

U.S. Fish & Wildlife Service

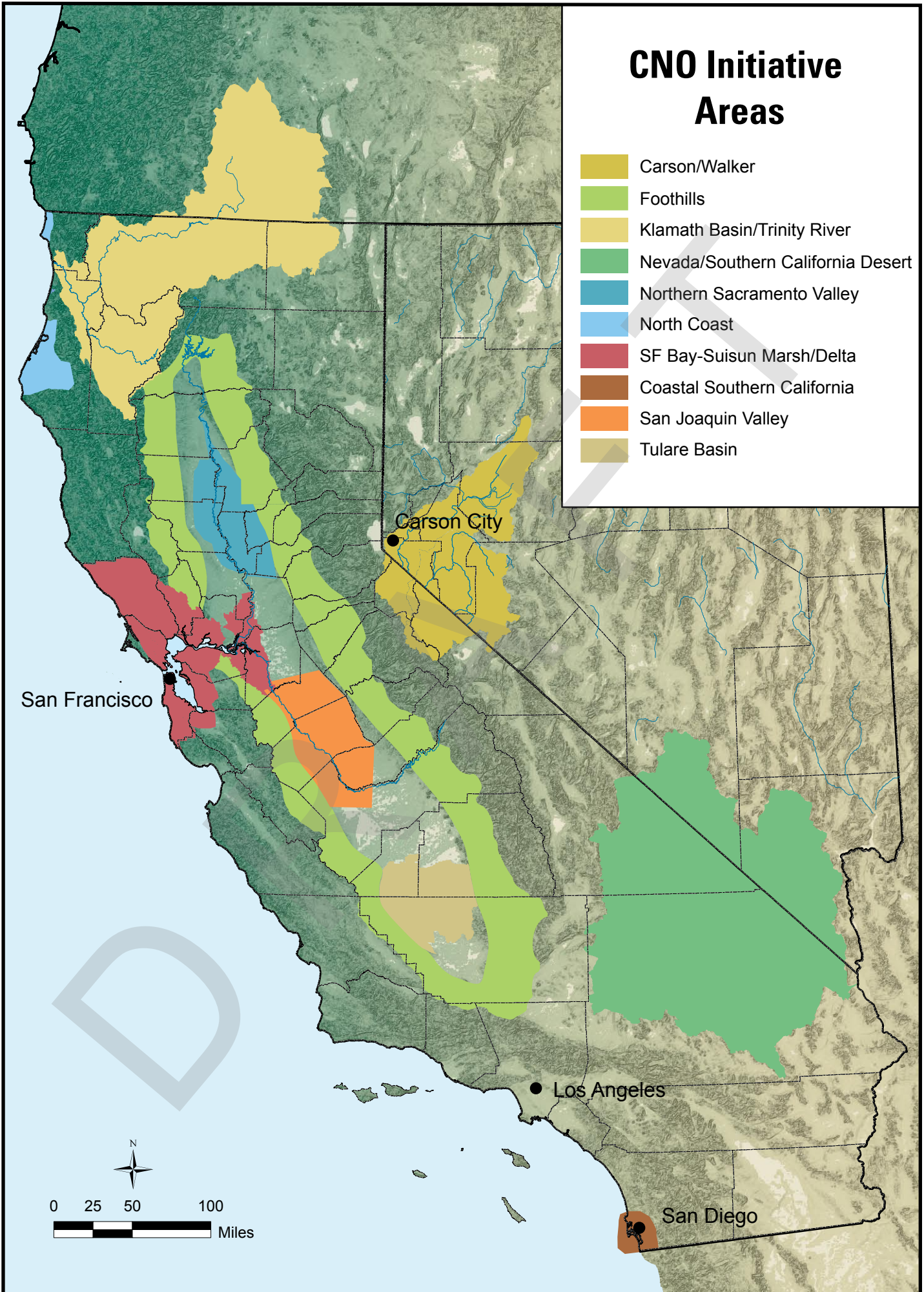
Initiative Areas

*of California, Nevada, and
the Klamath Basin of Oregon*



CNO Initiative Areas

- Carson/Walker
- Foothills
- Klamath Basin/Trinity River
- Nevada/Southern California Desert
- Northern Sacramento Valley
- North Coast
- SF Bay-Suisun Marsh/Delta
- Coastal Southern California
- San Joaquin Valley
- Tulare Basin



Introduction

The US Fish and Wildlife Service (Service) in California, Nevada, and the Klamath River Basin (CNO) has initiated a strategic planning approach to protecting and conserving the important biological resources of the region. The strategy is predicated on maximizing our human and fiscal capital to address resource issues of greatest biological, social, and political need. By strategically concentrating our abilities and energies, CNO expects to stabilize or reverse resource trends for species and habitats of greatest concern. In order to accomplish this objective, CNO, through consultation with field offices, has identified geographically distinct regions to focus our collective efforts. These geographic designations, known as “Initiative Areas”, represent opportunities for CNO to affect the myriad environmental issues endemic to the region, on a landscape basis.

During 2005 and 2006, CNO examined critical resource needs in California, Nevada, and the Klamath Basin, as they related to our mission. All major programs within CNO, including Refuges, Fisheries, Ecological Services, Migratory Birds and others, were directed to identify important resource issues and the geographic areas that contain them. Each program had its own criteria with which to measure important resources, based on the program’s purpose and goals. Criteria used to determine priority areas included the amount of degraded habitat with restoration potential, the number of federally listed species, current land uses, condition of watersheds, habitat connectivity to protected areas, principle threats, and potential partnerships. By identifying areas and issues of the greatest need, CNO programs have provided the insight necessary for delivering a more effective and sustaining strategy for improving the health of our watersheds, landscapes, and biological communities. Below are the ten Initiative Areas identified as those areas of greatest need and having the best potential for resource conservation.

- Klamath Basin/Trinity River
- North Coast
- Foothills
- Northern Sacramento Valley
- Carson/Walker
- San Francisco Bay-Suisun Marsh/Delta
- San Joaquin Valley
- Tulare Basin
- Nevada/Southern California Desert
- Coastal Southern California

The pages, which follow, describe each Initiative Area, resource issues within the area that are important to the Service and our partners, and the potential for restoring habitats, recovering federally listed species, and for benefiting other species of concern. While the list of issues is not exhaustive, it is emblematic of the resource needs for each area. By emphasizing the Initiative Areas, Project Leaders will be able to allocate resources to maximize conservation activity and to exert the greatest effect on the landscape.

Although necessary to initiate restoration and recovery efforts towards our most pressing resource issues, neither this document nor the strategic endeavor is meant to be exclusive of resource imperatives throughout the Region. This exercise is intended to assist in focusing our biological expertise and partnering abilities toward a definitive mission and potential outcome, while administering to the responsibilities of each field office. As with all strategic plans, it should be understood that this list is not sacrosanct, but will be shrunk or expanded, as resource issues are resolved or recognized. Adaptability and responsiveness are hallmarks of a good strategy and, as such, are attributes intrinsic to this effort.

CNO’s instituting Initiative Areas as an enhancement to resource allocation decision-making is embodied in the mission of the Service - ...**working with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.**



Carson/Walker Initiative Area

Resource Issues

A resource of particular interest to the Service and its partners is the greater sage grouse to which a major threat is the degradation and destruction of sagebrush habitats. Agriculture, overgrazing, and urban development have eliminated or degraded millions of acres of sagebrush habitat for sage grouse. In January 2005 the Service completed a review of the population status of greater sage grouse and determined that the species does not warrant protection under the Endangered Species Act. The species remains

of concern to the Service which is working with its agency and rangeland partners to restore and conserve sage grouse habitat so federal listing is not needed in the future. Conservation actions underway by the Service include installation of livestock fencing, manipulation of decadent sagebrush to improve vegetative productivity, native plant seeding, reclaiming sagebrush lands lost to pinyon/juniper encroachment, controlling invasive plants, and working with ranchers to develop sage grouse habitat management plans. The State of Nevada's Comprehensive Wildlife Conservation Strategy recommends a variety of sage grouse conservation measures that coincide with the goals of the Service. Those include stabilizing the loss of sagebrush to wildfire and invasions of exotic species; reducing pinyon/juniper encroachment; restoring healthy range conditions to sagebrush habitat; and adopting the objectives of the Greater Sage Grouse Conservation Plan for Nevada and Eastern California by undertaking projects to maintain healthy populations of sage grouse at a stable or increasing trend.

At the watershed level, the Service is working with landowners to protect and restore native species in western

Nevada, some of which are federally listed as threatened. These include the Lahontan cutthroat trout, bald eagle, pygmy rabbit, Webbers ivesia, Yosemite toad, and mountain yellow-legged frog. Significant portions of the Carson and Walker River watersheds are also identified by the Intermountain West Joint Venture as important Bird Habitat Conservation

Areas. Habitat improvements that the Service is supporting with its partners and landowners include invasive species control, fencing to control access by livestock and off-road vehicles, planting

native vegetation, erosion control, and conducting species reintroductions. These activities are in line with the recommendations of Nevada's Comprehensive Wildlife Conservation Strategy and California's State Wildlife Action Plan calling for federal and state agencies to work with private landowners to implement agricultural and rangeland management practices compatible with wildlife conservation.

