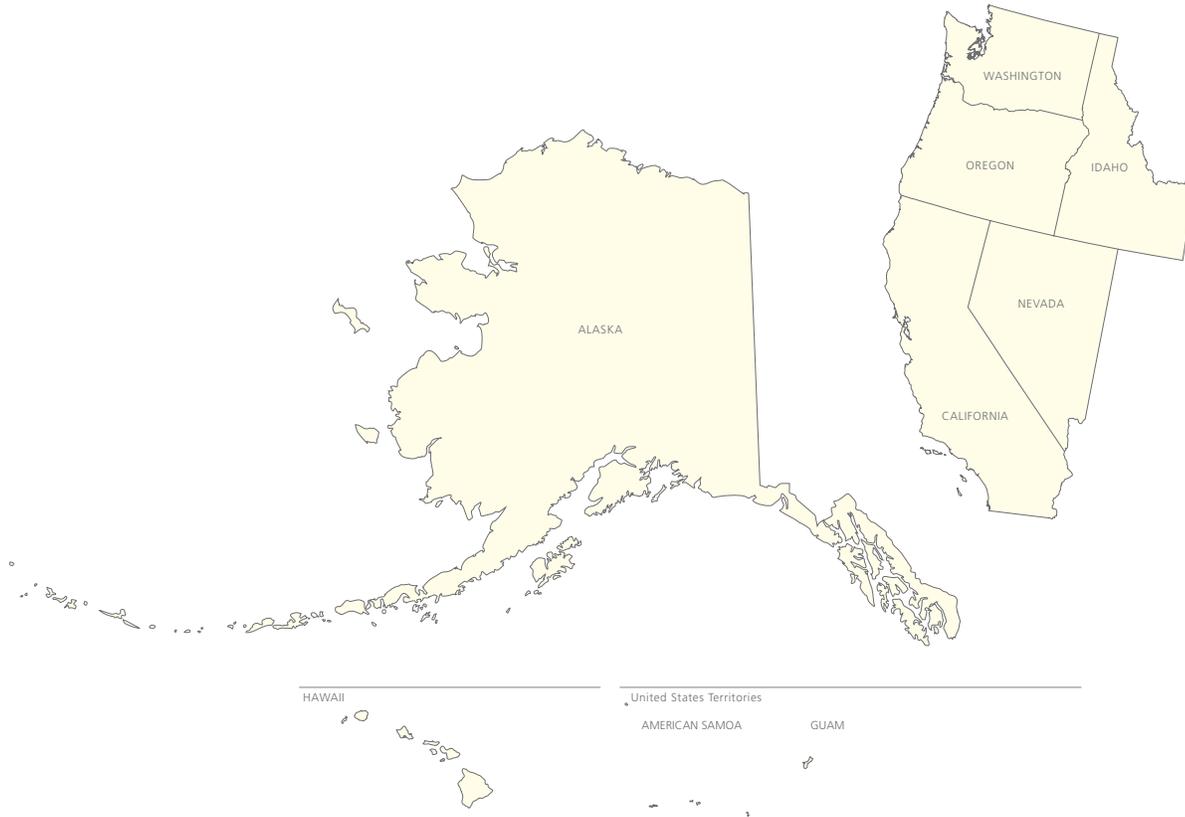


# Far West Region

California, Oregon, Washington, Alaska, Nevada, Idaho, Pacific Islands



# California Tribal Partnerships

## Traditional Native American Values Support Forest Management

**Location:** California

**Project Summary:** A unique blend of traditional Native American practices and today's science preserves native customs and contributes to forest health.

PHOTO BY KEN WILSON



**Children practice indigenous basket weaving techniques at a camp in California that sustains traditional cultural practices.**

### Resource Challenge

Over thousands of years, native peoples learned to manage the land, using practices such as controlled burns to create a healthy landscape. The USDA Forest Service in California is consulting and collaborating with tribes on more than 50 projects. Several are government-to-government agreements, with both entities pledging to cooperatively protect and restore the ecological health of land. Restoring and sustaining culturally important plants and re-introducing fire as a tool for forest renewal are two of the primary objectives.

### Examples of Key Partners

USDA Forest Service, Karuk Indigenous Weavers, California Indian Forest and Fire Management Council, Karuk Tribe of California, Maidu Tribe of California, California Department of Transportation, USDI, USDI Bureau of Land Management, California State Preservation Office, and others.

### Results and Accomplishments

Two projects illustrate effective government-to-government programs:

- *Follow the Smoke Passport in Time Project* is part of a USDA Forest Service program called “Passport in Time,” which gives volunteers a chance to participate in historic preservation and cultural projects. Started seven years ago, the project is helping to sustain traditional basket weaving.

Participants camp with California Indian basket weavers for a week, helping them process materials and weave baskets. Besides

working with weavers, volunteers manage forests for future basketry materials, thinning heavy fuels and building fire breaks to prepare for Forest Service controlled burns. More than 500 participants have volunteered 2,800 hours, saving \$25,000 in taxpayer dollars. The National Advisory Council on Historic Preservation and the Governor of California have both awarded the project for enhancing traditional forest management in California.

- *The Maidu Cultural Development Group Stewardship Project (MCDG)* is integrating traditional land practices with modern resource management on 2,100 acres of the Plumas National Forest. Traditionally, Maidu Indians tended forests, cultivating oaks to produce acorns, farming camas bulbs for food, harvesting wormwood for medicines, and pruning willows and maples for basket materials. The project is transplanting brodiaea and camus, reintroducing basketry materials, pruning oaks, and conducting low intensity prescribed burns.

The Maidu Cultural and Development Center and the Forest Service signed a 10-year Stewardship Contract to use Traditional Ecological Knowledge (TEK) across 1,500 acres of Plumas. The Center developed a Global Positioning System (GPS) inventory of the plants and wildlife habitat and has selected sites to monitor with other partners throughout the 10-year period. Maidu crews also transplanted gray willows, eradicated noxious weeds, and began long-term management of bear grass for basket making. The Maidu Group now issues contracts and subcontracts, and is running a successful business.

### Innovation/Highlight

**Collaboration with tribal governments brings traditional, holistic practices to modern resource management.**

### Project Contact

Sonia Tamez  
Regional Tribal Relations  
Program Manager  
USDA Forest Service  
707-562-8919  
stamez@fs.fed.us

*Website:* [www.r5.fs.fed.us/tribal-relations](http://www.r5.fs.fed.us/tribal-relations)



# Cascade Streamwatch Project

## Providing a Window to the Life of Native Salmon

**Location:** Oregon

**Project Summary:** The Cascade Streamwatch is a collaborative educational outdoor site for teaching and expanding public understanding of healthy watersheds and fisheries.



**Marshall High School students study stream characteristics, chemistry, and organisms in the Salmon River.**

### Resource Challenge

In 1990, the USDI Bureau of Land Management (BLM) and the USDA Forest Service began to discuss a potential interpretive facility and education program centering on healthy watersheds and fisheries. The idea soon attracted the interest of Wolfree Inc., a non-profit organization dedicated to providing science-oriented natural resource programs to underserved populations. The idea for Cascade Streamwatch was born.

The biggest challenge was finding a suitable site close to Portland, Oregon that could provide safe, accessible facilities for users. The BLM Wildwood Recreation Site, located on the Salmon River 39 miles east of Portland, proved to be the perfect spot. The Salmon River, rising from the snow and ice of Mt Hood, is a federally-designated Wild and Scenic River which harbors several species of salmon and trout. Wolfree developed and tested an extensive science-based education program, including teaching materials and in-service training for teachers.

