) Initial Study. The Planning Department may request additional information on the application through the "884" process. The "884" process provides agencies 30 days in which to notify applicants of the need for more information necessary to complete their application.

The Planning Department prepares a staff report that evaluates the project with regard to the Zoning Code, County General Plan, and other relevant local regulations. The project is then forwarded to DERA for environmental analysis.

Environmental Review

When DERA receives the application they may request additional information from the applicant in a separate "884" process. The CEQA timelines start when DERA deems the application complete.

Wetland status is determined:

- By the applicant on the application;
- By the DERA analyst through field checking and reference to habitat maps, or;
- Through an approved Nationwide or 404 permit, received prior to DERA processing.

If wetlands are present on the project site, then DERA requires the applicant to provide a Corps verified wetlands delineation. The Army Corps of Engineers (Corps) will send a letter verifying the delineation. Note that the Corps also requires a rare endangered species inventory. When fairy Shrimp are involved, the FWS currently prescribes a two year sampling period. Practically speaking most applicants assume Fairy Shrimp are present.

Relationship to the 404 process

The County's environmental analysis and the Corps' 404 permit are independent analyses. Neither DERA nor the Planning Department requires a 404 permit to be in hand prior to CEQA analysis, or for County approval. The timelines are different and might slow the process too much since the 404 permit can take up to 2 years for approval. DERA however, strongly encourages applicants to initiate the 404 permitting process prior to CEQA analysis.

The benefits of having a 404 permit in hand before CEQA analysis are potentially great. First, if the environmental analysis for the 404 permit is available, DERA may use it as part of their analysis. This saves the applicant the cost of a separate wetland mitigation plan. Second, the Corps may require changes to the project during the 404 process. If DERA bases its analysis on an original project design, then parts of the CEQA analysis may be invalid.

Mitigation

If the plan mitigates significant impacts to the satisfaction of DERA, then the project may need only a negative declaration to comply with CEQA. Otherwise, the Board of Supervisors may require compensation as outlined in the mitigation measures proposed by the environmental document and the planning staff report.

Prior to adoption of the current General Plan DERA treated sites of less than one acre as insignificant. The General Plan includes the no-net-loss-policy for all wetlands. Most applicants prefer to mitigate for sites of less than one acre by paying into the County's mitigation fund. Larger sites are usually mitigated both on and off-site through the mitigation plan prepared under CEQA or Federal permitting. Typical compensation required by the Corps is 1:1. The habitat quality is important so the ratio may be greater than 1:1. The presence of listed species complicates the process primarily because of complex interactions between the Corps and U.S. Fish and Wildlife Service.

Appendix H

California Rangeland Trust Standard Agricultural Easement

Draft: July 6, 2000

DEED OF AGRICULTURAL CONSERVATION EASEMENT AND AGREEMENT **CONCERNING EASEMENT RIGHTS**

This Grant Deed of Agricultural Conservation Easement is granted on this _____ day of _____, ___, by _____ ("Grantor"), to the California Rangeland Trust, a California nonprofit corporation ("Grantee"), for the purpose of forever conserving agricultural productivity, maintaining open space created by working landscapes and maintaining the natural balance of the ecosystem of the subject property.

Recitals

- A. Grantor is the sole owner in fee simple of certain real property consisting of approximately ____ acres, located in ______ County, California, and described in "Exhibit A" attached hereto (the "Property"). The Grantor intends to grant a conservation easement over the parcel(s), hereinafter referred to as the "Easement Area" or Easement (described and illustrated on map attached as "Exhibit B"). The Easement Area consists of approximately ______ acres of land, together with any improvements thereon.
- B. Grantee is a "qualified conservation organization" as defined by the Internal Revenue Code and is eligible to hold this Conservation Easement pursuant to Section 815.3 of the California Civil Code. As certified by resolution of its governing body, Grantee accepts the responsibility of monitoring and enforcing the terms of this Conservation Easement and upholding its conservation purposes forever.
- C. The property consists of [general description of property to follow].
- D. The Grantor intends to convey for valuable consideration [make a charitable gift of] the Easement Area interest conveyed by this Conservation Easement to the Grantee for the primary purpose of assuring that the agricultural productivity, open space created by working landscapes and the natural balance of the ecosystem (referred to herein as the "Conservation Values", and more specifically described in Exhibit C attached hereto) will be conserved and maintained forever, and that uses of the land that are inconsistent with these Conservation Values will be prevented or corrected. The parties agree that the current agricultural use of, and improvements to, the Easement Area are consistent with the conservation purposes of this Conservation Easement.
- E. Grantor further intends, as owner of the Easement Area, to convey to Grantee the right to preserve and protect the Conservation Values of the Property in perpetuity.
- F. The conservation purposes of this Conservation Easement are recognized by, and the grant of this Conservation Easement will further the policy purposes of, the following clearly delineated governmental conservation policies:

The Farmland Protection Policy Act, P.L. 97-98, 7 U.S.C. §§4201, et seq., whose purpose is "to minimize the extent to which Federal programs and policies contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and to

assure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, County and private programs and policies to protect farmland"; and Section 815 of the Civil Code of California.

The federal Farmland Protection Program, authorized by P.L. 104-127, 16 U.S.C. 3830, Section 388, whose purpose is to authorize the Secretary of Agriculture to purchase conservation easements or other interests in land with prime, unique, or other productive soil for the purpose of protecting topsoil by limiting non-agricultural uses of the land.

Section 815 of the California Civil Code, which defines perpetual conservation easements.

Division 10.2 of the California Public Resources Code, which creates the California Farmland Conservancy Program.

Section 51220 of the California Government Code which declares a public interest in the preservation of agricultural lands.

The _____ County General Plan, as amended in ____, which includes as one of its goals to protect all viable farmlands designated as prime, of statewide importance, unique, or of local importance from conversion to and encroachment of non-agricultural uses.

Resolution No. _____, approved by the Board of Supervisors of _____ County on _____ which expresses support for the acquisition of an agricultural conservation easement on the Property, and finds that such protection is consistent with the County's General Plan.

- G. All holders of liens or other encumbrances upon, and mineral rights on or beneath the Easement Area, have agreed to subordinate their interests in the Easement Area to this Conservation Easement and to refrain forever from any action that would be inconsistent with its conservation purposes [except any encumbrances specifically agreed to in advance and listed in "Exhibit D"].
- H. The Conservation Values of the Easement Area, its current uses and state of improvement, are described in a "Present Conditions Report" (attached as "Exhibit E"), prepared by the Grantee with the cooperation of the Grantor, consisting of maps, photographs, and other documents, and acknowledged by both to be complete and accurate as of the date of this Conservation Easement. Both Grantor and Grantee have copies of this report. It will be used by the Grantee to assure that any future changes in the use of the Easement Area will be consistent with the terms of this Conservation Easement. This report, however, is not intended to preclude the use of other evidence to establish the present condition of the Easement Area if there is a controversy over its use.
- I. Natural balance of the ecosystem means the balance between the agricultural uses of the Easement Area and the habitat that those uses have created and sustained. Grantee recognizes that this ecosystem exists because of the past stewardship of the landowner and depends on the future good stewardship decisions of the landowner and its successors. Grantor is entrusted with those future management decisions. Maintaining the natural balance of the ecosystem shall not prevent changes in the agricultural uses of the land, including intensification and vegetation management, provided that such changes do not

significantly impair the Conservation Values of this Conservation Easement. Grantee is entrusted with determining that the Conservation Values have been protected.