At the landscape level, the Carson/Walker region is one of the fastest growing areas of Nevada. The Service is working with private landowners and conservation organizations such as the The Nature Conservancy to promote fish and wildlife friendly farming and ranching and to help secure important riparian habitats and desert springs. Projects such as fencing springs and streams to limit cattle access and providing off-site water help restore habitats while continuing economically important ranching practices on the land.



Ranchers consult in the grasslands.



The Carson/Walker Initiative Area lies on the east side of the Sierra Nevada Mountains. It spans the Humboldt-Toiyabe National Forest and the Highway 395 corridor in California, across the Nevada border to incorporate the Carson and Walker River watersheds, and extends northeast to the Carson and Humboldt Sinks. Most of the area belongs to the Great Basin, a plateau characterized by isolated mountain ranges separated by arid basins. Mountain ranges rise to altitudes of 7,000 to 10,000 feet. Lowland vegetation includes sagebrush, rabbitbrush, saltbush, and other arid-adapted shrubs with annual and perennial grasses. Vegetation of mountainous areas transitions from fir and spruce at higher elevations, to ponderosa and lodgepole pines at mid-elevations, to pinyon pine and juniper forests of the foothills. Grazing is the most common land use. Much of the grazing land is rapidly being lost to urban and residential development.

Aquatic habitats in Nevada support the greatest number of federally-listed fish species (26) of any state in the nation. Desert springs, streams, and riparian areas are vital to amphibians and mollusks, as well as for fish and migratory birds. Commonly located on private land because homesteaders settled near limited water sources, nearly all of these aquatic systems have been degraded, leading to the listing of many native species. Aquatic systems are the life of the desert, supporting the economy through agriculture, grazing, recreation, mining, and urban communities.



A landowner surveys his property in Mono Co.

Restoration and Recovery Potential

The federally threatened Lahontan cutthroat trout (LCT) is a species of major focus because the Initiative Area supports one of three distinct population segments. Principle threats to the population include habitat degradation from livestock grazing, urban and mining development, water diversions, competition from and hybridization with nonnative trout, and poor water quality. The Service's recovery plan for the species recommends a variety of actions to recover the species. Of those, activities in which the Service is engaged in the area include improving habitat conditions that could extend the range of the species, reintroduction of LCT to Carson and Walker River watersheds by the Service's Lahontan National Fish Hatchery; securing habitat to sustain



Lahontan cutthroat trout habitat.

viable populations within this distinct population segment; working with landowners to develop management plans to improve LCT habitat on private lands; restoring riparian areas along LCT streams; and working to maintain genetic stocks within historic basins.

Partners with the Service in this effort are the Nevada Department of Wildlife, Humboldt-Toiyabe National Forest, Nevada Division of Forestry, The Nature Conservancy, Washoe Tribe of Nevada/California, California Department of Fish and Game (DFG), Walker River Paiute Tribe, Nevada Land Conservancy, Natural Resources Conservation Service, Bureau of Reclamation, Bureau of Land Management, and Department of Defense-Hawthorne Army Depot.



Lahontan cutthroat trout.

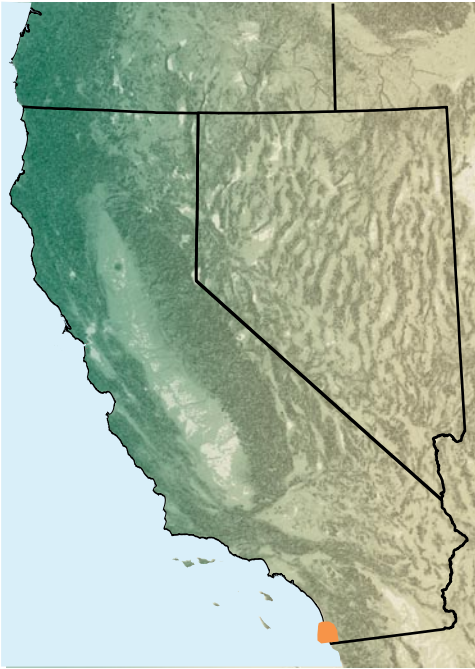


Sage grouse (above); sage grouse area exclusion (right).



Angus cows graze the Great Basin.





Coastal Southern California Initiative Area

Resource Issues

The intersection of biological resources and urbanization has made the South Coast, according to the State of California's Wildlife Action Plan, the most threatened biologically diverse area in the continental US. It is home to 476 vertebrate animal species - approximately 38 percent of all vertebrate species in California. More than 150 species of animals and 200 species of plants are either listed as protected or considered sensitive by wildlife agencies and conservation groups. The boundaries of the Initiative Area roughly coincide with those of the San Diego County Multiple Species Conservation Program (MSCP), a comprehensive habitat conservation planning program for southwestern San Diego County. The MSCP was developed cooperatively by participating jurisdictions and special districts in partnership with the wildlife agencies, property owners, and representatives of the development industry and environmental groups to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation on one species at a time. Species being addressed include coastal California gnatcatcher, coastal cactus wren, orange-throated whiptail, Quino checkerspot butterfly, Riverside fairy shrimp, Del Mar manzanita, and Orcutt's spineflower. Service efforts to implement the MSCP with its state agency partners is achieving a recommendation of the State Plan calling for wildlife agencies to improve the development and implementation of Natural Community Conservation Plans such as the MSCP.

At the watershed level, restoration of coastal wetlands and habitats for migratory birds and listed species are being undertaken by the Service and its partners. The largest and most successful tidal wetland restoration undertaken in southern California to date, the Bolsa Chica project, was completed in 2006. The project restored nearly 600 acres of marine and wetland habitat previously isolated from tidal influence by the

Pacific Coast Highway. Restoration of tidal influence to the coastal wetland was accomplished by removing oil extraction facilities, installing a new inlet structure, construction of a new bridge, and excavation of aquatic habitats and intertidal wetlands. Also included was construction of nesting and feeding areas for threatened and endangered birds including the California least tern. Partnering with the Service to provide funding and other assistance were the California Coastal Conservancy, State Lands Commission, National Oceanic & Atmospheric Administration (NOAA), U.S. Environmental Protection Agency (EPA), DFG, the California Resources Agency, Army Corps of Engineers, and others. The project achieves a specific conservation action recommended by the State Plan for federal, state, and local agencies to protect and restore the best remaining examples of coastal wetlands.



At the landscape level, the highly developed urban nature of southern California drives all Service activities in the Initiative Area, whether it is species listing and recovery, habitat restoration and conservation partnerships, Refuges, contaminants, or invasive species control. To achieve its program goals, the Service is coordinating with local and state governments, conservation organizations, and the public as envisioned in the State Wildlife Action Plan. Key conservation actions recommended by the Plan that correspond with Service goals include addressing regional habitat fragmentation and protection of priority wildland linkages; coordinating efforts to control occurrences of invasive species; coordinating development of model ordinance and building codes for new or expanding communities, especially in fire-adapted landscapes; and collaborating to develop programs to provide recreational opportunities that do not conflict with wildlife habitat needs. Substantial and timely efforts by the Service and its agency and private partners is needed to accomplish these and other goals so as to preserve as much as possible the area's remaining wildlife diversity.

The area encompasses southwestern San Diego County in California, and contains two major habitats of management concern by the Service; coastal wetlands and coastal sage scrub. Coastal habitats include coastal strand, lagoons, and river mouth estuaries that transition from riparian wetlands to fresh and saltwater marshes. Inland, hillside and bluff areas support sage scrub habitat of drought resistant shrubs and forbs including California sagebrush, bush monkeyflower, chamise, manzanita, and scrub oak. Other habitats are isolated native grasslands and vernal pools, and uplands supporting oak woodlands. Major drainages include the Tijuana, San Diego, Otay, Sweetwater, San Diego, and San Dieguito Rivers. The area is distinguished by population growth and urbanization that have transformed the landscape since the 1940s. The major land use of the area is as an urban and residential center. Some agriculture remains including livestock grazing, orchards, row crops, and specialty crops such as flowers.

Restoration and Recovery Potential

The focus for the Service in the Initiative Area is to find innovative solutions for improving habitat for threatened and endangered species. An important conservation partner is the Department of Defense (DOD) with which the Service is collaborating at the Naval Amphibious Base at Coronado. A critical area for amphibious and clandestine training in support of warfare operations, it also contains critical habitat for federally threatened western snowy plovers and endangered California least terns. To support the recovery of these species, the Navy physically marks nesting areas and reschedules training to

other areas during nesting season. The Navy also conducts an active predator control program on Coronado's beaches to protect nesting birds. Population counts are increasing for both species to the extent that in the year 2000 about 40-50 percent of the beach area that would normally have been available for military training was set aside for nesting. It provides an example of the kind of dedication the DOD has to its obligations under the Endangered Species Act, and its willingness to do what it can within its mission to work with the Service to assist with species recovery.