Today, visitors can learn about terrestrial and aquatic habitats as part of an innovative watershed ecology program. Its most unique feature is an accessible in-stream viewing window where visitors can see native northwest salmon and steelhead living in their natural habitat. Students, with help from private and public natural resource specialists, make observations, develop hypotheses, investigate aquatic and terrestrial systems to test their hypotheses, and present their conclusions.

### Examples of Key Partners

USDI Bureau of Land Management (BLM), USDA Forest Service, and Wolfree Inc., a non-profit educational organization.

### Results and Accomplishments

Cascade Streamwatch, now 15 years old, has become one of the most successful outdoor educational sites in the Northwest, hosting more than 80,000 visitors to Wildwood and Cascade Streamwatch each year. More than 10,000 students and adults participate in Wolfree’s programs or in other school programs, educational events, and tours.

Wolfree has been an invaluable partner in building awareness and support for Cascade Streamwatch in the diverse communities it serves. Just a few of the private and public supporters are: the City of Portland Water Bureau, Jackson Foundation, Kelly Foundation, Merrill Lynch and Co. Foundation, Metro Greenspaces, Northwest Natural, Trout Unlimited, Oregon Community Foundation, Oregon Department of Fish and Wildlife, Clackamas County, Portland General Electric, Portland State University, Wells Fargo, US Bank, Weyerhaeuser Company, Oregon Forest Resources Institute, Templeton Foundation, and the Oregon Watershed Enhancement Board.

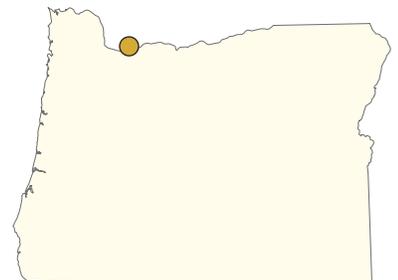
Wolfree and its partners were recently honored by the Superintendent of Portland Public Schools. In 2005, Portland State University presented Wolfree with a Civic Engagement Award for excellence in partnerships for student learning.

### Innovation/Highlight

**The Project partners developed a hands-on educational experience featuring a streamside viewing window for observing fish.**

### Project Contact

Dale Waddell  
Executive Director  
Wolfree Inc.  
503-239-1820  
sierra@ccwebster.net



# Central Oregon Partnership for Wildfire Risk Reduction

## Linking Wildfire Prevention with Economic Opportunity

**Location:** Central Oregon

**Project Summary:** The Central Oregon Partnership is using small tree harvests as a tool to foster health forest health and build new forest-biomass industries.



**“Melcher Harvester” being used in forest management for the Central Oregon CROP program.**

### Resource Challenge

Millions of forests in the interior West face a high risk of catastrophic wildfires. The main cause of the problem is a buildup of undergrowth and small trees that cause wildfires to burn fiercely. A major initiative is underway to remove excess fuels in high-risk areas, but the lack of markets for small trees is a problem.

In 2001, the Central Oregon Intergovernmental Council (COIC) launched the Central Oregon Partnerships for Wildfire Risk Reduction (COPWRR) Project, whose goals are to reduce wildfire risk, enhance ecosystem health, and improve forest-based economies. The group identified a key need: a dependable supply of small diameter wood to attract businesses. The region’s supply of small wood fluctuated over the years, a factor in stalling investments in technology and employment.

The COPWRR created a Coordinated Resource Offering Protocol (CROP) initiative to help stabilize the regional wood supply. The Partnership agreed with the principle that ecosystem health, removing excess fuels, and reducing wildfire risk around communities should drive the supply.

The CROP selected two key strategies: 1) fostering markets to utilize biomass material from forest treatments, and 2) developing 10-year stewardship contracts. Stewardship contracts bundle land management tasks within a single long term contract, offering producers a steady supply of work and materials while benefiting the forest and cutting administrative costs.

### Examples of Key Partners

Central Oregon Intergovernmental Council, USDA Forest Service, Deschutes and Ochoco National Forests; USDI Bureau of Land Management (BLM), Governor’s Central Region Community Solutions Team, Friends of the Metolius, Clean Air Committee, Sustainable Northwest, Oregon Solutions, 3E Strategies, Northwest Wood Products Association, Oregon Departments of Fish and Wildlife, and Forestry; Oregon Natural Resources Council, Sisters Forest Planning Committee, Warm Springs Tribes, and forest industries.

### Results and Accomplishments

Oregon’s Governor designated the CROP initiative an Oregon Solutions project in 2003. The multi-interest group reached a consensus on purpose, goals, and implementation, signing a Declaration of Cooperation in January 2005. The Team’s activities include:

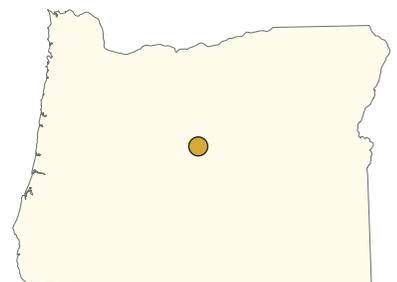
- Treating more than 28,000 acres per year to reduce hazardous fuels with a goal of 90,000 acres a year to address forest health, habitat improvement and biomass market stability.
- Fostering cooperative relationships to market and sell low-value trees.
- Developing and testing new harvesting techniques that are low impact on site soils and reduce skid trails.
- Launching a project monitoring protocol to measure progress on treatment goals, biomass market development, job creation, environmental effectiveness of treatments, and site impacts from tree harvests.

### Innovation/Highlight

**The CROP achieves ecosystem goals by creating markets for small diameter trees that need to be removed from the forest.**

### Project Contact

Scott Aycock  
Program Administrator  
Central Oregon  
Intergovernmental Council  
541-548-9525  
coic@coic.org



*Website: [www.coic.org](http://www.coic.org)*

# Commencement Bay Natural Resource Damage Assessment and Restoration

## From Derelict Waterfront to Prime Salmon Habitat

**Location:** Tacoma, Washington

**Project Summary:** This project showcases community-based restoration in Commencement Bay, a heavily urbanized, industrial area.

PHOTO COURTESY OF NOAA



**Trustees preparing for the big planting day by positioning plants that will be planted later on by volunteers.**

### Resource Challenge

Commencement Bay was built in the early 1900's by dredging and filling 4,000 acres of tidal flats and estuaries. Today, it is a major trans-Pacific port ringed by chemical, concrete, aluminum, and lumber manufacturers. Despite past filling and dredging, the Bay still provides critical rearing and feeding habitat for many marine species, including endangered Chinook salmon.

Restoring urban industrial areas is expensive and complex, requiring extraordinary cooperation. The Commencement Bay partnership grew from a common responsibility and a mandate of the National Resource Damage Assessment (NRDA) process to restore, replace, or acquire natural resources equivalent to those once found in the Bay. The partnership leverages and facilitates more restoration activity than the NRDA Trustees could accomplish alone. Community-based restoration has not only increased the extent of restoration, but inspired a commitment to the bay's long-term stewardship.

### Examples of Key Partners

National Oceanic and Atmospheric Administration (NOAA), USDI Fish and Wildlife Service, State of Washington Departments of: Ecology, Natural Resources, and Fish and Wildlife; Indian Tribes: Puyallup and Muckleshoot; Citizens For A Healthy Bay (CHB); Friends of Hylebos Wetlands; Earth Corps; South Puget Sound Salmon Enhancement Group; Ridolfi Inc.; City of Tacoma; Pierce County Water Programs; Pierce Conservation District; Sumner Sportsmen's Association; and David Adams, landowner.