Deed and Agreement

For the reasons given, and in consideration of their mutual promises and covenants, the Grantor hereby grants and conveys to the Grantee, its successors and assigns, and Grantee hereby accepts, a perpetual "conservation easement" as defined by Section 815.1 of the Conservation Easement Act of 1979 (California Civil Code, Section 815 et seq.), and of the nature and character described in this Conservation Easement.

- 1. **Use of Property.** It is the purpose of this Conservation Easement to preserve the agricultural productivity, open space from working landscapes and the natural balance of the ecosystem of the Easement Area; to provide for continued farming and ranching activities; to engage in future ranching activities, and to preserve the open space character, wildlife habitat, and scenic qualities of the Easement Area (the Conservation Values, as further described in Exhibit C hereto).
- 2. **Prohibited Acts.** Grantor promises that it will not perform, or knowingly allow others to perform, any act or use on or affecting the Easement Area described above in conflict with the covenants set out in this Conservation Easement. Grantor authorizes Grantee to enforce these covenants. However, unless otherwise specified below, nothing in this Conservation Easement shall require the Grantor to take any action to restore the condition of the Easement Area after any Act of God or other event over which Grantor has no control. Grantor understands that nothing in this Conservation Easement relieves it of any obligation or restriction on the use of the Easement Area imposed by law.
- 3. **Construction of Buildings, Facilities and Other Structures.** The construction or reconstruction of any building, facility or structure of any type, except those existing on the date of this Conservation Easement is prohibited except in accordance with paragraphs 3 (a) through (e) and 11 below.
 - (a) *Fences*. Existing fences may be repaired and replaced, and new fences may be built anywhere on the Easement Area for purposes of reasonable and customary management of livestock and wildlife, without permission of the Grantee. All new fences shall be sited and designed to protect the Conservation Values of the Easement Area, including but not limited to wildlife corridors.
 - (b) Agricultural Structures and Improvements. New buildings or other structures and improvements to be used solely for agricultural purposes, including the processing or sale of farm products predominantly grown or raised on the Easement Area, but not including a dwelling, may be built on the Easement Area with the advance written permission of the Grantee. Existing structures on the Easement Area may be repaired, reasonably enlarged and replaced at their current location without further permission of the Grantee, provided that such repair, enlargement, or replacement does not impair the Conservation Values. The Grantor will locate structures so as to not interfere with, impair, or otherwise burden the agricultural productivity and other Conservation Values of the Easement Area.
 - (c) *Residential Dwellings*. All existing single family residential dwellings and appurtenant structures may be repaired, reasonably enlarged and replaced at their current location without further permission of the Grantee. No additional dwellings or appurtenances

may be constructed on the Easement Area except to the extent specifically permitted in this Conservation Easement.

- (d) *Billboards.* No billboards shall be erected on the Easement Area. Signs denoting the names and addresses of residents on the Easement Area, denoting allowable business uses, or describing other permitted activities on the Easement Area, or to post the property to control unauthorized entry or use, are permitted, insofar as such signs do not significantly impair the Conservation Values of the Easement Area.
- (e) *Farm Labor and Tenant Housing*. All existing dwellings or structures used to house farm tenants and employees may be repaired, reasonably enlarged and replaced at their current location without further permission of the Grantee. New single or multifamily dwellings or structures to be used solely to house farm tenants, employees or others engaged in agricultural production of the Easement Area may be built on the Easement Area only with advance written permission by the Grantee. The Grantor shall locate and design such structures so as to not interfere with, impair or otherwise burden the agricultural productivity and other Conservation Values of the Easement Area.
- 4. **Subdivision.** The subdivision of the Easement Area, whether by physical, legal or any other process, is prohibited except with the advance written permission of the Grantee, and as permitted by law. Such permission shall be subject to the Grantee's determination that such subdivision does not interfere with, impair or otherwise burden the Conservation Values of the Easement Area.

Subdivisions of land are permitted under this Conservation Easement. However, any division of ownership will result in an additional burden on the monitoring and enforcement responsibilities of the Grantee. Therefore, the transfer of any parcel in less than its entirety (except for transfers solely to change the method of holding title by the same party or parties) shall require the payment of a transfer fee to the Grantee's monitoring fund. The fee shall be equal to _____ percent (___%) of the fair market value of the property transferred; however, Grantee may reduce the fee at its discretion. Once a parcel has been transferred and a fee paid, no further fee will be required unless the parcel is further subdivided.

[Optional: The Grantor represents and agrees that no additional, separate legal parcels currently exist within the Property that may be recognized by a certificate of compliance pursuant to California Government Code § 66499.35 based on previous patent or deed conveyances, subdivisions, or surveys. Grantor will not apply for or otherwise seek recognition of additional legal parcels with the Property based on certificates of compliance].

- 5. **Development Rights.** Grantor hereby grants to Grantee all development rights, except as specifically reserved to Grantor herein, that are now or hereafter allocated to, implied, reserved or inherent in the Easement Area, and the parties agree that such rights are terminated and extinguished, and may not be used on or transferred to any portion of the Property as it now or hereafter may be bounded and described, or to any other property adjacent or otherwise. The Easement Area may not be used for the purpose of calculating permissible development or lot yield of any other property.
- 6. **Resource Stewardship.** In order to protect the Conservation Values, Grantor is encouraged to conduct all ranching and farming operations in accordance with good management practices that address soil and water conservation, erosion control, pest management, nutrient management, and habitat protection.

7. Mining.

(a) Surface Mining. The mining, extraction, or removal of soil, sand, gravel, oil, natural gas, fuel, or any other mineral substance, using any surface mining method, is prohibited. Notwithstanding the foregoing, soil, sand, gravel or rock may be extracted without further permission from Grantee provided that such extraction is: of material solely for use on the Property, is in conjunction with and in furtherance of activities permitted herein, is accomplished in a manner which is consistent with, does not interfere with, impair or otherwise burden the Conservation Values, and does not disturb more than one acre of the Property. Notwithstanding any other provision here of, this section 7 shall be interpreted in a manner consistent with section 170(h) of the Internal Revenue Code, the Treasury regulations adopted pursuant thereto, and any other successor provisions addressing the same subject.

[WARNING TO GRANTOR: It is unclear whether the extraction or removal of sand and gravel would jeopardize a charitable contribution deduction under Internal Revenue Code section 170. See, e.g., Great Northern Nekoosa Corporation vs. U.S., 1998 Stand. Fed. Tax Rep. (CCH) P 49,811, 97-2 USTC ¶50,591 (1997). Your tax counsel should review this and any other tax issues with you carefully.]

- (b) Other Mining Methods. Mining using methods other than surface mining is allowed where consistent with the applicable provisions of paragraph 11 hereof, and where the mining and all activities therewith will not interfere with, impair or otherwise burden the Conservation Values and will at most have a limited localized impact on the Property.
- 8. **Timber Harvesting.** Trees on the Easement Area may only be cut to control insects and disease, to prevent personal injury and property damage, and for on-site firewood and other domestic uses, including construction and repair of permitted buildings and fences on the Easement Area. [Any timber harvesting or harvesting on the Easement Area for purposes other than those described above shall be conducted as allowed by law, on a Sustainable Yield Basis as that term is defined by the California Department of Forestry, and pursuant to a plan approved as required by law].
- 9. **Paving and Road Construction.** Existing paved roads may be maintained, repaved, and rebuilt on the original alignment at the Grantor's discretion without permission of the Grantee. No portion of the Easement Area presently unpaved shall be paved, nor shall any road for access or other purposes be constructed without the permission of the Grantee. The Grantee shall not give such permission unless the Grantor demonstrates to Grantee that the proposed paving, grading, or covering of the soil, or the location of any such road, will not substantially diminish or impair the Conservation Values. Unpaved roads that presently exist may be relocated as unpaved roads as required by agricultural operations, provided that abandoned roads will be returned to agriculture or a natural condition. For purposes of this paragraph, "pave," "paved," or "paving" shall include covering of the soil surface with concrete, asphalt, gravel, or other material other than soil.
- 10. Agricultural Intensification. Certain changes in agricultural operations, including intensification, within areas identified as open rangeland or farmland, are not considered to impair the Conservation Values. The present conditions report will identify areas of open rangeland (areas with less than ten percent tree canopy cover) and lands which have been farmed within the previous 50 years (farmland). Conversion of farmland to other agricultural uses (including intensification) is permitted. Conversion of ten percent (10%) of the open rangeland to other agricultural uses is permitted, provided that such

conversion does not occur within one hundred (100) feet of any blue line stream. Additional conversion of open rangeland shall require the prior approval of Grantee. Prior to applying for such approval, Grantor shall clearly identify the area proposed to be converted, the location of any blue line streams, vernal pools or other sensitive habitat, and show adequate natural areas for corridors. In the absence of unusual circumstances, no more than fifty percent (50%) of the open rangeland shall ever be converted to other uses.