Least tern.



Brown Pelicans.



*Bolsa Chica Lowlands
Restoration Project.*



Foothills Initiative Area

Resource Issues

Supporting a diversity of plants and wildlife, the area is one of the most important in the state for migratory raptors and songbirds that thrive on the variety of vegetation types and habitats of the foothill region. Some habitats, such as vernal pools and areas of gabbro soils, support unique assemblages of plants and animals of great interest to the Service and its partners. Species of special interest include the federally listed California red-legged frog, California tiger salamander, vernal pool fairy shrimp, vernal pool tadpole shrimp, and El Dorado bedstraw. The Foothill Initiative and the State of California's Wildlife Action Plan both recognize the importance of maintaining and restoring habitats for these species by reducing habitat fragmentation and providing connectivity between habitats. In areas where development is occurring or projected, DFG and the Service are working to achieve the goals of the State Plan with landowners, agencies, cities, and counties to secure sensitive habitats and key wildlife migration corridors. Toward this effort the Service, DFG, the California Cattlemen's Association, and a large number of other agency and private partners have teamed to form the California Rangeland Conservation Coalition. Formed to recover listed species, enhance habitats, and "keep common species common," the Coalition is working to protect and improve the ranching industry and its culture by providing economic, social, and other incentives, and by reducing regulatory burdens to proactive stewardship on private ranchlands.



Ranch partners meeting.

Private Stewardship Grants, Recovery Program Grants, Land Acquisition Grants, and other programs, the Service is assisting landowners to plant native vegetation, control non-native invasive species, install livestock management fencing, and numerous other habitat improvement activities.

At the landscape level, the foothill ring area is experiencing rapid urban and residential growth that threatens important habitats for migratory birds, listed species, and other resources of

importance to the Service, the State, and its agency and private partners. To address that threat the Service and DFG are working to implement recommendations of the State Wildlife Action Plan that include the following: develop policies and incentives to facilitate better integration of wildlife conservation considerations into local and regional planning and land-use decision making; work to insure that infrastructure development projects are designed and sited to avoid harmful effects on sensitive species and habitats; develop policies and incentives to better integrate wildlife conservation into state and regional transportation planning; strive to allocate sufficient water for ecosystem uses and wildlife needs when planning for and meeting regional water supply needs; and give greater priority to wildlife and natural resources conservation education.

This "ring" of habitat occurs above the floor of the Central Valley, encircling it from an elevation of approximately 300 to 2,500 feet, or generally to the level where coniferous forest becomes dominant. It includes a mix of valley oak savannah, oak woodlands, blue oak-foothill pine woodlands, open grasslands, vernal pools, riparian, and wetland habitats that harbor unique ecosystems and species of plants and animals. Major land uses include livestock grazing, vineyard and orchard crops, firewood harvest, and recreation. The land is primarily privately owned, much of it by private ranches, and supports important ecosystems essential for maintaining healthy populations of fish and wildlife. Much of the area is at risk to urban and residential development that threatens to convert and fragment important habitats.

At the watershed level, the area provides a unique opportunity for the Service to work with the ranching community to protect and restore large areas of intact habitat, an opportunity not available in other areas of California. With funding provided by its Partners for Fish and Wildlife,

Foothills habitat in Alameda County.



Restoration and Recovery Potential

Foothill rangelands and the species on which they depend persist today because of the responsible land stewardship practices of ranchers that own these lands. Maintaining a strong and viable ranching community that keeps working lands working will help protect important habitats and wildlife movement corridors that connect those habitats. For example, the Service is working with ranchers in the foothill area of Alameda County to provide funds to improve habitats for California tiger Salamanders and California red-legged frogs that thrive in livestock watering ponds. Habitat protection and restoration efforts include repairing water impoundment structures, installation of off-stream water for cattle, riparian fencing, and planting native plants. The Service helped develop a locally-driven process to streamline permitting that provides landowners with Endangered Species Act (ESA) permits for pond improvements. Providing regulatory relief from the ESA through tools such as safe harbors and candidate

conservation agreements can provide motivation and relief to landowners wanting to restore and protect wildlife habitats.

For the Service, the key to achieving its goals of species recovery, keeping common species common, while supporting the long-term viability and culture of the ranching industry lies in developing partnerships. Encouraging voluntary, collaborative, locally-led conservation has proven to be effective in educating the public about the benefits of grazing and ranching to wildlife, and in maintaining and enhancing working landscapes.

Partners with the Service in this effort include DFG, the California Rangeland Trust, California Cattlemen's Association, California Association of Resource Conservation Districts, Defenders of Wildlife, The Nature Conservancy, the California Farm Bureau Federation, Bureau of Reclamation, and others.

Tidy tips in vernal pools at Jepson Prairie.



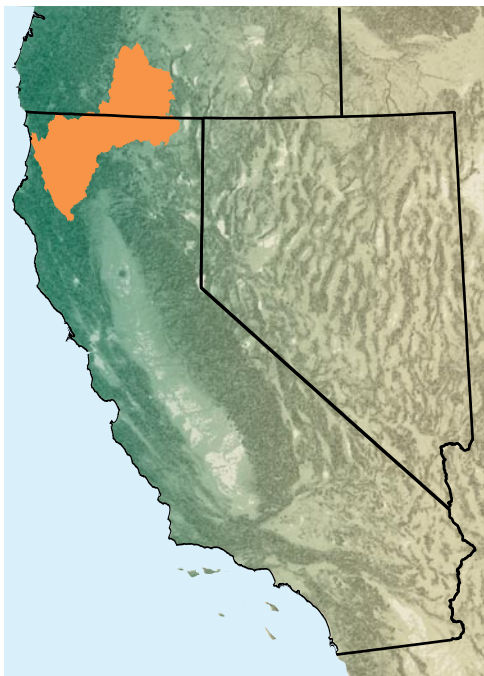
Vernal pool tadpole shrimp.



California red-legged frog.



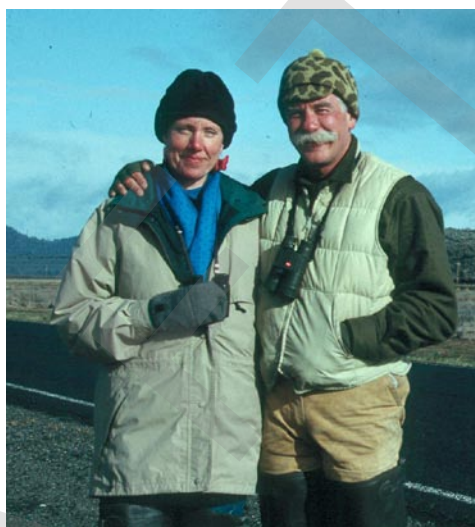
Cattle in oak woodlands.



Klamath Basin/Trinity River Initiative Area

Resource Issues

Competition for water between fish and wildlife, agriculture, and urban needs in the Basin is increasing. Conflicts over water in the Upper Klamath Basin reached a crisis in 2001 when water was denied to farmers on the federal Reclamation Project due to drought and ESA-related requirements to protect endangered salmon and suckers. The consequences included protests by angry farmers, national media attention, and calls for repeal of the Endangered Species Act. Demands for water in the Basin exceed capacity, and farmers, tribes, and wildlife have all paid the price. Many aquatic species have been designated as threatened or endangered due to poor water quality and habitat loss. Water temperature, nutrients, pH, and dissolved oxygen often are out of compliance with levels recommended by the States. In California, the Service and the State Wildlife Action Plan both target coho salmon as a species of special emphasis because of its importance to the commercial fishing industry and as an indicator of watershed health. As recommended by the Plan, a joint federal and state effort is focusing on salmon recovery by providing funds and other support for habitat improvement, to increase instream flows, and to replicate natural seasonal flow patterns.



Klamath landowners.

the Natural Resources Conservation Service, and the Klamath County Soil & Water Conservation District. Uplands and wetlands are being fenced to limit cattle access, and off-stream livestock water is being provided. The projects are achieving the goals of the State Wildlife Action Plan for federal and state agencies to work with private landowners to expand efforts to restore and conserve riparian communities, restore fish passage, and to modify grazing practices to recover key habitats. Klamath Refuges are implementing “walking wetlands” that rotate agricultural lands in and out of production while providing wetlands for wildlife and water quality

benefits. It is expected that Chinook salmon also historically occupied portions of the Sprague River for spawning.