### Results and Accomplishments

The following projects have been completed or are scheduled for completion soon:

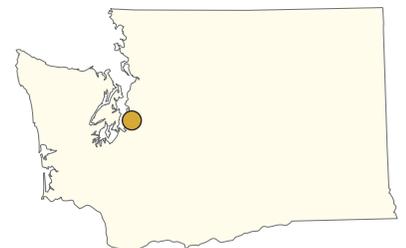
- Trustees, the Puyallup Tribe of Indians, Pierce County Water Programs, and the South Puget Sound Salmon Enhancement Group reconnected the 96th Street Oxbow to the river's main channel by widening a culvert in the levee and digging a historic channel.
- A 15-acre project site, littered with derelict vessels and equipment, was cleared of debris, restoring a migratory corridor for young salmonids.
- CHB purchases, assembles, and distributes clean boating kits that help prevent fuel spills and keep contaminated bilge water from entering the Bay, educating boaters on "green" operation.
- Recently purchased 16 acres to construct fish and wildlife habitat along the last tidally-influenced reach of Hylebos Creek.
- The Sha Dadx (Frank Albert Road) project will convert a relic channel of the Puyallup River to salmonid and other habitat and allow water to flow between the river and wetland. A ring levee will surround the entire project for flood control.
- Restoration projects have been completed, or will be soon, at Middle Waterway, Olympic View, Swan Creek, Tahoma Salt Marsh, Mowitch, Skookum Wuldge, Squally Beach, Yowkwala, Sportsmen's Oxbow, and St. Paul Cap.

### Innovation/Highlight

**Evolution of a mandate into a partnership that leverages voluntary participation and community-based restoration grants into long-term stewardship.**

### Project Contact

Lance Winecka  
 Project Manager  
 South Puget Sound Salmon Enhancement Group  
 360- 412-0808  
 Email: lancew@spsseg.org



**Website:** [www.darp.noaa.gov/northwest/cbay/restore.html](http://www.darp.noaa.gov/northwest/cbay/restore.html)

## Creeks & Communities

### Building Capacity for Collaborative Stewardship

**Location:** Western United States, Mexico, and British Columbia

**Project Summary:** Federal-level, interagency strategy designed to foster and support grassroots action across the landscape for stewardship of wetlands and riparian areas.



**Creeks and Communities participants in Madera, Chihuahua, Mexico.**

#### Resource Challenge

Healthy communities need healthy riparian areas and wetlands. While most people recognize the importance of these resources, there can be strong disagreement about their condition and what actions should be taken to restore and maintain these resources. The Creeks and Communities strategy, initiated in 1996 and led by the National Riparian Service Team—a joint effort of USDI Bureau of Land Management (BLM) and the USDA Forest Service—builds the community’s capacity to confront and manage riparian and wetland resources issues.

#### Examples of Key Partners

National Riparian Service Team (USDI-BLM and USDA-FS), USDA National Resources Conservation Service, the Riparian Coordination Network, landowners and others.

#### Results and Accomplishments

After eight years, the creeks and communities strategy has reached more than 25,000 people through 335 briefings and presentations, 475 community-based training sessions, and 185 service trips (training combined with on-site problem solving).

The creeks and community strategy is based on sound scientific principles and practices applied in an adaptive and collaborative framework. Experts in both scientific and collaborative fields support hands-on wetland and riparian stewardship planning and management. The partnership has successfully addressed issues ranging from enhancing communication and cooperation in collaborative planning processes, to averting appeals and lawsuits, to

improving resource conditions. Projects that highlight the creeks and communities strategy include:

*Yainix Ranch* – The owners of the Yainix Ranch in the Sprague River Valley of southeast Oregon are using their land as a model to break the impasse between Klamath Project irrigators, environmentalists, and the Klamath Tribes. With the help of the National Riparian Service Team (NRST), the USDA National Conservation Service (NRCS), Sustainable Northwest, the Klamath Tribes and others, the owners are using their ranch as a testing ground for collaborative river restoration that can help guide the recovery of the Klamath Basin and its communities.

*North Fork Crooked River* – A designated Wild and Scenic River located in Cook County, Oregon, the North Fork Crooked River supports outstanding scenic, botanical, and wildlife values. It is also a river divided. Issues range from de-watering due to irrigation, to grazing impacts, to upland forest conditions. The Ochoco National Forest contacted NRST to help it start a collaborative management process. The communities and creeks strategy strengthened local capacity to address on-the-ground water and riparian issues and prepared stakeholders to design a management and monitoring strategy.

#### Innovation/Highlight

**The partnership is working directly with people on the land, at their location, focusing on their issues and helping them develop the skills needed to restore and manage riparian areas and wetlands.**

#### Project Contact

Laura Van Riper, Ph.D.  
Social Scientist  
National Riparian Service Team  
541-416-6702  
laura\_van\_riper@or.blm.gov

*Website:* [www.or.blm.gov/nrst](http://www.or.blm.gov/nrst)



# Crissy Field Restoration

## Transforming the Presidio's Urban Waterfront

**Location:** San Francisco, CA

**Project Summary:** The Restoration project created a world-class waterfront park from a former 100-acre asphalt and concrete dump, raising \$34 million in private funds.

PHOTO BY DAVID SANGER PHOTOGRAPHY



**The 28-acre restored grass airfield at Crissy Field.**

### Resource Challenge

The Presidio in San Francisco is a National Historic Landmark transferred from the Department of Army to the U. S. National Park Service in 1994. It was the nation's longest-operating military facility, having served under the flags of three nations. Crissy Field, part of the Presidio and on the waterfront east of the Golden Gate Bridge, was originally part of a large estuary. It was filled with debris from the 1906 San Francisco Earthquake, and was further degraded when it served as a site for the 1915 Panama International Exposition. Later, the Army located maintenance, engineering, and other operations there. It was also a dump for domestic waste and paved with asphalt and concrete.

Partners in the Crissy Field restoration needed to strike a balance between protecting cultural resources and restoring natural resources. Major resource challenges included removing more than 87,000 cubic yards of contaminated materials, crushing 75 acres of asphalt and concrete on site and using the aggregates as a foundation for walkways and bikeways, reconstructing the original dunes, creating a 22-acre tidal lagoon, and placing fill from the lagoon to create a foundation for the restored Crissy airfield. Partners would raise \$34 million in non-federal money for the project.

### Examples of Key Partners

USDI National Park Service (NPS), Golden Gate National Park Conservancy, U.S. Army, The Presidio Trust (Federal Government Corporation), the City and County of San Francisco, California Coastal Conservancy State agency, and thousands of citizen stewards.

### Results and Accomplishments

The Project's Accomplishments include:

- Raised \$34 million in non-federal funds under the leadership of the Golden Gate National Park Conservancy, non-profit partner to the Golden Gate National Parks, realizing the public's vision for the site.
- Signed an agreement among the National Park Service, the Parks Conservancy, and the Haas, Jr. Fund, spelling out each party's commitment to a successful partnership.
- Accepted the largest monetary gift ever given to the National Park Service.
- Established a zone stewardship concept to engage the community in site maintenance.
- Created the Crissy Field Center, a community-based facility for environmental programs.
- Established Community and Youth Advisory Boards through the Golden Gate National Parks Conservancy to develop onsite programs and connect to diverse communities.
- Initiated an Emerging Young Environmental Leaders Program at the Crissy Field community center, drawn from diverse communities.
- Initiated a Community Heroes program to recognize environmental leadership in the community.
- Cultivated and planted vegetation for the "Help Grow Crissy Field" campaign, using citizen volunteers.