- 11. **Trash.** The dumping or accumulation of any kind of trash, refuse or derelict equipment on the Easement Area is prohibited. However, this shall not be interpreted to prevent the storage or accumulation of agricultural products and byproducts on the Easement Area, provided that such storage or accumulation is done in accordance with all applicable laws and regulations and in a manner so as to avoid any impairment of the Conservation Values.
- 12. Industrial, Recreational and Non Agricultural Commercial Uses. Industrial, recreational, and non-agricultural commercial uses, including building and facilities associated therewith, are not permitted on the Easement Area without the advance written permission of the Grantee. Grantee shall not give such permission, unless the Grantor demonstrates to Grantee that the proposed use, buildings or facilities will not interfere with, impair or otherwise burden the Conservation Values. Notwithstanding the foregoing, passive recreational uses (such as wildlife viewing, hiking and photography), commercial hunting and fishing uses, as well as noncommercial uses and facilities for the personal use of residents on the Easement Area, are permitted, without advance permission, provided that they do not interfere with, impair or otherwise burden the Conservation Values and are undertaken in a manner consistent with all applicable laws.
- 13. Water Rights. Grantor shall retain, maintain and preserve the right to use all water rights associated with the Easement Area, which Grantor represents are sufficient to sustain present and future agricultural production and Conservation Values on the Easement Area. Grantor shall not transfer, encumber, lease, sell, or otherwise separate such water rights from the Easement Area.

Grantor may transfer, encumber, lease, sell or otherwise separate from the Easement Area those water rights identified in Exhibit F, which water rights Grantor has demonstrated to Grantee's satisfaction are not necessary to sustain present or future agricultural production or Conservation Values on the Easement Area.

- 14. Feedlot. The establishment or maintenance of a commercial feedlot is prohibited. For purposes of this Conservation Easement, "commercial feedlot" is defined as a permanently constructed confined area or facility within which the property is not grazed or cropped annually, and which is not used and maintained for purposes of engaging in the business of feeding livestock. For purposes of this Conservation Easement, a "commercial feedlot" shall not be defined to include the establishment, use or maintenance of corrals, holding pens or pastures. Nothing in this section shall prevent Grantor from confining livestock for discretionary seasonal feeding, or from leasing grazing rights to the easement area for livestock owned by others, and from feeding on a seasonal basis livestock owned by such a lessee.
- 15. **Rights Retained by Grantor.** The Grantor retains the right to perform any act not specifically prohibited or limited by this Conservation Easement. Grantor's present uses and compatible historic uses of the Easement Area for agriculture and ranching are deemed to be permitted activities consistent with the terms of this Conservation Easement. The Grantor retains all ownership rights consistent with the preservation of the Conservation

Values of the Easement Area, including, but not limited to, the right to exclude any member of the public from trespassing on the Easement Area (other than Grantee and its representatives) and the right to sell or otherwise transfer the Easement Area to anyone Grantor chooses. Without limiting the generality of the foregoing, and subject to the specified restrictions of this Conservation Easement, the Grantor expressly reserves the right to hunt on the Easement Area, as permitted by law. Grantor also retains the right to intensify the agricultural use of the Easement Area, provided that such intensification does not diminish or impair the other Conservation Values of the Easement Area.

- 16. **Responsibilities of Grantor and Grantee Not Affected.** Other than as specified herein, this Conservation Easement is not intended to impose any legal or other responsibility on the Grantee, or in any way to affect any existing obligation of the Grantor as owner of the Easement Area. Among other things, this shall apply to:
 - (a) Taxes. Grantor shall pay before delinquency all taxes, assessments, fees and charges of whatever description levied on or assessed against the Easement Area or the property underlying the Easement Area by competent authority. If the Grantee is ever required to pay any taxes or assessments on the Easement Area or underlying property, Grantor will promptly reimburse Grantee for the same.
 - (b) *Upkeep and Maintenance.* Grantor shall continue to be solely responsible for the upkeep and maintenance of the Easement Area. Grantee shall have no obligation for the upkeep or maintenance of the Easement Area.
 - (c) *Liability and Indemnification.* In view of Grantee's negative rights, limited access to the land, and lack of active involvement in the day-to-day management activities on the Easement Area, Grantor shall and hereby agrees to indemnify, protect, defend and hold Grantee, its officers, directors, members, employees, contractors, legal representatives, agents, successors and assigns (collectively "Grantee") harmless from and against all liabilities, costs, losses, orders, liens, penalties, damages, expenses, or causes of action, claims, demands, or judgments, including without limitation reasonable attorney's fees, arising from or in any way connected with injury to or the death of any person, or physical damage to any property, or any other costs or liabilities resulting from any act, omission, condition, or other matter related to or occurring on or about the Easement Area, regardless of cause, unless solely due to the gross negligence or willful misconduct of the Grantee. Grantee shall be named additional insured on all of Grantor's insurance policies related to the Property.
- 17. **Enforcement.** Grantee, its agents and representatives shall have the right to enter with reasonable advance notice onto the Easement Area for purposes of monitoring compliance with the terms of this Conservation Easement. If the Easement Area is not accessible by public roads, Grantor hereby grants Grantee adequate access to the Easement Area for the limited purposes of monitoring and enforcement of the terms of this Conservation Easement. Grantee's monitoring and access activities shall not interfere with normal agricultural operations on the Property.

If the Grantee finds what it believes is a violation, it may at its discretion take appropriate legal action. Except when an ongoing or imminent violation could irreversibly diminish or impair the Conservation Values of the Easement Area, the Grantee shall give the Grantor written notice of the violation and thirty days to correct it before filing any legal action. If Grantee determines that a violation may exist or has occurred, the Grantee may seek an injunction to stop it, temporarily or permanently. Grantee may also seek an injunction requiring the Grantor to restore, or pay for the restoration of, the Easement Area to its

condition prior to the violation, including but not limited to, reasonable attorney's fees. The failure of Grantee to discover a violation or to take immediate action shall not bar it from doing so at a later time. Grantee's remedies described in this paragraph shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity. Furthermore, the provisions of California Civil Code Section 815, et seq., are incorporated herein by this reference and this Conservation Easement is made subject to all of the rights and remedies set forth therein. Grantee shall be entitled to recover its costs incurred in any such enforcement effort, including reasonable attorneys' fees.