At the landscape level, resource extraction in the Klamath and Trinity River watersheds of the Lower Klamath Basin are impacting fish and wildlife. Timber harvest, mining, gravel extraction, dams, and water diversions have affected not only fish, but also terrestrial species of concern to the Service such as the marbled murrelet, northern spotted owl, pacific fisher, and bald eagle. The Service is working to implement recommendations in the State Plan to alleviate impacts from resource extraction. Efforts include (1) working with federal, state, and local agencies and mining operations to encourage ecologically sensitive mining practices; (2) working with public forest managers to conduct maintain habitat diversity, habitat connectivity, and riparian and aquatic habitats; and (3) developing nonregulatory policies and incentive programs that encourage forestry operators to practice ecologically sustainable forest management.

This Initiative Area is made up of two separate Basins, the Upper and Lower Klamath Basins. The Upper Basin of southern Oregon and northern California is made up of two sub-basins, the Upper and Lower Klamath Lakes, and encompasses 12,000 square miles. Historically, the Basin contained 185,000 acres of shallow lakes and freshwater marshes that attracted fall concentrations of over 6 million waterfowl. In 1905 the Bureau of Reclamation initiated the Klamath Reclamation Project to convert lakes and marshes of the Lower Klamath and Tule Lake areas to agricultural lands. Today, less than 25 percent of the historic wetlands remain. The Upper Klamath, Lower Klamath, Tule Lake, Clear Lake, and Bear Valley National Wildlife Refuges anchor the Service’s wildlife management efforts. The two most prevalent vegetation types in the Upper Basin are tule marshes of cattail, bulrushes, sedges, and water-tolerant grasses, and Great Basin steppe supporting sagebrush, saltbush, and perennial grasses. Predominant land uses are grazing and agriculture including hay, alfalfa, grains, potatoes, and horseradish.

The Lower Klamath Basin centers on the 350 mile-long Klamath River; the second largest river in California. Flowing from Oregon west through Siskiyou County in California, the river is joined by its largest tributary, the Trinity River. Evergreen forests, mixed conifer and hardwood forests, and riparian habitats predominate. Commercial and recreational fishing, timber harvest, and grazing are major land uses.

Restoration and Recovery Potential

Restoring healthy ecological conditions and recovering listed species such as salmon, suckers, and bull trout in the Upper and Lower basins is critical for sustaining economic prosperity, viable fish and wildlife populations, and Native American cultural, religious and subsistence use. Tools at the Service's disposal include grants and cost-share programs for riparian, wetland, and upland habitat restoration. The Service has programmatic and safe harbor agreements available to streamline federal permitting for habitat improvement projects, and is coordinating efforts to bring together the agricultural community, agency land managers, and community leaders to work cooperatively to insure

healthy fish and wildlife populations. Assessment and monitoring are underway to direct the most efficient and effective groundwork to accomplish restoration goals.

Partners include Oregon Department of Fish and Wildlife, Natural Resources Conservation Service (NRCS), Klamath Watershed Council, Oregon Watershed Enhancement Board, The Klamath Tribes, Oregon State University Extension Service, Klamath Soil & Water Conservation District, Bureau of Land Management (BLM), Bureau of Reclamation, US Forest Service, Ducks Unlimited, Klamath Basin Rangeland Trust, Klamath Basin Ecosystem Foundation, and others.

Tecumseh Springs sucker habitat.



Upper Klamath Basin waterfowl.



Dam impeding fish passage.



The area includes parts of Inyo and San Bernardino Counties in California, and parts of western Clark and Nye Counties in Nevada. The landscape includes peaks, cliffs, canyons, dry washes, sand dunes, desert springs, playas, and riparian corridors. The area contains Mojave National Preserve and Death Valley National Park, and features extremes in elevation ranging from below sea level in Death Valley to peaks in excess of 11,000 feet. Temperatures range from 95 to 120 °F in summer to 20 to 30 °F in winter. The area receives less than six inches of rain per year. Lowland vegetation ranges from creosote, blackbush, and desert needlegrass scrub-steppe near Las Vegas, to creosote, saltbush, hopsage and Indian rice grass scrub of the western Mojave, to succulent scrub and palo verde, ironwood, and smoke tree woodlands in the southeast. Mountains isolated by desert and scrub habitats are known as “mountain islands” with environments ranging from alpine bogs and rocky slopes to coniferous forests, mountain shrublands, and pinyon-juniper woodlands. Land uses include mining, recreation, grazing, pasture, and farming. Several military bases are present. About 80 percent of the Mojave Desert in California is managed by federal agencies.

Nevada/Southern California Desert Initiative Area

Resource Issues

The insular nature of many habitats has given rise to a variety of endemic species and species with limited ranges. There are 439 vertebrate species inhabiting the Mojave Desert, including 252 birds, 101 mammals, 57 reptiles, 10 amphibians, and 19 fish. Of these, 30 are included on the State of California’s Special Animals List. The list includes the endangered desert tortoise, Amargosa toad, Pahrangat round-tail chub, Hiko White River springfish, southwestern willow flycatcher, and yellow-billed cuckoo. Las Vegas is one of the fastest growing cities in the nation, and urbanization is a major cause of habitat destruction and fragmentation. The Ash Meadows and Pahrangat National Wildlife Refuges (NWRs) and other areas are threatened by groundwater pumping, invasive plants, and diversion of water for agriculture. The Service is supporting projects to improve habitats for rare species through grants and cost-share programs of the Conservation Partnerships Program, including upland restoration of perennial grasses, shrubs, and native annuals, and removal of invasive plants. Protecting and restoring desert springs and rivers is essential to protecting riparian species. The State Wildlife Action Plan recommends several actions to restore and conserve wildlife in the region that the Service is implementing, including (1) improving stewardship on federal lands to protect wildlife diversity; (2) protecting and restoring riparian, spring, seep, and wetland areas; (3) working to reduce off-road vehicle damage to wildlife habitats; and (4) providing resources and coordinating efforts to control invasive species.



Rancher in the field.

At the watershed level, the Service is working in the Amargosa River Basin to improve habitats for the federally endangered Amargosa toad. Through its Partners for Fish and Wildlife Program the Service is working with private landowners and the Nevada Department of Wildlife to implement the Amargosa Toad Conservation Agreement. Efforts include projects that improve water use efficiency for landowners to provide seasonal ponds for toad breeding habitat - including repair and replacement of water pipes and installation of water control structures to keep water available for toads throughout the year. The projects are securing and improving wet habitats in the Amargosa River Basin, a recommendation of both the California Wildlife Action Plan and the State of Nevada’s Comprehensive Wildlife Conservation Strategy.

At the landscape level, military actions often conflict with wildlife conservation. Construction of base facilities and support communities eliminates and fragments wildlife habitats, and field maneuvers can damage habitat. Federal law requires the military to prepare and implement Integrated Natural Resources Management Plans (INRMPs) to address management and conservation of species and habitats. Department of Defense (DOD) staffs are working with the Service and its state and nongovernmental partners to implement INRMPs by conducting wildlife research and conservation projects that include protecting desert tortoise habitat at Edwards Air Force Base, and monitoring populations of Mojave tui chub at China Lake Naval Air Weapons Station. Participation by the military will play a major role in recovering listed species.

Restoration and Recovery Potential

A species of interest to the Service is the federally threatened Mojave population of the desert tortoise, the “flagship of the Mojave Desert” whose population has declined as much as 90 percent in some areas. Threats include destruction and fragmentation of habitat by urbanization, agriculture, grazing, mining, off-road vehicles, military exercises, and human collection. The Service’s central strategy for saving the desert tortoise, pursuant to the 1994 Recovery Plan, has been the establishment of Desert Wildlife Management Areas (DWMA) to provide special protection for the tortoise and other wildlife. Actions taken by the Service and its partners to achieve DWMA goals include installing tortoise barriers along highways,

and reducing raven predation on young tortoises. Other actions include eliminating livestock grazing in DWMA and constructing fences in key areas to keep out free-roaming dogs. To move the recovery process forward the Service established the Desert Tortoise Recovery Office in Reno, Nevada. The office is focusing on research, monitoring, and recovery plan implementation rather than on regulation, and provides a point of contact through which activities are coordinated. Partners with the Service in this effort include DFG, National Park Service, DOD, BLM, off-road vehicle groups, ranchers and grazing lease-holders, and local communities.



Amargosa toad.



Desert tortoise.

Las Vegas landscape.



Hiko White River springfish.



Northern Sacramento Valley Initiative Area

Resource Issues

Conservation and restoration of wildlife habitats on private lands is a major emphasis for the Service in the area. That same emphasis is reflected in the State Wildlife Action Plan which calls on DFG, the Service, NRCS, and local resource conservation districts to improve conservation and restoration on private lands. Agencies cannot protect all important areas for wildlife in the region through acquisitions and regulatory approaches alone. Landowners are working with the Service and its agency partners to restore habitats through the Partners for Fish and Wildlife Program and other voluntary programs.



Wildlife friendly farming in the Sacramento Valley.