### Innovation/Highlight

**The partners raised \$34 million in private funds and attracted citizen volunteers to sustain on-going operations.**

### Project Contact

Greg Moore  
 Executive Director  
 Golden Gate National Parks Conservancy  
 415-561-3030 x 2228  
 gmoore@parksconservancy.org



# Eastern Nevada Landscape Coalition

## Saving the Great Basin and the Sage Grouse

**Location:** Eastern Nevada

**Project Summary:** The Eastern Nevada Landscape Coalition is one of the first community-based efforts in the Great Basin to tackle restoration on a landscape-scale.



Eastern Nevada Landscape Coalition annual workshop and tour.

### Resource Challenge

Following the devastating fires of 1999, which burned 1.7 million acres in Northern Nevada, a team from the USDI Bureau of Land Management (BLM) published two reports, the first identifying the need to restore the Great Basin and the second identifying the steps to make it happen.

The BLM and others drew three conclusions from the reports:

- Fire suppression and invasive annuals and noxious weeds accounted for the poor condition of the Great Basin ecosystem.
- Restoration of sage grouse was linked to the ecological health of the Great Basin.
- Traditional ways to fight invasive species and to restore native habitat were inadequate for basin-wide recovery.

Spurred on by these findings, the Ely Nevada BLM Field Office and others concluded that restoration of the Great Basin would only happen with the support and participation of state and local agencies, tribal governments, universities, natural resource groups, and communities. The BLM moved quickly to garner support. Their efforts materialized in 2001 with the founding of The Eastern Nevada Landscape Coalition (ENLC), an unprecedented community-based partnership for landscape-level restoration of the eastern Nevada Great Basin ecosystem.

The ENLC membership has grown quickly, now standing at more than 100, and so has its commitment to full partnership with the Ely Nevada BLM Field Office in restoring the Great Basin.

### Examples of Key Partners

Rock Mountain Elk Foundation, The Nature Conservancy, Nevada Cattlemen’s Association, City of Ely, Ely Shoshone Tribe, Nevada Association of Counties, Tri-County Weed District, White Pine County Commission, Nevada Department of Agriculture, Nevada Division of Wildlife, Nevada Senator Dean A. Rhoads, State of Nevada Commission for the Preservation of Wild Horses, Red Rock Audubon Society, Nevada Farm Bureau, Society of Range Management – Nevada, Big Horns Unlimited, Nevada Wild Land Seed Producers, Newark/Long Valley Cooperative Weed Management Area, White River Valley Cooperative Weed Management Area, Railroad Valley Cooperative Weed Management Area, Snake Valley Cooperative Weed Management Area, federal agencies, and others.

### Results and Accomplishments

During BLM fiscal years 2003-2006, the ENLC worked on more than 8.7 million acres in six watersheds; activities included restoration, treatments, inventories, and data collection. Achievements include:

- Surveyed more than four million acres and 10,000 sites.
- Restored and reseeded more than 2,000 acres.
- Inventoried more than 6 million acres for noxious and invasive weeds.
- Received FY 2004 and 2005 grants to implement restoration projects in the Gleason Creek and Smith Valley watersheds.

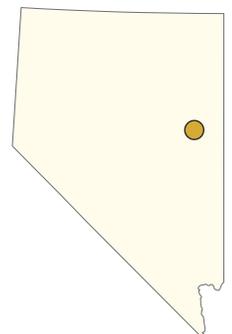
### Innovation/Highlight

**A community-based restoration initiative working at a landscape level and relying on a Science Committee to guide restoration activities in the project area.**

### Project Contact

Betsy McFarland  
Executive Director  
Eastern Nevada Landscape Coalition  
775- 289-7974  
encl@sbcglobal.net

Website: [www.envlc.org](http://www.envlc.org)



# Ebey's Landing National Historical Reserve

## Community Commits to Conserving Land and History

**Location:** Puget Sound, Washington

**Project Summary:** The community of Coupeville, WA, and the National Park Service manage Ebey's Landing for historic, agricultural, and open space conservation.



**Students from the 2002 Pacific Northwest Preservation Field School repair the historic Jacob Ebey Blockhouse.**

### Resource Challenge

The Ebey's Landing National Historical Reserve (NHR), created by Congress in 1978, is one of just a few places where much of the Northwest's history is still evident on the landscape, appearing to today's visitors much as it did a century ago. One hundred year-old farms are still active; forests are harvested; century-old buildings still serve as homes or businesses.

Most of the land within Ebey's NHR is privately owned, including its farms, shops, and homes. The historic waterfront town of Coupeville, located within the Reserve boundary, still serves as the county seat. In the mid-1970s, most of Ebey's prairie was subdivided into 5-acre house lots. Coupeville residents were torn over the prospect of losing the agricultural landscape, historic sites, and open space. They chose to support a new Reserve to preserve these values.

Unlike most National Parks, the 25 square mile Reserve mixes federal, state, county, and private property, all managed to preserve their historic integrity. Changes in the cultural landscape will continue but in a way that respects the past.

Ebey's partners are responsible for retaining the historic fabric; a Trust Board appointed from the community governs the Reserve. A Citizen's Advisory Committee advises the Board. Local government uses zoning and design reviews to ensure that future growth is in keeping with the historic buildings and the landscapes that make Ebey's Landing unique.

### Examples of Key Partners

USDI National Park Service, Washington State Parks and Recreation Commission, Island County, Town of Coupeville, private landowners, local agricultural community, The Nature Conservancy, The Trust For Public Land, Whidbey Camano Land Trust, AuSable Institute (Christian Environmental Stewardship Institute), and Island County Historical Society.

### Results and Accomplishments

The Trust Board and partners are actively protecting the Reserve's historic and natural resources. The Board and The Nature Conservancy protected more than 600 acres of prime scenic and recreational land using the Land and Water Conservation Fund and more than \$2 million in private donations.

Reserve partners use scenic easements as their principal protection tool. Easements keep the land in private ownership, on the tax rolls, and relieve the Reserve from managing thousands of acres. Local residents farm and manage lands that have easements, maintaining the historic landscape, sustaining local agriculture, and conserving open space. The Trust is looking at options to ensure that agriculture remains economically viable in the face of changing market conditions.

### Innovation/Highlight

**The Ebey's Landing is a mixed-ownership Park governed by a local community board and advised by a Citizen's Advisory Committee.**

### Project Contact

Rob Harbour  
Manager  
Ebey's Landing National  
Historical Reserve  
360-678-6084  
Rob\_Harbour@partner.nps.gov



*Website: [www.nps.gov/lebl](http://www.nps.gov/lebl)*

## Endangered Species Conservation Partnership

### Marine Training and “Sweat Equity” Overcome Foreign Plant Invasion

**Location:** Marine Corps Base, Hawaii

**Project Summary:** Marine Corps links training maneuvers to conservation by using amphibious assault vehicles to control invasive plant species, helping to restore the Hawaiian stilt.

PHOTO BY DR. DIANE DRIGOT



**Nesting endangered Hawaiian Stilt (*Himantopus mexicanus knudseni*) at Nu’upia Ponds, Marine Corps Base Hawaii.**

#### Resource Challenge

Pickleweed and mangroves are aggressive non-native plants that are spreading rapidly through coastal wetlands, where they displace, and sometimes eliminate, native vegetation and wildlife. One species of waterbird, the Hawaiian stilt, has been declining in numbers as these non-native plants invade the open mudflats it needs for foraging and nesting. The bird is federally listed as endangered.