With respect to the management of the resources within the easement area, the following shall apply:

Grantee will obtain a present conditions report for each project. This report will correspond closely to the values to be protected by the easement and will contain written descriptions of the property and its resources, aerial and ground-level photos and maps. The report will locate all site improvements and any property features called out in the easement (e.g. riparian zones, viewsheds, forest resources, etc.). In addition to identifying the management measures that contribute to the existing condition of the property, the present conditions report will serve as the basis for all future monitoring and enforcement.

- Stage 1: Except in rare circumstances where the proposed easement area needs immediate improvement, Grantee will encourage Grantor to develop a management plan specific to the property. This will not, however, be a requirement. Grantee believes that, in most cases, the existing stewardship on the ranches it selects for conservation easement projects has supported and enhanced the Conservation Values these ranches provide. The standard employed by Grantee to ensure resource conservation will be that of the "prudent person" rule, which is commonly applied to trustee relationships.
- Stage 2: Where remedial action is needed from the outset, or if, as a result of joint monitoring by Grantee and Grantor, Grantee identifies a problem, Grantor will be required to develop a management plan that addresses soil and water conservation, erosion control, pest management, nutrient management, forage maintenance and habitat protection. The specific elements of the plan will require Grantee's approval and Grantee will make sure that a plan is in place and being utilized each year during it's annual monitoring. Grantor and Grantee will conduct joint qualitative monitoring to ensure that the Conservation Values identified in the easement are being protected. This monitoring will be supported through the baseline conditions report and subsequent reviews, using photographs and narrative descriptions, among other evaluation tools. Monitoring will also consider issues like site potential, weather conditions, unusual economic circumstances, vegetative variety and quality and trends in resource conditions.
- Stage 3: If an identified problem persists, or if Grantor and Grantee disagree regarding the problem or its remedy, a certified rangeland manager or other qualified professional will be brought in to develop a management plan at Grantor's expense. The specific elements of the plan will require Grantee's approval and Grantee will make sure that a plan is in place and being utilized each year during it's annual monitoring. A violation of such a management plan will be considered a violation of the easement.
- Stage 4: If problems continue to persist, Grantee will take legal action to protect the Conservation Values. If egregious resource damage is threatened or occurs, Grantee

has the right to bypass the preceding stages and pursue legal action to prevent further imminent damage to the Conservation Values.

If Grantee believes that immediate action must be taken to address immediate threats to the Conservation Values, a third party (as identified in Stage 3) may be brought in to evaluate resource conditions and suggest remedies.

- 18. Forbearance No Waiver. Forbearance by the Grantee to exercise its rights under this Conservation Easement in the event of any breach of any term of this Conservation Easement by Grantor shall not be construed to be a waiver by the Grantee of such term or of any subsequent breach of the same or any other term of this Conservation Easement. No delay or omission in the exercise of any right or remedy upon any breach by Grantor shall impair such right or remedy or be construed as a waiver.
- 19. Grantee Transfer of Easement. Grantee may transfer the Easement created by this Conservation Easement to (1) any public agency authorized to hold interests in real property as provided in Section 815.3 of the Civil Code of California; or (2) any private nonprofit organization that, at the time of transfer, is a "qualified organization" under Section 170(h) of the U.S. Internal Revenue Code and under Section 815.3(a) of the Civil Code of California. In selecting an appropriate transferee entity, preference will be given to a qualified agency or organization with an agricultural conservation purpose, which has board, staff, or consultants with practical agricultural management experience, and which agency or organization expressly agrees to assume the responsibility imposed on the Grantee by this Conservation Easement. If such agency or organization cannot be found, or is not suitable for any reason, then another qualified agency or organization which expressly agrees to assume the responsibility imposed on the Grantee by this Conservation Easement may be selected. Grantor shall be provided notice of any proposed transfer, information about proposed transferee(s), and opportunity for input. If more than one qualified agency or organization meets the foregoing criteria and are equally capable of effecting the conservation purposes of this Conservation Easement, Grantor may select the organization which shall be the transferee.

If Grantee ever ceases to exist or no longer qualifies under Section 170(h) of the U.S. Internal Revenue Code, or applicable state law, a court of competent jurisdiction shall transfer this Conservation Easement to another qualified organization having substantially similar purposes that agrees to assume the responsibilities imposed by Grantee by this Conservation Easement, provided that Grantor shall be provided notice of and an opportunity to participate in the court proceedings.

- 20. **Grantor Transfer of the Easement Area**. Any time the Easement Area itself or any interest in it is transferred by the Grantor to any third party, the Grantor shall notify the Grantee in writing prior to the transfer of the Easement Area, and the deed of conveyance shall expressly refer to this Conservation Easement. Failure to notify Grantee or include the required reference to this Conservation Easement in the deed shall not affect the continuing validity and enforceability of this Conservation Easement.
- 21. Amendment of Easement. This Conservation Easement may be amended only with the written consent of Grantee and Grantor. Any such amendment shall be consistent with the purposes of this Conservation Easement and shall comply with Section 170(h) of the U.S. Internal Revenue Code, California Civil Code Section 815, et seq., or any regulations promulgated in accordance with that section. Any such amendment shall also be consistent with California law governing conservation easements.

- 22. **No Public Dedication or Public Access.** Nothing contained in this Conservation Easement shall be deemed to be a gift or dedication of any portion of the Easement Area for use by the general public. This instrument does not convey a general right of access to the public.
- 23. Grantor's Title Warranty; No Prior Conservation Easements. Grantor represents and warrants that Grantor has good fee simple title to the Easement Area, free from any and all liens or encumbrances (including without limitation, any deeds of trust or mortgage) [or that any lender has subordinated to this agreement] and hereby promises to defend the same against all claims that may be made against it. Grantor represents and warrants that the Easement Area is not subject to any other conservation easement. Grantor may grant any subsequent conservation easements on the Easement Area provided that such easements do not interfere with or reduce the Conservation Values of this easement. Grantee shall be notified at least ninety days in advance, in writing, of any proposed conservation or other easement for the Easement Area, which notice shall include the proposed easement.

24. Environmental Provisions.

- (a) *Grantor's Environmental Warranty.* Grantor warrants that Grantor has no knowledge of a release or threatened release of hazardous substances or wastes on or that could affect the Easement Area and, as more generally set out in paragraph 15(c) above, agrees to indemnify, defend, protect and hold Grantee, its directors, officers, employees, agents, and contractors, and their heirs, successors, and assigns, harmless from and against all litigation costs, demands, penalties, damages, liabilities, claims or expenses (including reasonable attorney fees) arising from or connected with any release of hazardous waste or violation of federal, state, or local environmental laws as a result of or arising out of the activities of Grantor on the Property or any breach of this Conservation Easement.
- (b) *Grantee Not An Owner, Operator, Or Responsible Party.* Notwithstanding any other provision herein to the contrary, the parties do not intend this Conservation Easement to be construed such that it creates in or gives the Grantee:
 - (1) the obligations or liability of an "owner" or "operator" as those words are defined and used in environmental laws, as defined below, including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 USC § 9601 et seq. and hereinafter "CERCLA");
 - (2) the obligations or liability of a person described in 42 USC 9607(a)(3) or (4);
 - (3) the obligations of a responsible person under any applicable Environmental Laws, as defined below;
 - (4) the right to investigate and remediate any Hazardous Materials, as defined below, associated with the Property; or
 - (5) any control over Grantor's ability to investigate, remove, remediate, or otherwise clean up any Hazardous Materials associated with the Property.
- (c) Assumption of Environmental Liabilities and Indemnification. From and after acquisition of the Easement by Grantee or any of Grantee's successors or assigns (whether by operation of law or otherwise) Grantor and Grantor's successors in interest shall be solely responsible for and agree, jointly and severally: (A) to assume all past, present and future liabilities, whether known and unknown and whether now existing or