At the watershed level the Service is providing financial assistance to remove nonnative invasive plant species from riparian and wetland areas. These activities are in line with the goals of the State Plan which calls on federal, state, and local agencies to provide resources and coordinate

efforts to control invasive species. The Service is working with the Big Chico Creek Ecological Reserve and four private landowners to manually remove invasive Spanish and French broom and restore native riparian habitat to 16 miles of creek. The broom

outcompetes native riparian vegetation needed by the yellow-billed cuckoo, willow flycatcher, and other riparian species of concern, and alters the hydrology of an important salmon and steelhead stream.

At the landscape level, State

and federal agencies and private organizations are collaborating to protect and restore habitat connectivity along major rivers in the Central Valley. Service priorities for the area reflect those of the State Wildlife Action Plan, with the Plan calling for the funding of riparian habitat restoration and conservation as a conservation priority. The prevalence of Service programs and incentives to assist ranchers, farmers, and other landowners to restore and conserve riparian habitats reflect that priority.

This area contains the American, Butte, Colusa, and Sutter Basins, and is intersected by the Sacramento River and its tributaries. Entirely below 300 feet in elevation, the area once contained extensive wetlands and large blocks of riparian forest. About 92 percent of the historic wetlands, 95 percent of the riparian habitats, and 99 percent of the native grasslands have been lost to agriculture and development. Typical wetland plants include hardstem and alkali bulrush, cattails, spike rush, swamp timothy, dock, and cocklebur. Riparian areas consist of Fremont cottonwood, Oregon ash, willows, box elder, and elderberry. Sacramento, Colusa, Delevan and other National Wildlife Refuges anchor the Service's wildlife habitat protection and restoration goals in the Valley. Agriculture is the major land use of the area, with orchards, riceland, wheat, row crops, cattle, and hay production being the main products.



Snow geese loafing.

Restoration and Recovery Potential

Wetland restoration will address habitat protection and restoration needs for the federally threatened giant garter snake (GGS) as identified in the Service's Draft Recovery Plan for the Giant Garter Snake. In addition to GGS, the recovery plan identifies other species of concern that would also benefit from wetland restoration including the tricolored blackbird, white-faced ibis, and northern pacific pond turtle. Projects assisting in the recovery of GGS include "deleveling" (restoring historic wetland hydrology to) agricultural fields, planting native vegetation to wetlands and adjacent uplands, providing permanent wetlands for GGS, and managing vegetation to increase wetland productivity.

Riparian restoration along the Sacramento River contributes to the recovery of the federally threatened valley elderberry longhorn beetle, and will help meet the objectives of the National Marine Fisheries Service's Proposed Recovery Plan for the federally endangered winter run chinook salmon. Other threatened species to benefit include the federally threatened Central Valley spring-run

chinook salmon and Central Valley steelhead.

The State Plan highlights Swainson's hawk as a species at risk in the Central Valley. Because the hawk nests in proximity to riparian areas and utilizes oak woodlands, native grass uplands, and agricultural fields for foraging, it is vulnerable to land development. Efforts to protect the hawk focus on restoring native uplands and protecting agricultural lands from conversion and development through conservation easements, private landowner habitat restoration agreements, safe harbor and candidate conservation agreements, and other such tools available to state and federal wildlife management agencies.

Partnering with the Service in all these efforts includes the Natural Resources Conservation Service, Bureau of Reclamation, DFG, The Nature Conservancy, California Waterfowl Association, Ducks Unlimited, River Partners, NOAA, and many other agency and non-governmental partners.



Valley elderberry longhorn beetle.



Giant garter snake.

Sacramento Valley riparian habitat.



North Coast Initiative Area

Resource Issues

The area's relatively unfragmented landscape has led to a shared strategy between landowners, agricultural support groups, and the conservation community to preserve working lands to ensure landscape and habitat

areas, allowing stream channels access to their floodplains, providing large woody material for fish cover, reducing sediment input to streams, and restoring streambank integrity. These Initiative Area activities share the goals of the State Wildlife Action Plan of reducing impacts from dairy

Centrally located on the rugged northern coast of California, the area includes the Lower Eel, Mattole, Bear, and Mad River watersheds and Humboldt Bay as major fish and wildlife habitat features upon which the Service is focusing its efforts. Part of the Coast Range, the area encompasses mountains, hills, valleys, and plains whose weather, topography, and vegetation are influenced by the marine environment. Elevations increase as you move inland, reaching 6,000 feet on the east side. Rainfall amounts are among the highest in the state, with fog and cool temperatures at the coast. Inland temperatures are higher with lower humidities. Characteristic vegetation includes black cottonwood, willow, and alder forests along riparian and delta areas, often mixed with Sitka spruce and coast redwood. Continuous or mixed stands of coniferous and hardwood forests supporting Douglas fir, madrone, and others are prevalent inland. Major land uses include timber harvest, dairy and beef cattle, instream gravel mining, and agriculture (including vineyards).



Riparian planting in Arcata.

connectivity. The dairy industry provides important habitat for sensitive species including the Aleutian Canada goose, waterfowl, and shorebirds, but also benefits listed species including coho salmon, chinook salmon, and steelhead. The Northcoast Initiative and the State of California's Wildlife Action Plan both target coho salmon as a species of special emphasis because of its importance to the commercial fishing industry and as an indicator of watershed health. The joint federal and state effort is focusing on recovering coho populations by providing funds and other support for habitat improvement efforts. Protection of coastal dune habitats, tidal habitats, and baylands are also important resource issues of focus by the Service.

At the watershed level, Service sponsored assessments and restoration projects have been developed with landowners in watersheds throughout the area. Plans and projects are being conducted that restore habitat connectivity by removing barriers to fish passage, planting riparian

and livestock operations by restoring riparian and coastal habitats impacted by those activities.

At the landscape level, the Northcoast provides a unique opportunity to restore and conserve quality habitat because the area is comprised of large, established working ranches, dairies, and forest lands that have not experienced the extensive urbanization and habitat alteration seen in other areas of the state. Through coordinating its Initiative Area effort with the State Wildlife Action Plan, the Service works with DFG to protect and restore remaining stands of intact fish and wildlife habitat. For example, both Federal and State efforts will work to protect and restore conditions for up-migrating salmon in the Eel River where mature riparian forests occur. The potential for achieving successful connectivity between public and private land in the area is high because many private lands lay adjacent to areas protected by the US Forest Service, BLM, Humboldt Bay National Wildlife Refuge, and DFG.

Restoration and Recovery Potential

The most prominent recovery issue for the Service is restoration of habitats for federally listed coho salmon, chinook salmon, and steelhead. All three species are federally listed, and coho is state listed as endangered. Restoring salmonid populations is essential to the economic existence of the Tribal, commercial, and recreational fishery. Coho salmon abundance is 6-12% of what it was in 1940, while chinook and steelhead populations have also declined. Service efforts to restore habitats to enhance the recovery of listed species includes developing off-stream livestock water, restoring riparian areas and floodplains through tree planting and setback levees, and working with private landowners to improve dairy and rangeland management. Along the Mattole River in southern Humboldt County, an area critical to the recovery of chinook and coho salmon, the Service is working with its agency and private partners to improve instream habitats. Improvement activities include projects to stabilize eroding banks and reduce sediment input to the river, removing instream barriers to improve upstream access, and working in the channel to improve spawning habitats.

Instream habitat for salmon and steelhead.

Instream and riparian improvements that benefit salmonids also benefit other listed species including the tidewater goby, Point Arena mountain beaver, Behren's silverspot butterfly, and several listed plant species. In Mendocino County, agricultural lands along the coast contain the only known population of federally endangered mountain beaver. Working with willing landowners to exclude livestock from riparian areas where mountain beaver burrows are located could lead to recovery of the species in the foreseeable future. Estuarine projects will benefit the large populations of waterfowl and shorebirds that stage and winter in Humboldt Bay, the second largest estuary in California. A variety of partners are working with the Service to accomplish these activities to achieve their shared goals.

Partners include DFG, the California Coastal Conservancy, California State Water Resources Control Board, Wildlife Conservation Board, BLM, USDA NRCS, Mattole Restoration Council, Jacoby Creek Land Trust, Trinity County Department of Transportation, and the County of Humboldt.