Though the number of Hawaiian stilts counted in Marine Corps Base Hawaii’s wetlands dropped to just 60 in the early 1980s, the base still hosted one of the State’s largest concentrations of the birds. However, pickleweed and mangroves were creeping into traditional feeding and nesting areas, threatening to wipe out the remaining birds, ultimately contributing to their possible extinction.

#### Examples of Key Partners

Sierra Club, Hawaii Chapter; Hawaii Department of Land and Natural Resources; Marine Corps Base Hawaii, 3rd Marine Regiments Combat Assault Company, USDI Fish and Wildlife Service’s Pacific Islands Office, schools, civic groups, and citizens.

#### Results and Accomplishments

In the early 1980s, Base natural resources staff and Marines began teaming with civilian volunteers such as the Sierra Club and other groups to host “ecology camps” to remove mangrove and pickleweed by hand. At the same time, Marines began what is now an annual “Mud Ops” tradition, where weed removal joins Marine training maneuvers. Using 26-ton amphibious assault vehicles, Marines plow through pickleweed in wetland mudflats, improving stilt habitat

before the onset of nesting season while gaining valuable training experience.

While using amphibious assault vehicles might seem heavy-handed, it controls the noxious weeds, allows stilts and native plants to re-establish themselves, and provides the Marines with essential training. Machines developed to operate in wartime are waging an ecological battle. In addition, the event accomplishes in two days what it would take contractors weeks to do. And it’s successful: the number of stilt counted on the Base over twenty years has risen from 60 to 160. The Base is beginning to collaborate with State agencies and other organizations to remove mangroves in adjacent Kaneohe Bay, Oahu to prevent their spread.

“Mud Ops” is featured annually in the media and, in 2004, a nationally distributed poster featuring the event was produced as part of the Marines’ *Saving a Few Good Species* awareness campaign.

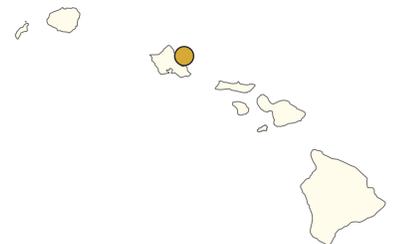
After 23 years, the Marine Corps Base Hawaii has removed all mangroves from its wetlands, kept pickleweed in check, and has been recognized in the State’s Aquatic Invasive Species Management Plan as a proactive conservation leader.

#### Innovation/Highlight

Part of the *Saving a Few Good Species* campaign, the project is combining Marine maneuvers with habitat restoration.

#### Project Contact

Mr. Jeff Mikulina  
 Director  
 Sierra Club, Hawaii Chapter  
 808-538-6616  
 mikulina@lava.net



**Website:** [www.fws.gov/endangered/pubs/marines.html](http://www.fws.gov/endangered/pubs/marines.html)

# Endangered Species Act Assurances for Private Landowners

## Blanket Approvals for Certain Conservation Practices

**Location:** Oregon's Columbia River Basin

**Project Summary:** Private landowners with approved Natural Resources Conservation Service-Resource Management Systems (NRCS-RMS) conservation plans are able to use their lands for work and conservation with a minimum of red tape.



The 2004 Biological Opinion signing ceremony with NRCS, USFWS, NMFS, and the conservation districts.

### Resource Challenge

The Columbia River Basin is the Nation's fourth largest watershed. Originating in Canada and stretching throughout the Pacific Northwest, it covers nearly a quarter of a million miles of mountains, forests, farms, and other lands. The river system supports five species of salmon and other important species, including the steelhead, shad, smelt, and bald eagle, some threatened or endangered.

Wasco, Gilliam, and Sherman Counties sit along several rivers in the heart of the Basin, with agriculture the dominant land use in many places. Numerous Federal and state agencies and non-profit organizations encourage landowners to adopt conservation practices. In areas covered by the Endangered Species Act (ESA), federal agencies are required to employ a lengthy, formal consultation process on landowner conservation plans if the plan might affect endangered or threatened species. These consultations can take months, even years, to complete. Often, the landowner becomes discouraged by the long regulatory process and declines to participate.

### Examples of Key Partners

Oregon Farm Bureau, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture, Oregon Wheat League and Oregon State University Extension, USDA Natural Resources Conservation Service (NRCS), National Marine Fisheries Service (NMFS), USDI Fish and Wildlife Service (FWS), Wasco, Gilliam, and Sherman County Soil and Water Conservation Districts.

### Results and Accomplishments

After a four-year consultation among NRCS, NMFS, and FWS led by the soil and water conservation districts in Wasco, Gilliam and Sherman Counties, the agencies developed a biological assessment and biological opinion for conservation practices in the three counties. Private landowners with an NRCS-approved resource management system (RMS) conservation plan receive an incidental take permit for their operation. This allows private landowners to improve livestock management, plant trees, protect soil, and improve water quality in a timely manner with minimal red tape. In addition, private land managers who have land on hillsides above the streams and reduce soil erosion have the same protections. As an added benefit, farmers can implement the projects when the timing is best for both the endangered species and the crop cycle.

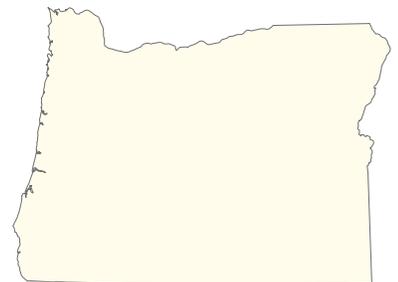
This milestone provides regulatory certainty for agricultural producers under the Endangered Species Act—a win-win for endangered species, farmers, ranchers and federal agencies.

### Innovation/Highlight

ESA consultation process that allows blanket approval for some conservation practices without jeopardy to landowners.

### Project Contact

Deborah Virgovic  
Fish Biologist  
USDA NRCS  
503-414-3094  
Deborah.virgovic@or.usda.gov



Website: <ftp://ftp-fc.sc.egov.usda.gov/OR/Biology/T&E/Tri-County%20Consultation/>

# Five Counties Salmonid Conservation Program

## Counties Take Joint Action to Conserve Endangered Salmon

**Location:** Northern California

**Project Summary:** This program is an innovative local collaboration aimed at the long-term recovery of salmon and steelhead in Northern California.

PHOTO BY ROSS TAYLOR



**For the first time in 50 years, adult salmon can migrate and spawn in tributaries above the fish passage improvement projects.**

### Resource Challenge

In 1997, five Northern California counties agreed to collaborate on a proactive response to the listing of salmon under the federal Endangered Species Act (ESA), forming the Five Counties Salmonid Conservation Program (5C). The goal was to contribute to the long-term recovery of salmon and steelhead in Northern California by: 1) looking at options for improving county plans, policies, and practices for providing or enhancing fish habitat, 2) identifying areas where counties might be vulnerable to challenges under the ESA, and 3) upgrading training programs, monitoring, and reporting procedures.

### Examples of Key Partners

Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity Counties; National Oceanic and Atmospheric Administration (NOAA) Fisheries; California Departments of Fish and Game, Transportation, Regional Water Quality Control Board, Coastal Conservancy; environmental and non-profit organizations; private consultants.