hereafter discovered, arising out of and related to environmental conditions of whatsoever kind or nature on, under or affecting the Property, including, without limitation, with respect to the presence or release of Hazardous Substances; and (B) to indemnify, protect and defend with counsel acceptable to Grantee, and hold Grantee and its directors, officers, employees, agents, attorneys, representatives, successors and assigns (the "Indemnified Parties") harmless from and against any claims (including, without limitation, third party claims for personal injury or death, damage to property, or diminution in the value of property), actions, administrative proceedings (including informal proceedings), judgments, damages, punitive damages, penalties, fines, costs, liabilities (including sums paid in settlements of claims), remedial action, compliance requirements, enforcement and clean-up actions of any kind, interest or losses, attorneys' fees (including any fees and expenses incurred in enforcing this indemnity), consultant fees, and expert fees that arise directly or indirectly from or in connection with: (i) the presence, suspected presence or Release of any Hazardous Substance whether into the air, soil, surface water or groundwater of or at the Property; (ii) any violation or alleged violation of Environmental Law affecting the Property, whether occurring prior to or during Grantor's ownership of the Property and whether caused or permitted by Grantor or any person other than Grantor; (iii) any claim or defense by Grantor or any third party that any Indemnified Party is liable as an "owner" or "operator" of the Property under any Environmental Law; or (iv) any breach of the representations and warranties set forth in sections _____ hereof.

(d) Definitions.

- (1) The term "Environmental Law" shall include, but shall not be limited to, each statute named or referred to below, and all rules and regulations there under, and any other local, state and/or federal laws, ordinances, rules, regulations, orders and decrees, whether currently in existence or hereafter enacted, which govern (i) the existence, cleanup and/or remedy of contamination or pollution on property; (ii) the protection of the environment from soil, air or water contamination or pollution, or from spilled, deposited or otherwise emplaced contamination or pollution; (iii) the emission or discharge of Hazardous Substances into the environment; (iv) the control of Hazardous Substances; or (v) the use, generation, transport, treatment, removal or recovery of Hazardous Substances.
- (2) The term "Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing of any Hazardous Substance into the environment (including, without limitation, the continuing migration of Hazardous Substances into, onto or through the soil, surface water, or groundwater, and the abandonment or discarding of barrels, containers, and other receptacles containing any Hazardous Substance), whether caused by, contributed to, permitted by, acquiesced to or known to Grantor or Grantor's predecessors or successors in interest.
- (3) The term "Hazardous Substance" shall mean (a) any oil, flammable substance, explosives, radioactive materials, hazardous wastes or substances, toxic wastes or substances or any other wastes, materials or pollutants which (i) pose a hazard to the Property or to persons on or about the Property or (ii) cause the Property to be in violation of any Environmental Law; (b) asbestos in any form which is or could become friable, urea formaldehyde foam insulation, transformers or other equipment which contain dielectric fluid containing levels of polychlorinated biphenyls, or radon gas; (c) any chemical, material or substance defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous

materials," "extremely hazardous waste," "restricted hazardous waste," or "toxic substances" or words of similar import under any applicable local, state or federal law or under the regulations adopted or publications promulgated pursuant thereto, including the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"), 42 USC section 9601, et seq.; the Resource Conservation and Recovery Act ("RCRA"), 42 USC section 6901, et seq.; the Hazardous Materials Transportation Act, 49 USC section 1801, et seq.; the Federal Water Pollution Control Act, 33 USC section 1251, et seq.; the California Hazardous Waste Control Law ("HWCL"), Cal. Health & Safety section 25100, et seq., Hazardous Substance Account Act ("HSAA"), Cal. Health & Safety Code section 25300, et seq., the Porter-Cologne Water Quality Control Act (the "Porter-Cologne Act"), Cal. Water Code section 13000, et seq., the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65); Title 22 of the California Code of Regulations, Division 4, Chapter 30; (d) any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any governmental authority or may or could pose a hazard to the health and safety of the occupants of the Property or the owners and/or occupants of property adjacent to or surrounding the Property, or any other person coming upon the Property or adjacent property; and (e) any other chemical, materials or substance which may or could pose a hazard to the environment.

- 25. **Interpretation.** This instrument shall be interpreted under the laws of the State of California, resolving any ambiguities and questions of the validity of specific provisions so as to give maximum effect to its conservation purposes. If any provision of this Conservation Easement, or the application thereof to any person or circumstances, is found to be invalid, the remainder of the provisions of this Conservation Easement, or the application of such provisions to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.
- 26. **Captions.** The captions in this Conservation Easement have been inserted solely for convenience of reference and are not a part of this Conservation Easement and shall have no effect upon construction or interpretation.
- 27. **Perpetual Duration.** The easement created by this instrument shall be a servitude running with the land in perpetuity. Every provision of this Conservation Easement that applies to Grantor and Grantee shall also apply to and be binding upon their respective agents, heirs, executors, administrators, successors and assigns.
- 28. **Notices.** Any notice, demand, request, consent, approval or communication that either party desires or is required to give to the other shall be in writing and either served personally or sent by United States certified mail, return receipt requested, addressed as follows or such other address as either party from time to time shall designate by written notice to the other.

To Grantee: California Rangeland Trust 1221 H Street Sacramento, CA 95814-1910 Phone: 916/444-2096

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- 29. **Condemnation.** If all or any part of the Easement Area is taken by exercise of the power of eminent domain, or acquired by purchase in lieu of condemnation, so as to terminate this Easement in whole or in part, Grantors and Grantees shall act jointly to recover the full value of their respective interests in the Property so taken or purchased, and all direct or incidental damages resulting therefrom. All expenses reasonably incurred by Grantors and Grantees in connection with the taking or purchase shall be paid out of the amount recovered. If only a portion of the Easement Area is subject to such exercise of eminent domain, this Conservation Easement shall remain in effect as to all other portions of the Easement Area.
- 30. Extinguishment. If circumstances arise in the future that render the purpose of this easement impossible to accomplish, this easement can only be terminated or extinguished, whether in whole or in part, by judicial proceedings in a court of competent jurisdiction, and the amount of the compensation to which Grantee shall be entitled from any sale, exchange, or involuntary conversion of all or any portion of the Property subsequent to such termination or extinguishment, shall be determined, unless otherwise provided by California law at the time, in accordance with Paragraph 31, Valuation. Grantee shall use any proceeds received under the circumstances described in this paragraph in a manner consistent with its conservation purposes, which are exemplified by this Conservation Easement.
- 31. **Valuation.** This easement constitutes a real property interest immediately vested in Grantee. For the purpose of paragraph 30, Extinguishment, the parties stipulate that this easement has a fair market value determined by multiplying (a) the fair market value of the Property unencumbered by the easement (minus any increase in value attributable to improvements made after the date of this Conservation Easement) by (b) the ratio of the value of the easement at the time of this Conservation Easement to the value of the Property, unencumbered by the easement, at the time of this Conservation Easement.

For purposes of this paragraph, Grantor and Grantee agree that the ratio of the value of the easement to the value of the Property unencumbered by the easement is _____. This ratio shall remain constant.