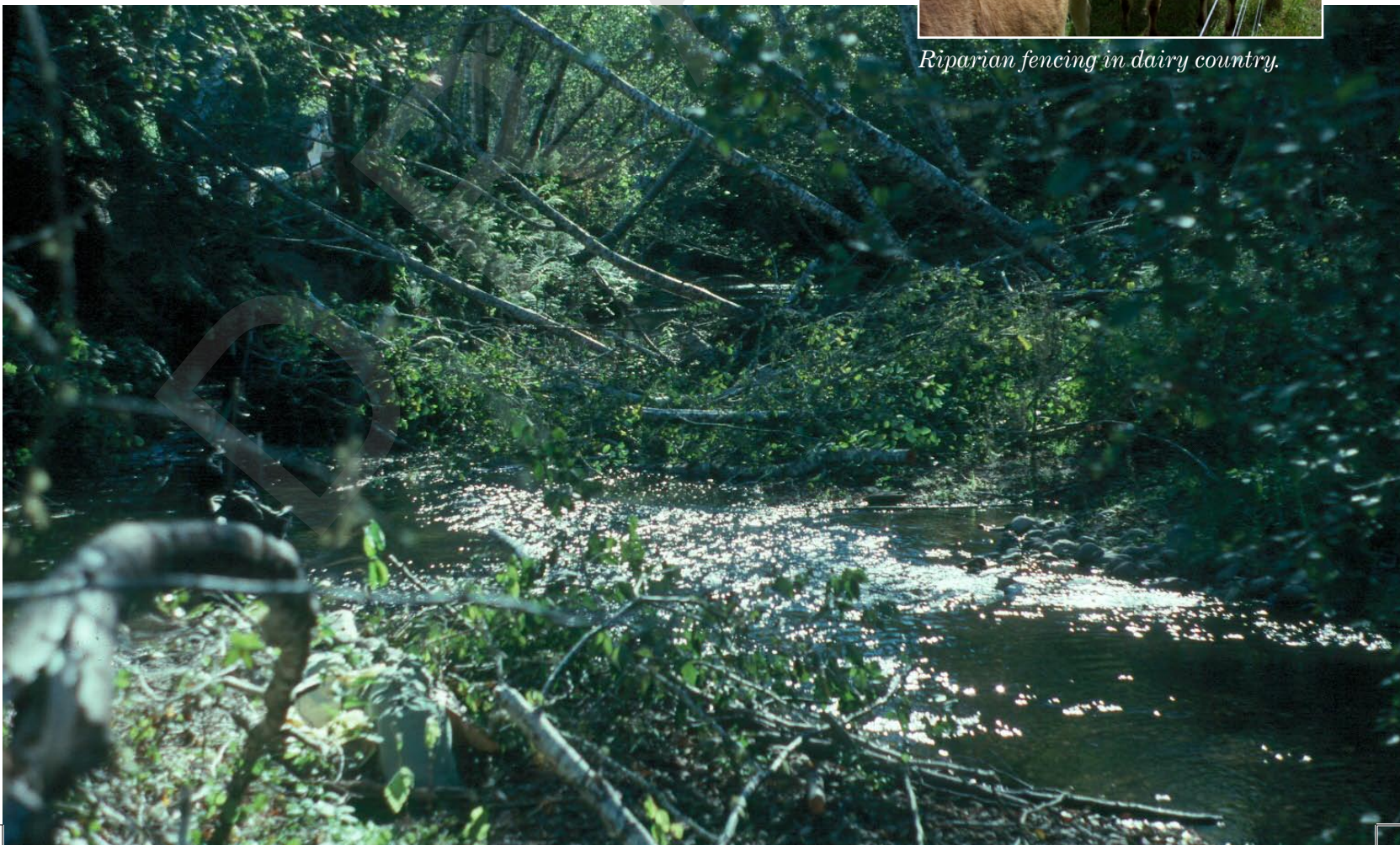
Chinook salmon.

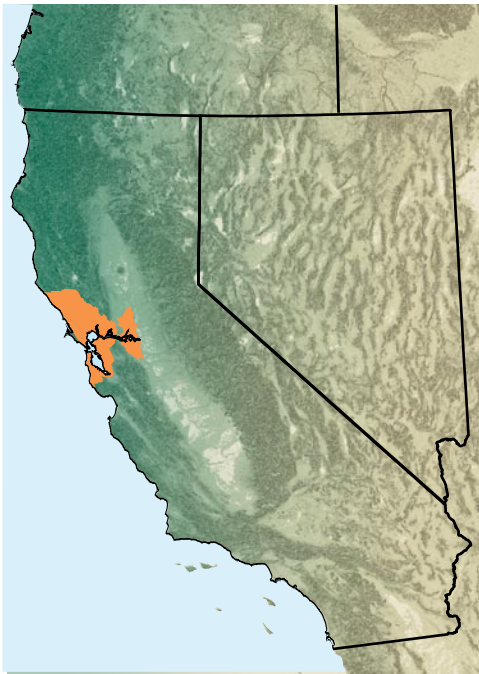


Terns.



Riparian fencing in dairy country.





San Francisco Bay-Suisun Marsh/ Delta Initiative Area

Resource Issues

As called for in the California State Wildlife Action Plan, habitat improvement programs that provide funding and technical assistance for projects benefiting chinook salmon are an emphasis for the Service in the Initiative Area. Habitat improvements include removing fish passage barriers such as dams and diversions, reestablishing natural flow and temperature regimes in rivers, restoring riverine and floodplain habitats and ecological processes, and restoring salmon to streams where they have been eliminated.



Volunteers restore riparian habitat.

At the watershed level, the area contains eight population core areas identified in the Service's Recovery Plan for the federally threatened California red-legged frog. Service projects that benefit the frog in those core areas are taking place on private lands in Marin, Sonoma, and San Mateo counties through wetland and riparian restoration and improvements in dairy management. For the federally endangered San Francisco garter

snake, habitat restoration through prescribed burning and other activities is underway with funding from the Service and its partners, providing an immediate benefit to the species.

At the landscape level, protecting and restoring lowland habitat linkages that provide connectivity between tidal marshes, salt ponds, and stream corridors

that link baylands with upland areas are the focus of both the Service and the California State Wildlife Action Plan. The Initiative Area contains listed species whose entire range is limited to the Bay Area, including the San Francisco garter snake, California freshwater shrimp, salt marsh harvest mouse, and Alameda whipsnake. Restoration projects have been completed or are underway on private lands through the Service's Partners for Fish and Wildlife, Private Stewardship Grants, Cooperative Endangered Species Conservation Fund, and other State and Service-funded habitat restoration programs. The projects directly contribute to the goals of Service Recovery Plans for those species.

The area is composed of 11 counties surrounding San Francisco Bay and the Sacramento/San Joaquin River Delta; Marin, Sonoma, Napa, Solano, Sacramento, San Joaquin, Alameda, Contra Costa, Santa Clara, San Mateo, and San Francisco counties. Encompassing 1,600 square miles, the San Francisco Bay and Delta together form the nation's second largest estuary. Lands adjacent to the Bay are characteristic of a coastal plain with low-lying baylands and river deltas supporting salt marsh, coastal scrub, redwood forests, freshwater creeks, terrace prairies, tidal mudflats, and salt ponds that provide habitat for seabirds, waterfowl, songbirds, and shorebirds of the Pacific flyway. Elevations and temperatures rise inland, reaching 3,000 feet at the peaks of the coastal mountains, and support grasslands, chaparral, and oak woodlands. The Sacramento and San Joaquin Rivers carry rain and snowmelt from the northern and central parts of the state into the Delta. Other major rivers include the Napa and Petaluma rivers, and Sonoma, Petaluma, and Coyote Creeks. Protected habitats owned by the National Park Service, Fish and Wildlife Service, State Parks, and private holdings protected by conservation easements are intermixed with agricultural lands in a densely populated urban setting. Much of the area is rural, supporting an agricultural economy of dairy and livestock, orchards, vineyards, and specialty crops.

Burning to restore habitat for San Francisco garter snakes.



Restoration and Recovery Potential

Populations of federally endangered Delta smelt are in decline, an indication of a reduction in quality of Bay and Delta habitats. The greatest cause for the decline is the construction of dams and diversions that alter river flows, increase water temperatures and salinities, trap and kill fish, and change the dynamics of sloughs and streams. Other factors include loss of floodplain, riparian, and estuarine habitats through diking, draining, flood control, and the impact of invasive aquatic species. Three large government programs were established to affect the future of Delta fish populations; the Central Valley Project Improvement Act (CVPIA), CALFED, and the California Bay-Delta Authority. These programs will directly benefit the recovery of 19 at-risk native fishes and other species, and contribute to the recovery of 25 other species. Activities to maintain and enhance fish populations critical to commercial, sport, and recreational fisheries include restoring stream channels and floodplains, reducing sediment,

improving water quality, coordinating operations of Delta pumps to improve conditions and habitats, and protecting and restoring aquatic, upland, and riparian habitats.

The area supports a number of important habitats under threat from development and other human impacts. Recovery plan goals for the San Francisco garter snake, California red-legged frog, and California freshwater shrimp include working with agricultural groups to protect farm and ranch lands. Several agricultural groups have made a strong commitment to working with the Service to achieve common goals. The San Francisco Bay NWR, Environmental Defense, San Francisco Bay Joint Venture, NOAA, the California Resources Agency, EPA, The Bay Institute, California Cattlemen's Association, local dairy operators, State Parks and many other Service partners are active in supporting wildlife-friendly agriculture that assists in species recovery.