### Results and Accomplishments

The “5C” has effectively capitalized on the technical skills of its participants and leveraged financial support from numerous funding sources. The program has become a model for local California governments that need to develop programs to meet ESA regulatory requirements. It has tallied an impressive list of accomplishments in less than 10 years:

- Completed 39 fish migration barrier removal projects, restoring more than 100 miles of habitat. An additional 9 projects, opening 17 miles of habitat, will be constructed in the summer of 2005, with 9 more projects, opening 19 miles of habitat, being designed or already scheduled for development in 2006.

- Completed six pilot sediment reduction projects and scheduled one for 2005.
- Secured and presently administering more than \$3,580,000 in funding.
- Developing methods to streamline permitting procedures (ESA, Clean Water Act, and California Fish and Game Code).
- Drafted *A Water Quality and Stream Habitat Protection Manual for County Road Maintenance in Northwestern California Watersheds*.
- Kept an estimated 95,200 cubic feet of sediment out of streams via restoration projects.
- Developed watershed-friendly road designs and training.

Collaboration among the counties has reduced maintenance costs, avoided potential fines, and facilitated resource sharing. Future work will include incorporating land use incentives into county general plans, designing and building storm water retention basins in county facilities, and restoring and enhancing urban streams.

### Innovation/Highlight

**A collaborative, proactive local government approach to endangered species protection and recovery.**

### Project Contact

Mark Lancaster  
5C Program Director  
Trinity County Planning Department  
530-623-1351 x 5  
mlancaster@trinitycounty.org

*Website:* [www.5counties.org](http://www.5counties.org)



# Fort Hunter Liggett Grasslands Restoration

## Controlling a Thorny Problem: The Invasive Yellow Star Thistle

**Location:** Central California

**Project Summary:** A broad-based partnership is working to restore the grasslands and oak savannahs of Fort Hunter Liggett by controlling the invasive yellow star thistle.



**Spraying of Transline, a herbicide at Fort Hunter Liggett in the Long Valley area**

PHOTO BY ART HAZE BROOK

### Resource Challenge

Fort Hunter Liggett in California holds thousands of acres of grassland habitat and oak savannah within its borders, land that supports numerous species of vegetation and wildlife, including the second largest elk herd in the state. From a military perspective, these ecosystems offer quality training in a natural setting, typifying a Mediterranean-type climate. From a natural resources perspective, California's grasslands and oak savannahs are declining in both amount and quality, threatening the animals and plants that depend upon them. Vernal pools, or seasonal wetlands, occur frequently in these grasslands, providing habitat for many species including the federally listed vernal pool fairy shrimp.

Since the non-native yellow star thistle was introduced to California in the 1800s, it has invaded 25 million acres of grasslands and oak savannah, crowding out native species and hampering soldier training. From the time it was discovered at the Fort, it spread to 20,000 acres in just 5 years. Besides overrunning native vegetation, the plant causes other problems: its thorns are sharp enough to rip clothing, the plant is toxic to horses, and cattle cannot eat the plant because it sticks in their throat. Worse, it's prolific. Each plant produces about 5,000 seeds which can lay dormant for up to 5 years.

### Examples of Key Partners

Federal Agencies: U.S. Army West Coast Garrison (P), Fort Hunter Liggett Installation, Army Environmental Center; State Agencies: Monterey County Agriculture, San Luis Obispo County Department of Agriculture; non-government organizations: Rocky Mountain Elk Foundation; University of California-Davis, and Dow Agrochemical.

### Innovation/Highlight

**Weed control with a combination of a plant-specific herbicide, prescribed fire, and biological controls.**

### Results and Accomplishments

The Fort joined forces with State agencies and the Rocky Mountain Elk Foundation to control the yellow star thistle infestation.

Since 1999, about 4,800 acres have been treated successfully with a combination of prescribed fire, biological controls, and herbicides. The herbicide, developed by Dow Chemical, kills only the yellow star thistle, which allows safe aerial applications. It is applied for two consecutive years, supplemented by controlled fires to further stamp out the invader. In addition, plant-specific beetles and a fungus are being tested in the hope that they will substitute for the lack of natural enemies.

The Rocky Mountain Elk Foundation has awarded two grants to support yellow star thistle control, matched by funds from the Fort Hunter Liggett hunting program.

Besides helping the Army clear Fort Hunter Liggett of yellow star thistle, the partners plan to assist farmers and ranchers in protecting and restoring their lands.

### Project Contact

Mr. Gary Houston  
Chief, Environmental Office  
US Army, Combat Support  
Training Center  
831-386-2365  
Gary.Houston@liggett-emh1.army.mil



# Hawaii Coral Reef and Native Algae Restoration

## Removing Alien Invaders That are Smothering Hawaii's Reefs

**Location:** O'ahu, Hawai'i

**Project Summary:** Volunteers, local communities, Non-governmental organizations (NGO), businesses, and government work together to remove invasive alien algae and to restore Hawaii's coral reefs.

PHOTO BY BRUCE CASLER



Hundreds of volunteers remove *Gracilaria salicornia* from the reefs of Waikiki, O'ahu.

### Resource Challenge

Hawaii's coral reefs are home to an abundance of marine invertebrates and fishes, nearly 28 percent found solely in Hawaii. The spread of invasive, non-native marine algae is one of the greatest threats to Hawaii's coral reefs and other near shore marine ecosystems. As alien algae spreads, it grows over and smothers coral reefs and native algal communities, killing extensive areas of native habitat.

This project is taking significant strides toward restoring and protecting Hawaii's coral reef ecosystems by removing alien algae and restoring native species in Kane'ohe Bay and Waikiki, O'ahu, and by fostering community stewardship through education and volunteerism.

The initiative, which was sparked by a small group of agencies led by The Nature Conservancy and the University of Hawaii, has evolved into one of the largest grassroots partnerships in the state, and includes federal, state, and county agencies, local businesses, and thousands of volunteers from across the island.

### Examples of Key Partners

National Oceanic and Atmospheric Administration (NOAA) Community-based Restoration Program, The Nature Conservancy of Hawaii, Hawaii State Division of Aquatic Resources, University of Hawaii, Waikiki Aquarium, the Hawaii Coral Reef Research Initiative, Coordinating Group on Alien Pest Species, the USDI, Reef Check, local businesses and community groups.

### Innovation/Highlight

The Project is developing new mechanical and biological techniques for removing invasive algae, and using historic cultural practices for reestablishing native algae species at restoration sites.

### Results and Accomplishments

Removing alien algae from high priority coral reefs is key to the long-term survival of Hawaii's reefs and the abundance of life that thrives there. Volunteers have removed more than 88 tons of the alien algae *G. salicornia* at more than a dozen community-based events over the past three years.

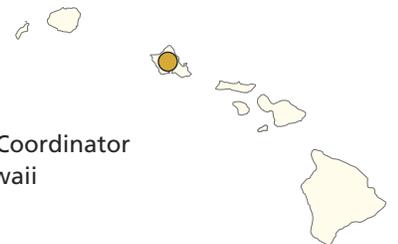
The Nature Conservancy recently developed and is testing a floating platform barge with a mechanized removal device, greatly increasing removal efficiency. The University of Hawaii, Waikiki Aquarium, Hawaii Coral Reef Research Initiative, and the Hawai'i Institute of Marine Biology are also exploring a new invasive algae control technique that uses a native Hawaiian sea urchin (*Tripnustes gratilla*) to graze any remaining invasive algae, and thereby help to prevent re-establishment after mechanical removal.

The State Division of Aquatic Resources, the Coordinating Group on Alien Pest Species, and The Nature Conservancy are now reaching out to communities statewide, offering education and volunteer opportunities for control, early detection, and rapid response to curtail the spread of invasive algae in other areas, and more importantly, to stop new infestations before they become established.