- 32. Laws Currently in Effect. All references in this Conservation Easement to statutes, regulations and other laws shall be deemed to refer to those statutes, regulations and laws currently in effect, or as amended (or any successor provision then applicable).
- 33. **Present Conditions/Use.** The terms "present conditions" or "present uses" mean the conditions or uses as they exist on the effective date of this Conservation Easement.
- 34. **Recordation.** Grantee shall promptly record this instrument in the official records of ______ County, California, and promptly notify the Grantor through the mailing of a conformed copy of the recorded easement.
- 35. Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Easement Area and supersedes all prior discussions, negotiations, understandings or agreements relating to the Easement Area, all of which are merged herein.
- 36. **Counterparts.** The parties may execute this instrument in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it.
- 37. **Attorneys' Fees.** Should proceedings be brought to enforce or interpret any of the terms of this instrument, the prevailing party in any such proceedings shall be entitled to recover from the non-prevailing party its costs, including reasonable attorneys' fees.
- 38. **Permission.** Whenever permission, consent or approval ("permission") is required pursuant to this Conservation Easement, such permission shall be obtained in advance and in writing signed by the party from whom permission is to be obtained. Whether permission should be granted or denied shall be determined based upon the purposes of this Conservation Easement, and shall not be unreasonably withheld.
- 39. Exhibits. The exhibits attached hereto are incorporated herein by this reference:

Exhibit A: Property Description Exhibit B: Description and Map of Easement Area Exhibit C: Conservation Values Exhibit D: Permitted Encumbrances Exhibit E: Present Conditions Report [Exhibit F:Alienable Water Rights] [Optional]

40. **Effective Date.** This Conservation Easement is effective as of the date of the last signature executed below, or upon recordation in the Official Records of ______ County, California, if any signature is inadvertently undated.

Agreed to and executed by:

GRANTOR

Date

Grantor's Signature Witnessed by Notary Public:

State of:		County of:	
On this	day of	, before m	ie,,
personally	appeared		, personally known to me (or
proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are			
subscribed to the within instrument and acknowledged to me that he/she/they executed the same			
in his/her/t	their authorized c	apacity(ies), and that by his/her/	their signature(s) on the instrument
the person(s), or the entity upon whose behalf the person(s) acted, executed the instrument.			
Witness my	y hand and officia	ıl seal,	

Notary's Signature

GRANTEE

California Rangeland Trust

By:

Steve Sinton, Chairman Board of Directors Date

Appendix I

Contact Information

FEDERAL PROGRAMS

- **Conservation Reserve Program:** Contact the USDA-NRCS California State Office. 430 G Street #4164, Davis, CA 95616-4164. Phone: (530) 792-5600, Fax: (530) 792-5790.
- Wetlands Reserve Program: Administered by the Farm Service Agency (FSA). FSA Califoria Office, 430 G Street #4161, Davis CA 95616-4161. Phone: (530) 792-3520. On the web at *www.fsa.usda.gov/ca/ca.htm*.
- **Partners for Fish and Wildlife:** On the web at partners.fws.gov/index.htm. Phone: (916) 414-6446.
- Wildlife Conservation Board: Administered by the California Department of Fish and Game, 1807 13th St., Suite 103, Sacramento, CA 95814-7117. Phone: (916) 445-8448.

STATE PROGRAMS

- **California Farmland Conservancy Program:** Contact the NRCS California State Headquarters. Phone: (530) 792-5600. On the web at: *www.consrv.ca.gov/dlrp/CFCP/faq.htm*.
- **California Coastal Conservancy:** 1330 Broadway, 11th Floor, Oakland, CA 94612. Phone: (510) 286-1015. On the web at: *ceres.ca.gov/coastalconservancy/index.htm*.
- **California Waterfowl Habitat Program:** Administered by the California Department of Fish and Game, phone: (916) 653-5284, or the California Waterfowl Association, phone: (916) 648-1406.
- **Inland Wetland Conservation Program:** Administered by the Wildlife Conservation Board, 1807 13th St., Suite 103, Sacramento, CA 95814-7117. Phone: (916) 445-1093.
- **California Forest Improvement Program:** Administered by the California Department of Forestry and Fire Protection. Phone: (800) 738-8733.
- Resource Conservation Districts: On the web at: www.openspacecouncil.org.
- San Francisco Bay Joint Venture: The SFBJV is housed at the Coastal Conservancy, 1330 Broadway, 11th Floor, Oakland, CA 94612. Phone: (510) 286-1015. On the web at: *ceres.ca.gov/coastalconservancy/index.htm*.

PRIVATE PROGRAMS

- American Farmland Trust: 260 Russell Boulevard, Suite D, Davis, CA 95616. Phone: (530) 753-1073, Fax: (530) 753-1120. On the web at: *www.farmland.org*.
- **California Nature Conservancy:** 201 Mission Street, 4th Floor, San Francisco, CA 94105. Phone: (415) 777-0487.

California Rangeland Trust: 1221 H St., Sacramento, CA 95814-1910. Phone: (916) 444-2096.

- **California Waterfowl Association:** 4630 Northgate Blvd., Suite 150, Sacramento, CA 95834. Phone: (916) 648-1406, Fax: (916) 648-1665. On the web at: *www.calwaterfowl.org*.
- **The Conservation Fund:** 1823 Eleventh St., Suite 1-B, Sacramento, California 95814. Phone: (916) 498-1479, Fax: 916-498-1481. On the web at: *www.conservationfund.org*.
- **Ducks Unlimited:** Ducks Unlimited Western Regional Office, 3074 Gold Canal Dr., Rancho Cordova, CA 95670. Phone: (916) 363-8257. On the web at: *www.caldu.org*.
- Trout Unlimited: California State Office, 828 San Pablo Ave., Suite 244, Albany, CA 94706. Phone: (510) 528-5390, Fax: (510) 528-7880. On the web at: *www.tu.org*.
- **Trust for Public Land:** 116 New Montgomery St., 3rd Floor, San Francisco, CA 94105. Phone: (415) 495-5660. On the web at: *www.tpl.org*.
- **Conservation Corps or the statewide California Conservation Corps:** Call the National Association of Service and Conservation Corps. Phone: (202) 737-6272. On the web at: *www.nascc.org.*
- **Resource Conservation Districts:** RCDs are located in the same office as the Soil Conservation Service. The regional office for California will direct callers to the local office. Phone: (916) 447-7237.
- **University of California Cooperative Extension Service:** U.C. Extensions are listed under county governments in the telephone directory. Statewide specialists are located at the Berkeley, Davis and Riverside campuses.

FUNDRAISING

- The Foundation Center in San Francisco: 312 Sutter St. #606, San Francisco, CA 94108-4313. Phone: (415)397-0902, Fax: (415) 397-7670.
- The Fundraising School: Indiana University-Purdue University at Indianapolis, 550 West North St., Suite 301, Indianapolis, IN 46202-3162. Phone: (317) 274-7063.
- The Management Center of San Francisco: 870 Market St. #360, San Francisco, CA 94102-3009. Phone: (800)344-6627 ext. 2635. On the web at: *www.opportunitynocs.org*.

ENVIRONMENTAL EDUCATION

Aquatic Outreach Institute: 1327 South 46th St. #155, Richmond, CA, 94804. Phone: (510) 231-5655, Fax: (510) 231-5703. On the web at: *www.oainstitute.org*.

Marine Science Insitute: Phone: (650) 364-2760 ext. 10. On the web at: www.sfbaymsi.org.

River of Words: Phone: (510) 848-1155, or on the web at: row@irn.org.

Save The Bay's Canoes in Sloughs: 1600 Broadway, Suite 300, Oakland, CA 94612. Phone: (510) 452-9261, Fax: (510) 452-9266. On the web at *www.savesfbay.org*.

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- San Francisco Bay National Wildlife Refuge: PO Box 524, Newark, CA 94560. Phone: (408) 262-5513.
- Shorebird Nature Center: 160 University Ave., Berkeley, CA 94710. Phone: (510) 644-8623.