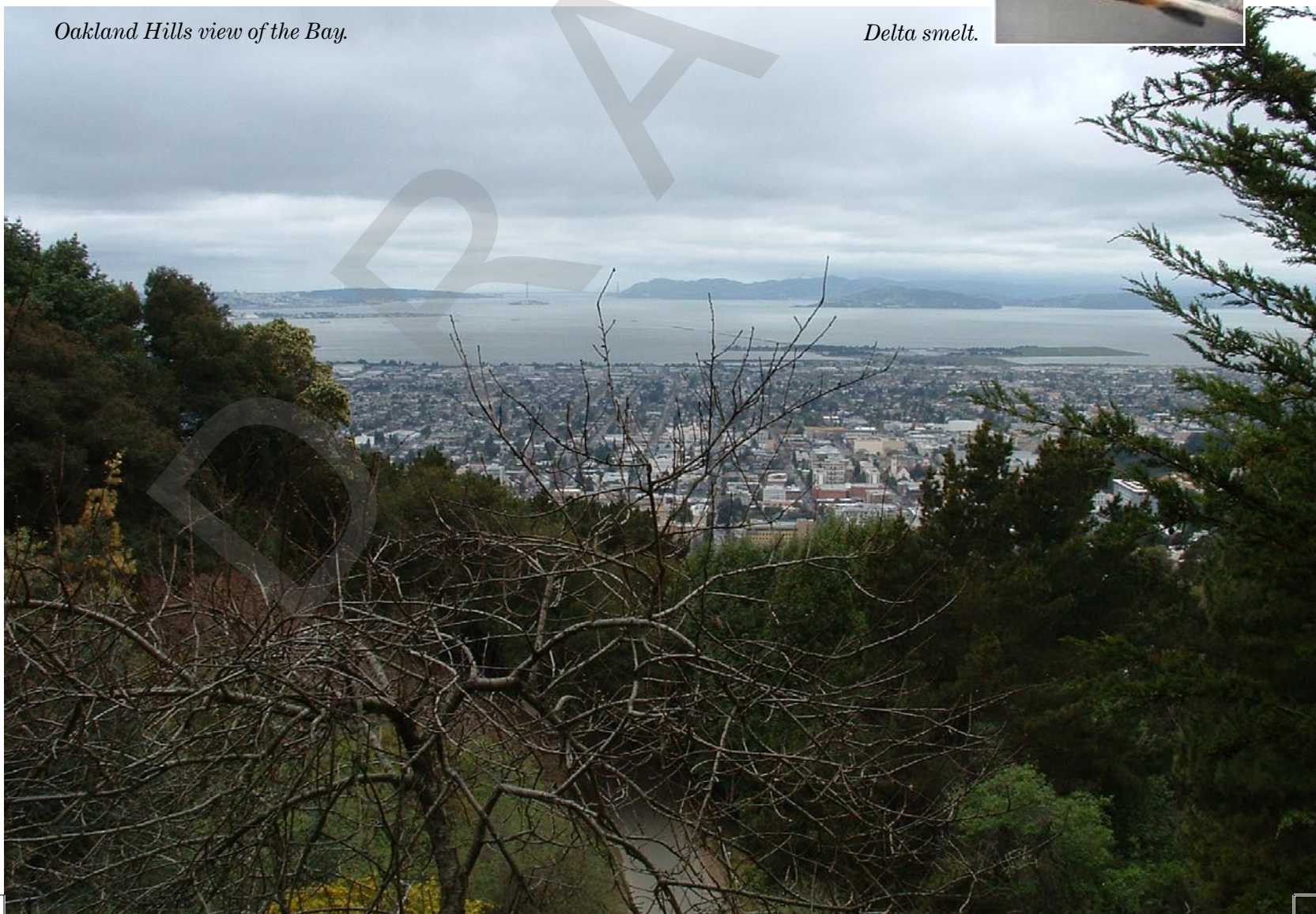


Sandhill crane.



Delta smelt.

Oakland Hills view of the Bay.



San Joaquin Valley Initiative Area

Resource Issues

Restoration and protection of riparian areas, wetlands in the GWMA, and salmon habitat in the San Joaquin River are major resource issues for the Service in the area. Species of interest include the federally listed riparian brush rabbit, riparian woodrat, giant garter snake, least Bell's vireo, and chinook salmon. Non-listed species of interest include the tricolored blackbird, Aleutian Canada Goose, and greater sandhill crane. The Service's Initiative Area plan and the State of California's Wildlife Action Plan both recognize the importance of providing incentives to ranchers, farmers, and other landowners to protect and restore habitats for these species.

At the watershed level, the recent discovery of federally endangered least Bell's vireos nesting at San Joaquin River NWR, the first recorded nesting activity for the species in the Central Valley in over 50 years, presents an exciting opportunity for the Service to work with its partners to improve habitats for the species.

San Joaquin River:



Recovery of the species lays not only in providing adequate habitat, but also in providing corridors between habitats. The Service's Strategic Plan for the Initiative Area and the State's Wildlife Action Plan share the goal of working

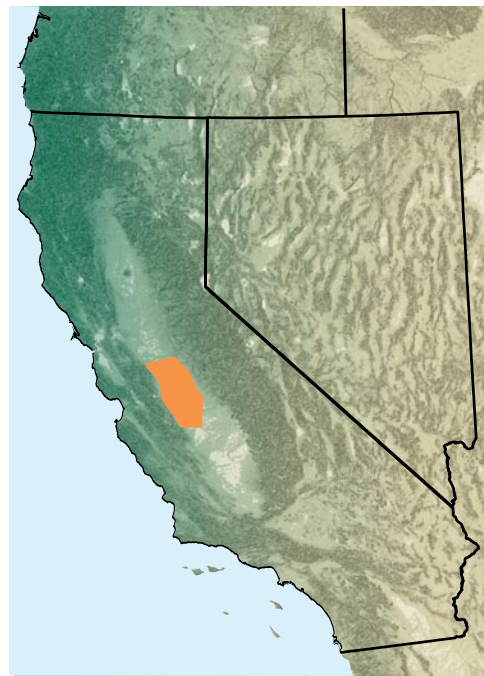
with cities, counties, and other partners to secure sensitive habitats and key habitat linkages for the least Bell's vireo and other species of concern.

At the landscape level, the northern San

Joaquin Valley is under pressure from development due to population growth and changing agricultural practices. It is estimated that 18,000,000 people will move to the area within the next 15 years. Wetlands and wildlife compatible agriculture are being lost to housing developments, dairies, orchards, and vineyards. The corresponding loss of wetlands and open space will adversely affect populations of migratory birds and threatened and endangered species. Protecting agricultural lands and river floodplains, restoration of wetlands and riparian habitats, and supporting wildlife-friendly farming and ranching will help sustain fish and wildlife populations under threat from population growth.



Irrigating the cotton fields.



The area includes portions of Merced, Stanislaus, Fresno, Madera, Tuolumne, and Mariposa counties. It includes what is commonly known as the Grasslands Wildlife Management Area (GWMA) and the San Joaquin River and its tributaries. The GWMA is a 179,460-acre mosaic of Federal, State, and private lands containing about 30% of the 310,000 acres of wetlands remaining in the Central Valley. Entirely below 300 feet in elevation, agriculture dominates the area and few remnants of native habitats remain. Rivers support valley riparian habitat containing Fremont cottonwood, willows, box elder, valley oak, elderberry, and non-native invasive species including giant reed, perennial pepperweed, water hyacinth and tree of heaven. The San Joaquin River has become a major focus for many agencies as one of the most imperiled watersheds in the nation and the target of a major effort to restore salmon to the river. Upland habitats include annual and perennial grasslands, valley oaks on the valley floor and floodplains, and vernal pools on higher terraces. The primary land use is agriculture, particularly cotton, field crops, hay and alfalfa, dairy and beef cattle, orchards, and vineyards.

Restoration and Recovery Potential

Riparian habitat protection and restoration has been identified by federal and state agencies as a recovery focus in the northern San Joaquin Valley. Riparian brush rabbit, riparian woodrat, and valley elderberry longhorn beetle are riparian-associated species that will benefit from measures to restore some of the 89% of historic riparian woodland that has been lost to agriculture and development. Riparian brush rabbits have been extirpated from the area, and only a single riparian woodrat has been documented in the area. To help recover the species, captive-reared brush rabbits have been released at the San Joaquin River NWR, and a release of woodrats in the same area is planned. Additionally, private landowners adjacent to the San Joaquin River NWR have allowed brush rabbits to be released on their lands. Riparian restoration along the San Joaquin River will contribute to the recovery of both species. Conservation easements, Service

landowner agreements, retirement of agricultural lands for habitat restoration, and Service funding for riparian planting and installation of livestock exclusion fencing are tools being used by the Service to help recover the species.

Potential partners include DFG, the Natural Resources Conservation Service, River Partners, Central Valley Joint Venture, Point Reyes Bird Observatory (PRBO) Conservation Science, Wildlife Conservation Board, The Nature Conservancy, Ducks Unlimited, and California Waterfowl Association. Acquisition and restoration of the San Joaquin River basin has been designated as a major objective of the CalFed Bay-Delta Program. Lands near the San Joaquin River are being protected and restored through actions of the Service and its partners including the Tuolumne River Preservation Trust and the interagency Tuolumne River Technical Advisory Committee.