### Project Contact

Eric Co  
 Marine Conservation Program Coordinator  
 The Nature Conservancy of Hawaii  
 808-537-4508  
 eco@tnc.org

**Website:**  
[www.nature.org/wherewework/northamericalstates/hawaii/](http://www.nature.org/wherewework/northamericalstates/hawaii/)



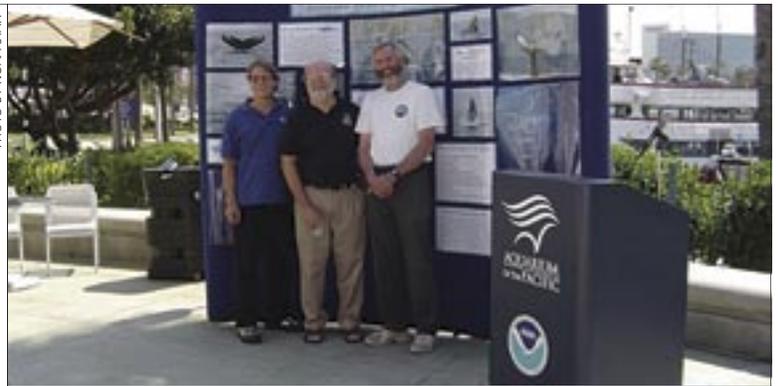
# Hawaiian Islands Humpback Whale National Marine Sanctuary

## State/Federal Agencies Co-manage Sensitive Humpback Whale Program

**Location:** Kihei, Hawaii

**Project Summary:** Protection of humpback whales is enhanced through a State/Federal management partnership.

PHOTO BY NOAA STAFF



**SPLASH partners present efforts to protect humpback whales.**

### Resource Challenge

Congress authorized the Hawaiian Islands Humpback Whale National Marine Sanctuary (HIHWNMS) in 1992 to: 1) strengthen resource protection measures, 2) educate the public about regulations that protect humpback whales and enhance enforcement, 3) conduct research, 4) increase awareness of humpbacks and their habitat, and 5) minimize stakeholder conflicts. Hawaii’s Governor formally approved the agreement in 1997.

The HIHWNMS is jointly managed by a national sanctuary manager whose program guidance is from the National Marine Sanctuary Program, and a state of Hawaii manager whose guidance comes from the Hawaii Department of Land and Natural Resources (DLNR). A Sanctuary Advisory Council offers advice and recommendations to the Secretary of Commerce through the national Sanctuary manager, and deserves much of the credit for the Sanctuary’s initial growth and success.

### Examples of Key Partners

Haleakalā National Park, State of Hawaii Dept. of Education, and Dept. of Land and Natural Resources (DLNR), and others; marine science organizations, Marine Mammal Commission, National Marine Mammal Laboratory, Marine Sanctuary Foundation, and Marine Sanctuary Programs; National Oceanic and Atmospheric Administration (NOAA), USDI Fish and Wildlife Service, the Sanctuary Advisory Council, Keālia Pond National Wildlife Refuge and Kilauea Point National Wildlife Refuge, communities, volunteers, schools, and other non-government organizations.

### Results and Accomplishments

Some of the Sanctuary’s successes include:

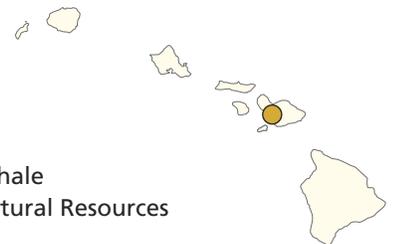
- Assessed the growing frequency of ship/whale collisions and identified actions to reduce the number of strikes. More than 80 resource managers, scientists, and marine community representatives made recommendations; priority issues are being addressed.
- Helped launch SPLASH, the most ambitious study of North Pacific humpbacks ever undertaken. Started in 2004, the three-year study involves hundreds of researchers from the United States, Japan, Russia, Mexico, Canada, the Philippines, Costa Rica, Panama, Nicaragua, and Guatemala, who are studying all known humpback whale habitats from the Bering Sea and Russia south to Costa Rica, and west to Hawaii and Asian tropical waters.
- Completed research that shows that Hawaii’s migratory population is increasing by 7 percent annually.
- Sponsored the 2000 Hawaii International Marine Debris Conference to address problems caused by discarded and lost fishing gear.
- Sponsored monthly lectures and teacher-student workshops. Sanctuary volunteers have also contributed substantively to on-site educational activities.

### Innovation/Highlight

**Joint State/Federal management of an important marine conservation program.**

### Project Contact

Jeffrey Walters, Ph.D.  
Sanctuary Co-manager  
Hawaiian Islands Humpback Whale  
NMS/Department of Land & Natural Resources  
808-587-0106  
Jeffrey.S.Walters@hawaii.gov



## Herger-Feinstein Quincy Library Group Pilot Project

### Community-based Group Balances Conservation and Community Stability

**Location:** Lassen, Plumas and Sierra Counties in northeastern California

**Project Summary:** The Quincy Library Group created a model for forest governance by making the community and community goals a central part of forest management.



**Wildlife biologist Tom Rickman explaining the benefits of removing conifer trees from an overgrown aspen stand.**

#### Resource Challenge

Quincy, a northern California logging town, was in deep distress. From bullet holes in an office window to near misses from swerving logging trucks, the environmental community and the timber industry were at war. Lower timber harvests, job losses, and less revenue to run county governments added to the frustration and animosity.

A handful of Quincy leaders decided that their small community would be different from so many others locked in similar controversies. Three men—an elected county supervisor, a timber company executive, and an environmental lawyer—met at the town library to talk. It was “the only neutral place we could think of, and once there, we knew we had to keep our voices down,” said one. They decided to create the Quincy Library Group (QLG), now a 30-member, citizen-based committee that bases its ideas on sound technical information, a broad political base, and local participation.

The QLG focuses on Lassen, Plumas, and Sierra Counties in northeastern California, which are primarily federal lands. Like Quincy, the region is heavily dependent on the logging industry.

#### Examples of Key Partners

Bill Coates, Former Plumas County Supervisor, Michael Jackson, Attorney, Tom Nelson, District Forester, and Sierra Pacific Industries were founding members of the QLG. Other members include: forest industry representatives, environmental and policy consultants, county officials, Cooperative Extension, Union representatives, biologists and foresters, wood energy producers, forest users, the academic community, environmental groups, and interested citizens.

#### Innovation/Highlight

**A handful of citizens decided to step out of controversy to work on mutual goals.**

#### Results and Accomplishments

QLG has been successful because: 1) it is hard to avoid people in a small town, 2) each of the three founders were strong personalities, not inclined to be pressured into an artificial consensus, and 3) Quincy’s people cared enough—and worked hard enough—to overcome years of anger and mistrust.

Accomplishments include:

- Adopted a Community Stability Proposal, recommending changes in environmental management on the National Forests
- In 1998, the US House of Representatives voted overwhelmingly to establish the Herger-Feinstein Quincy Library Group Pilot Project, a landmark forest management plan which directed the region’s National Forests to implement several management strategies, including habitat protection for California Spotted Owls. The bill also required the Forest Service to involve the QLG and others in future proposals.
- The QLG secured about \$10 million in supplemental funding from Congress for local National Forests to implement a Forest Health Pilot program based in part on QLG concepts. Two-thirds of the funding goes to forest health project contractors.