COMMUNITY BASED RESTORATION

- Alameda County Clean Water Program: On the web at: www.co.alameda.ca.us/pwa/watervolref.htm.
- **Audubon Society:** State Office, 555 Audubon Place, Sacramento, CA 95825. Phone: (916) 481-5332, Fax: (916) 481-6228.
- **Golden Gate National Parks Association Crissy Field Restoration:** Crissy Field Volunteer Hotline, Phone: (415) 561-3034 ext. 3445.
- Friends of Sausal Creek: Stuart Richardson, Woodland Restoration Projects Leader, 1738 Excelsior Ave., Oakland, CA 94602. Phone: (510) 864-7175, Fax: (510) 864-7175.
- Izaak Walton League of America: 707 Conservation Lane, Gaithersburg, MD. 20878. Phone: (800) BUG-IWLA. On the web at: *www.iwla.org*.
- Save The Bay: 1600 Broadway, Suite 300, Oakland, CA 94612. Phone: (510) 452-9261, Fax: (510) 452-9266. On the web at: *www.savesfbay.org*.

Appendix J

A Sampler of Funding Sources for Land Conservation and Protection

FEDERAL PROGRAMS

- North American Wetlands Conservation Act (NAWCA): NAWCA provides federal funds specifically to "conserve North American wetland ecosystems and waterfowl and the other migratory birds and fish and wildlife that depend on such habitats." (PL 101-233) Eligible projects include acquisition and restoration of wetlands, among other activities. Proposals are accepted twice a year in April and August and require a 50/50 nonfederal match. A small grants program is also available with a May deadline. Contact: US Fish & Wildlife Service, (703) 358-1711. Website: *http://northamerican.fws.gov/granpro.html*.
- National Coastal Wetlands Conservation Act: Funds generated from excise taxes on sport fishing equipment and boat gasoline taxes are set aside in the Sport Fish and Restoration Account of the Aquatic Resources Fund for the acquisition, restoration, and enhancement of coastal wetlands systems. This program funds only state agencies, i.e. State Coastal Conservancy and Wildlife Conservation Board. Grants are available to coastal states and require either a 25% or 50% match. Contact: Verlyn Ebert, U.S. Fish and Wildlife Service; 911 NE 11th Avenue, Portland, OR 97232-4181, (503) 231-6128. Website: *www.fws.gov/cep/cwgcover.html.*
- Land and Water Conservation Fund (LWCF): LWCF is composed primarily of revenue from outer-continental shelf leases and royalties. Although the authorized level of funding annually is \$900 million, Congress appropriates much less for the acquisition of land for conservation by the U.S. Forest Service, Bureau of Land Management, National Park Service, U.S. Fish and Wildlife Service, and the U.S. Forest Service. Contact your Congressional representative or regional office of any of the federal agencies for more specific information. Website: *www.ahrinfo.org/*.
- **Central Valley Project Improvement Act/Bureau of Reclamation:** A variety of funding programs are available for the acquisition, restoration, and study of wetlands and other water resources in the Central Valley. Contact Chuck Solomon at the Bureau of Reclamation at (916) 978-5052. The Bureau of Reclamation also has a wetlands program with grant funding. Contact Bob Shaffer at (916) 414-6459. Website: *www.mp.usbr.gov/.*

U.S. Department of Agriculture, Natural Resource Conservation Service

Wetlands Reserve Program (WRP): Funds are available through the U.S. Department of Agriculture, Natural Resource Conservation Service for the acquisition of conservation easements on agricultural lands. Both permanent and 30-year easements can be purchased under the WRP, with priority given to projects that maximize wildlife values. Contact: Alan Forkey, Wetlands Biologist, (530) 792-5653 or Anita Brown, State Information Officer (530) 792-5644. Website: *www.wl.fb-net.org/ca.htm*.

Wildlife Habitat Incentive Program (WHIP): WHIP is a voluntary program for private landowners who want to develop or improve fish and wildlife habitat on their property. The Natural Resources Conservation Service (NRCS) administers the program, providing technical assistance and up to 75% of the cost of the project. NRCS also

offers watershed planning services that may lead to the commitment of financial resources for project implementation. Contact your local NRCS for more information. Website: *www.nrcs.usda.gov/NRCSProg.html.*

- Army Corps of Engineers Sections 1135 & 206: Section 1135 funds are available for the restoration and acquisition of wetlands previously affected by an Army Corps project. For more information, contact the Army Corps of Engineers at (415) 977-8702. Section 206 funds provide for the restoration of aquatic ecosystem structure and function. Projects usually include the manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. No relationship to an existing Corps project is required. Contact Guy Brown at (916) 557-5270.
- **Environmental Protection Agency:** Various grants in the range of \$25,000-\$350,000 are available through the EPA for watershed planning, restoration and stewardship studies for state, tribal and local governments. Grants are also available for Environmental Justice Issues, Pollution Prevention, Brownfields Assessment, Community/Economic Development and Environmental Education. Their public information line is (415) 744-1500 and may be reached at Environmental Protection Agency, Region 9, 75 Hawthorne Street, San Francisco, CA 94105. Website: *www.epa.gov/epahome/grants.htm.*
- **Watershed Assistance Grants (WAG):** The River Network allocates funding to build capacity of existing or new watershed partnerships to protect and restore their watersheds. Website: *www.rivernetwork.org.*
- **Partners for Fish & Wildlife Program:** The U.S. Fish and Wildlife Service offers cost-share programs to restore and enhance wildlife habitats on private land. For more information, call (916) 414-6446. Website: *http://partners.fws.gov/index.htm*.
- Land Exchange Program: The Bureau of Land Management (BLM) seeks to preserve wildlife habitat and provide improved public access through this exchange program. The BLM exchanges public land for prime private wildlife habitat based on fair market value of lands. Private landholders and land trusts are eligible applicants. Contact: Dave McIlnay, 2800 Cottage Way, Suite West-1834, Sacramento, CA 95825-1886. Phone: (916) 978-4671. Website: http://pub4.ca.blm.gov/caso/landsales.html.

STATE PROGRAMS

- **California Coastal Conservancy:** The Conservancy has grant funding for the acquisition, restoration and enhancement of significant coastal and bay resource and habitat lands through the Bay Area Conservancy Program. Grants are also available for the preparation of plans for the enhancement and restoration of wetlands, dunes, rivers, streams, and watersheds. State and local agencies and non-profits may apply. Contact the State Coastal Conservancy at (510) 286-1015. Website: *www.coastalconservancy.ca.gov.*
- **CALFED Bay-Delta Program:** This program is comprised of both state and federal agencies that have been charged with finding a solution to the long-standing water wars in the Delta. Ecosystem restoration is a major component of the program and over \$100 million has been allocated to date. Projects and programs must be within the Bay-Delta and its tributary watersheds, and local, state and federal agencies, non-profits and individuals are eligible to apply. In the future, RFPs will be released in January. A wide range of grant amounts has been allocated, from a few thousand to millions. Call Rebecca Fauver at (916)

654-1334 for more information. CALFED Bay-Delta Program, 1416 Ninth Street, Suite 1155, Sacramento, CA 95814. Website: *http://calfed.ca.gov/programs.html*.