Least Bell's vireo.

© Moose Peterson



Riparian brush rabbit.



San Joaquin kit foxes.



Wetland habitat.



The Tulare Basin is made up of the beds of the former Tulare, Buena Vista, Goose and Kern lakes, and includes portions of Kings, Tulare, Kern, and San Luis Obispo Counties. Historically the Basin contained the largest freshwater wetland west of the Mississippi River, about 500 square miles in size. Flows from the Kings, Tule, Kaweah, and Kern Rivers created extensive wetlands, sloughs, ponds and marshes, most of which have been lost to agricultural development and water diversion. Also lost were extensive grassland and saltbush scrub uplands. Despite the losses the area still contains significant wetlands, many of which are privately owned hunting clubs increasingly isolated by development. The area is recognized for its international importance to migratory waterfowl and shorebirds of the Pacific Flyway. Wetlands support cattails, hardstem and alkali bulrush, swamp timothy, spikerush, smartweed, and watergrass. The primary land use is agriculture, with Tulare County ranking second in the nation in agricultural productivity. Cotton, vegetables, grain, alfalfa, dairy and silage, beef cattle, and orchards are major products. Oil production is another land use, having unique implications for fish and wildlife.

Tulare Basin Initiative Area

Resource Issues

With agriculture a major land use in the Basin, conflicts between wildlife and agriculture are bound to occur. An example involves the tricolored blackbird. A species restricted mainly to California, its population has declined precipitously such that the species was recently petitioned for listing under the Endangered Species Act. In recent years most breeding tricoloreds have come to nest in dairy silage fields, setting up a conflict between the birds' nesting cycle and the timing of silage harvest. The Service has had to intervene to prevent nests and young birds from being destroyed during harvest. The Service, DFG, landowners, and other partners are working to institute the recommendation put forth in the State Wildlife Action Plan calling for regional coordination of habitat preservation to better serve wide-ranging species, such as the tricolored blackbird, which are trying to survive in an environment of reduced and degraded habitats.

Another important resource issue is the need for improvement in water quality for wetland dependent wildlife. Impacts to waterbirds from elevated levels of salinity, pH, selenium, boron, chloride, molybdenum, and sulfate in Basin wetlands are of concern to fish and wildlife agencies. The Service and its partners are working together to insure wetlands receive adequate quality water for migratory birds, threatened and endangered species, and other important resources. At the watershed level, the Service and its partners are working to construct a water conveyance system in Kern County that will extend Pintail Slough to the north and south, and which will connect Poso Creek to the Alpaugh Canal. The project will further the restoration and enhancement of 2,000 acres of wetlands and adjacent

uplands. Consistent with the goals and objectives of the Central Valley Joint Venture, the project will contribute to the objective of enhancing wetlands and waterfowl habitat on 291,555 acres of public and private lands. Partners include the Tulare Basin Wetland Association, Semitropic Water Storage District, Alpaugh Irrigation District, private landowners, California Waterfowl Association, Bureau of Reclamation, Natural Resources



Working the fields.

Conservation Service, DFG, Wildlife Conservation Board, the Tulare Basin Wetlands Association, and the Service's Partners for Fish and Wildlife Program. The project provides an example of how the Service and DFG are working toward the State Plan's goal for agencies to work together to restore aquatic habitats in the region. At the landscape level, restoring and protecting upland habitats and providing linkages to existing uplands in the Basin is a focus of the Service, DFG, and others. The State Wildlife Action Plan highlights the importance of providing linkages between isolated uplands at Kern and Pixley National Wildlife Refuges, Allensworth Ecological Reserve, Semitropic Ridge, and the Foothill Ring Initiative Area. Uplands provide habitats for federal and state threatened and endangered species including the San Joaquin kit fox, blunt-nosed leopard lizard, giant kangaroo rat, Tipton kangaroo rat, and Buena Vista Lake shrew. Several listed plant species including the California jewelflower, palmate-bracted bird's beak, Kern mallow, and Bakersfield cactus will also benefit.

Restoration and Recovery Potential

The Service's Recovery Plan for Upland Species of the San Joaquin Valley, recommends a number of tasks to recover listed species that are being implemented by the Service. Those include purchasing lands and easements, establishing vegetation buffers to reduce habitat fragmentation and provide linkages between habitats; restoring native uplands on agricultural land; improving grazing management; increasing plant productivity by manipulating habitats mechanically or through

fire or grazing; controlling invasive plants and animals; and fencing to exclude livestock and off-road vehicle use. Potential partners are DFG, the Natural Resources Conservation Service, Wildlife Conservation Board, Bureau of Land Management, Bureau of Reclamation, The Nature Conservancy, Sequoia River Land Trust, Tulare Basin Wildlife Partners, and ranchers with large tracts of grazing land that provide habitat for upland species.



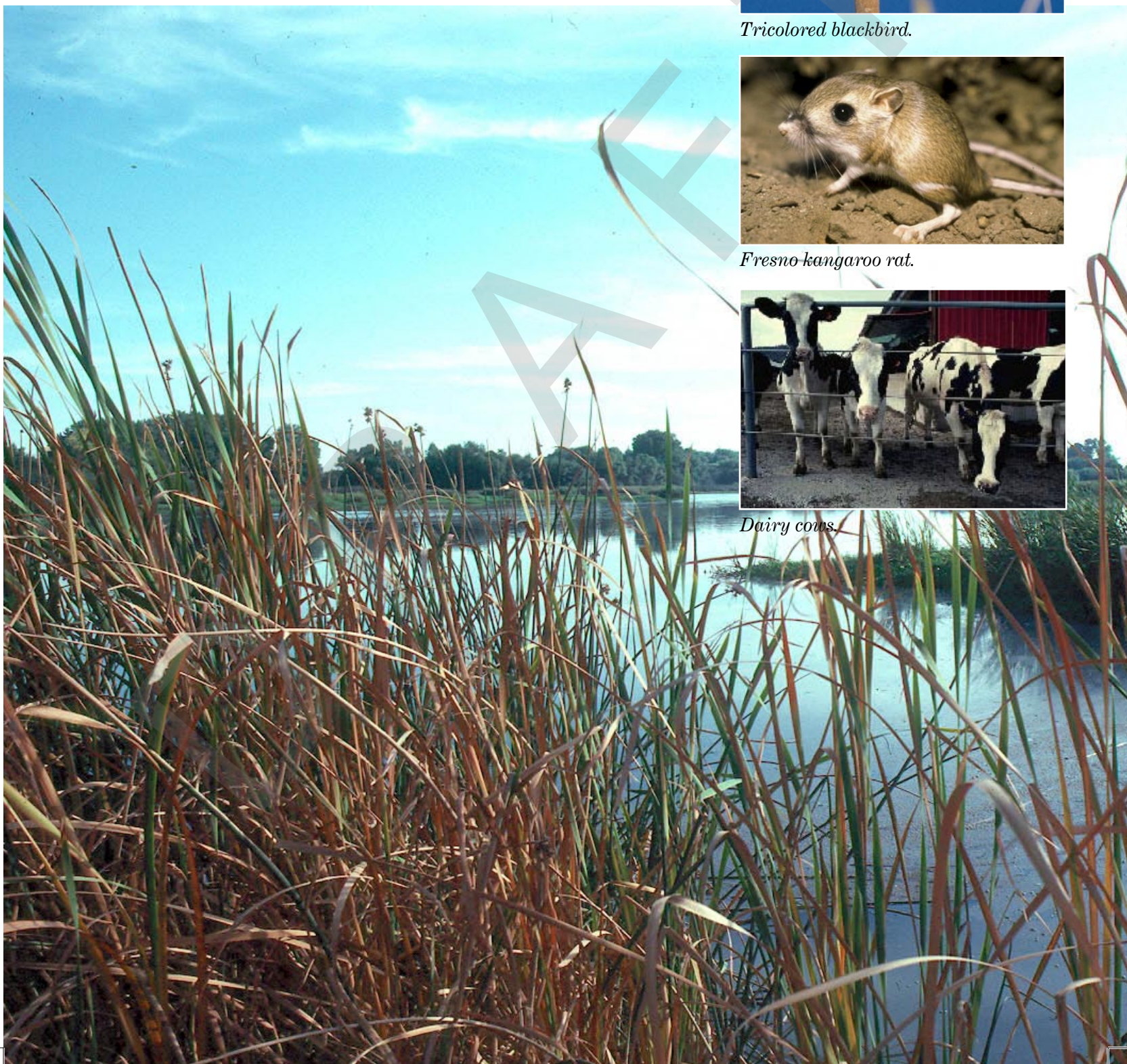
Tricolored blackbird.



Fresno kangaroo rat.



Dairy cows.



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