- **Transportation Enhancement Activities Program:** The federal Transportation Equity Act for the 21st Century (TEA-21) extends the life and intent of ISTEA through 2003, including the requirement that states spend a minimum of 10% of their Surface Transportation Program funds on "transportation enhancements" or conservation-related projects such as the acquisition of scenic lands, easements, and historic sites, construction of bicycle trails, removal of outdoor advertising, and archeological/historic preservation. Eligible projects must relate to a transportation facility and be above and beyond normal transportation projects or mitigation. Non-federal matching funds are required. California's TEA funds are separated into four portions, with the bulk of the funding available through regional transportation planning agencies. Local, state, and federal agencies are eligible to receive funding; non-profits are encouraged to submit joint applications. Application deadlines vary. Contact: Marsha Mason, Caltrans TEA Office, 1120 N Street, Sacramento, 95814. Phone: (916) 654-5275 or your local regional transportation planning agency. Website: *www.dot.ca.gov/hq/TransEnhAct.*
- Wildlife Conservation Board (WCB) Inland Wetlands Conservation Program and Riparian Habitat Conservation Program: WCB acquires and restores wildlife habitat throughout California. WCB also manages the Inland Wetlands Program for the acquisition and restoration of wetlands in the Central Valley and the Riparian Habitat Conservation Program that focuses on protecting and restoring riparian systems throughout the state. For more information on available funding, contact Marilyn Cundiff-Gee (Inland Wetlands) or Scott Clemons (Riparian) at (916) 445-8448. Website about WCB: http://ceres.ca.gov/wetlands/agencies/wcb.html.
- **California Farmlands Conservancy Program:** The CA Farmlands Conservancy Program (formerly the Agricultural Land Stewardship Program) within the State Department of Conservation provides long-term protection of farmland through grants for the purchase of agricultural conservation easements, fee title acquisition projects, policy/planning projects and land improvement projects. Local agencies and non-profits are eligible to apply. Contact: Charles Tyson, Program Coordinator, Office of Land Conservation, 801 K Street, MS 13-71, Sacramento CA 95814. Phone: (916) 324-0862. Website: *www.consrv.ca.gov/dlrp/CFCP*.
- **Environmental Enhancement and Mitigation Program (EEM):** Established in 1989, the EEM Program requires the state to spend an additional \$10 million a year over a 10-year period from FY 1991-92 to FY 2000-01 beyond what is legally required to mitigate the effects of transportation facility development. Grants are available for projects that mitigate, directly or indirectly, the environmental impacts of transportation facilities. This program awards funds in the following three categories: Highway Landscape and Urban Forestry, Resource Lands, and Roadside Recreation. Local, state, or federal agencies, non-profit organizations, or public/private partnerships, are eligible to apply. Requests are generally limited to \$250,000. No matching funds are required, although matching funds greatly strengthen your application. Contact: Bill Borden, California Resources Agency, 1416 Ninth Street, Room 1311, Sacramento, 95814. Phone: (916) 653-5656. Website: *http://ceres.ca.gov/cra/eemp_new.html.*
- Habitat Conservation Fund: The California Department of Parks and Recreation administers this grant program for local public agencies for the acquisition and restoration of wildlife habitats and significant natural areas. Eligible projects include acquisition/restoration of deer/mountain lions, rare, threatened and endangered species, wetlands, riparian,

anadromous fish and trout habitat and urban trail/wildlife corridor projects. Contact Odel King at (916) 653-8758, California Department of Parks and Recreation, PO Box 942896, Sacramento, 94296-0007. Website: *www.cal-parks.ca.gov/grants/HCF.htm*.

- State Water Resources Control Board (SWRCB) Nonpoint Source & Water Quality Planning Programs: SWRCB offers funding (grants and loans) for projects that improve or protect water quality that is impaired or threatened by non-point source pollution through the NPS section of the SWRCB. State and local agencies and non-profits may apply. For more information, contact Paul Roggensack (loans to address water quality associated with discharges and estuary enhancement) at (916) 657-0673, Paul Lillebo [205(j) planning grants] at (916) 657-1031, or Lauma Jurkevics [319(h) implementation grants] at (916) 657-0518. Website: www.swrcb.ca.gov/nps/grants.html.
- **Department of Fish and Game (DFG) Fines:** DFG collects fine monies for fish and game code violations. County fish and game committees typically administer these funds. Contact your local Fish and Game office for information.
- **Caltrans Mitigation:** Caltrans frequently looks for wetland projects that can be used to mitigate approved highway projects. Contact your local Caltrans office.
- **Urban Streams Restoration Program:** This program is offered by the Department of Water Resources Division of Planning and Local Assistance. The objective is to assist communities in reducing damages from stream bank and watershed instability and floods while restoring the environmental and aesthetic values of streams, and to encourage stewardship and maintenance of streams by the community. For more info, call Sara Denzler at (916) 327-1664. Website: *http://wwwdpla.water.ca.gov/environment/habitat/stream/usrp.html*.
- **Rivers and Trails Program:** This program is offered by the National Park Service. Rivers and Trails staff provide planning and technical assistance to rivers, trails, greenways, watershed, and open space efforts. Their role is to help achieve goals set collectively by the partners. Applications must be received before August 1st for the fiscal year beginning October 1st. Website: www.nps.gov/pwro/rtca.

LOCAL SOURCES

- **General Obligation Bonds:** Cities, counties, and recreation and park districts have authority to issue bonds for park and open space purposes. If approved, bonds and the interest they incur are re-paid through an increase in property taxes. Current law requires passage by a 2/3 vote bonds issued to fund-specific, popular projects are more likely to be approved.
- **Assessments:** An assessment may also be referred to as a "special" or "benefit" assessment, and involves the levying of a charge on property owners to provide financing for public improvements. A Landscaping and Lighting Act Assessment District is specifically designed to fund landscaping, street lighting, and open space acquisition/improvement projects. For example, Proposition KK approved by voters in 1994, created a landscaping and lighting assessment district in Eastern Contra Costa County that is used by the East Bay Regional Park District and its municipal partners to fund open space and trail improvements in this portion of the Park District.
- **Local Park Districts:** Many local or regional park districts are actively involved in acquiring and restoring wetland and riparian habitat. For more information, contact your local park district office.

- **Flood Control Districts:** The acquisition and restoration of wetlands is increasingly recognized as providing both environmental and flood control benefits. Contact your local district to determine if funds are available.
- **San Francisco Bay Regional Water Quality Control Board:** The Regional Board makes an effort to direct Administrative Civil Liability fines to local projects. For more information, contact Will Bruns at (510) 622-2327 or Carol Thornton at (510) 622-2419.

PRIVATE ORGANIZATIONS

- National Fish and Wildlife Foundation (NFWF): Funds are available for acquiring significant resource lands for the protection and restoration of sensitive fish, wildlife and plant species within NFWF's Wetlands and Private Lands and Wildlife and Habitat Initiatives. Other programs eligible for funding include Conservation Education, Fisheries Conservation and Management, and Neotropical Migratory Bird Conservation. Federal, state, and local agencies and non-profits may apply. Requested amounts and matching requirements vary. Contact: Eric Hammerling, NFWF, 116 New Montgomery Street, 2nd Floor, San Francisco, CA 94105. Phone: (415) 778-0999. Website: *www.nfwf.org*.
- **San Francisco Foundation:** The SF Foundation has a newly established grants program to support wetland research and restoration projects in the SF Bay and its surrounding watersheds. The focus is on those projects that improve water quality or reduce pollution. For more information, call Jane Rogers at (415) 733-8517. Website: *www.sff.org*.
- **Ducks Unlimited:** Ducks Unlimited (DU) provides technical assistance, matching funds and help in securing grants for the completion of wetland habitat restoration projects on both public and private land. Call the Western Regional Office of DU at (916) 852-2000. Website: *www.caldu.com*.
- **Packard Foundation:** The foundation's Conserving CA Landscapes Initiatives funds habitat protection and watershed projects in the Central Valley, Sierra, and Central Coast. For more information and grant guidelines, call (650) 948-7658. Website: *www.packard.org.*

فاحت فتناج والمتحد فتحدثنا







SAVE SAN FRANCISCO BAY ASSOCIATION

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