#### Project Contact

Bill Coates, Chair  
Quincy Library Group  
530-283-4260  
qlg@qlg.org

*Website: [www.qlg.org/](http://www.qlg.org/)*



# Indian Creek Restoration / City Center Revitalization

## Community Restores Creek to Rejuvenate Downtown

**Location:** Southwest Idaho

**Project Summary:** Caldwell's downtown revitalization plan uses restoration of Indian Creek as the catalyst for a sustainable community with ecological integrity and economic vitality.

PHOTO BY JAN BOLES



**Wetlands theme metal sculpture dedicated at the first annual Indian Creek Festival.**

### Resource Challenge

From its source in the Boise foothills, Indian Creek meanders through farmland, residential, and industrial areas before it enters downtown Caldwell, Idaho, where it joins the Boise River. Early settlers established Caldwell near the Oregon Trail where it became Idaho's first major city. As Caldwell grew, it buried Indian Creek beneath asphalt and concrete.

Eventually, the once-bustling downtown fell victim to retail centers and shopping malls. Faced with a blighted downtown, volunteers and business leaders developed a plan to restore the downtown. The core of the plan is to "daylight" Indian Creek, allowing it to flow free, and creating six acres of new green space. The creek will be a magnet for residents and visitors, creating an appealing environment to live, work, and play. A trail and pathway system will connect outlying areas to the downtown core.

The city is teaming with numerous local groups, citizens, non-profits, State and Federal agencies. The city has discovered the domino effect of partnerships: each new partner brings more partners to the table, enriching the project, building community connections, and engaging new audiences.

### Examples of Key Partners

City of Caldwell; Key Agencies: US Army Corps of Engineers; USDI National Park Service; US Department of Commerce—Economic Development Administration; Environmental Protection Agency (EPA); Idaho Departments of Environmental Quality, Transportation, Fish and Game, and Water Resources; Albertson College of Idaho; and many other local, state, and national organizations.

### Innovation/Highlight

**A broad-based partnership helps a community achieve its vision of environmental and economic sustainability.**

### Results and Accomplishments

Highlights include:

- Selected as a Preserve America Community by Laura Bush.
- Established a core area steering committee and hired redevelopment coordinator.
- Completed a creek restoration feasibility study with US Army Corps of Engineers assistance; design is underway.
- Developed a citywide trail system paralleling the creek and connecting downtown to the Boise River, schools, and parks. The National Park Service assisted.
- Formed the Economic Development Administration partnership to create a redevelopment strategic plan.
- Conducting petroleum pollutant assessments in the urban renewal district through the Brownfields program.
- Partnered with the Idaho Transportation Department and the Idaho Department of Commerce to rehabilitate the historic downtown train depot, which has been selected as an Artrain USA scheduled stop for 2006.
- Created a "wetlands theme" metal sculpture for a pedestrian bridge, completed by welding students.
- Published English and Spanish versions of a book written by Albertson College students about the history of the creek
- Completing a demonstration for creek restoration.
- Began annual Indian Creek Festival celebrations and Earth Day cleanups in 2002.

### Project Contact

Dennis Cannon  
Caldwell Redevelopment Coordinator  
City of Caldwell  
208-455-4736  
dcannon@ci.caldwell.id.us

**Website:**  
[www.caldwellonline.org/Indian\\_Creek.htm](http://www.caldwellonline.org/Indian_Creek.htm)



# Integrating Desert Conservation, Visitor Services, and Public Safety

## Multi-agency Cooperation Lowers Costs and Improves Management

**Location:** Southern California

**Project Summary:** Key government agencies created the California Desert Managers Group to coordinate conservation, recreation, research and other activities at a landscape scale.

PHOTO BY ERIC PFEFFER



**Biologist draws blood in a program supported by DMG to monitor desert tortoise health.**

### Resource Challenge

California’s 25 million acres of desert include 100 communities and 8 counties, 2 National Parks, a National Preserve, 6 military bases, 10 State Parks, 37 federally recognized Native American Indian Tribes, and more than 11 million acres of Bureau of Land Management public lands. All of this is within a day’s drive of 40 million people and a destination for hundreds of thousands of out-of-state visitors each year.

California deserts are home to unique wildlife and plant species, including the federally listed desert tortoise, and contain outstanding cultural and paleontological resources. In addition, deserts are vital training and testing grounds for the U.S. military.

Conflicting demands on the resource makes cooperation among federal, state, and local governments essential to supporting agency missions, protecting resources, and managing public use. The California Desert Managers Group (DMG) was established in 1994 as a forum for government agencies to discuss and address common issues. Cooperative management has helped each agency become more efficient, enhanced resource protection, and delivered better public service. The DMG mission is to develop coordinated, complimentary management, guidelines, practices, and programs to: 1) conserve and restore desert resources, 2) provide high quality recreation, public education, and visitor services, 3) provide for the safety of desert users, 4) develop and integrate databases and scientific studies for effective resource management and planning, and 5) promote compatibility in applying each agency’s mission.

### Examples of Key Partners

Department of Defense: Edwards AFB, Marine Corps Air Ground Combat Center, Marine Corps Air Station and Marine Corps Logistics Base, National Training Center, Naval Air Warfare Center; US Department of the Interior - Bureau of Land Management, Fish and Wildlife Service, U.S. Geological Survey; USDA Forest Service San Bernardino National Forest; State of California - Department of Fish and Game, Department of Parks and Recreation, Department of Transportation; and Local governments: Imperial, Kern, and San Bernardino Counties.

### Results and Accomplishments

- Restoring upland and riparian habitat and removing invasive species.
- Restored illegal dump sites that posed a public health threat.
- Implemented plans for the threatened desert tortoise.
- Reduced and maintained burro populations at appropriate levels.
- Protecting cultural resources and enhancing public awareness about the sensitivity and value of paleontological and cultural resources.
- Providing public information about scientific research in the California deserts.
- Coordinating with CalTrans, providing information about California deserts using interpretive exhibits at highway rest stops.

### Innovation/Highlight

**Involvement of high level managers has enhanced cooperation and commitment to shared goals.**

### Project Contact

Glen Black  
Senior Environmental Scientist  
California Department  
of Fish and Game  
909-987-7449  
gblack@dfg.ca.gov

*Website:* [www.dmg.gov](http://www.dmg.gov)



# Jordan Valley Cooperative Weed Management Area

## “Grass Roots” Weed Management in Idaho and Oregon

**Location:** Idaho and Oregon

**Project Summary:** The twelve public and private partners are managing weeds across Oregon and Idaho by sharing equipment, funds, labor, and local information.



**A contractor treating leafy spurge in Owyhee County in the Jordan Valley Coop Weed Management Area.**

### Resource Challenge

Invasive weeds pose a grave threat to ecological health and economic vitality of vast areas of the West. Experts estimate there are 70 million acres with invasive weeds in 11 western states. Noxious plants are spreading rapidly, invading 4,600 acres of public land per day—the equivalent of more than 4,500 football fields!

Weed problems include: 1) more frequent fires, making it difficult for shrubs to establish themselves, 2) heavy water use, which can displace native plants and deplete surface and underground water, 3) reduction in grazing capacities by up to 90 percent, and 4) disruption of wildlife and birds as alien weeds replace food plants, breeding, and nesting areas.

In 2002, private landowners from Owyhee and Malheur Counties, representatives from USDI Bureau of Land Management (BLM), the Oregon Department of Transportation, Owyhee and Malheur County Weed Superintendents, The Nature Conservancy, Idaho Department of Lands, and the Idaho Department of Agriculture met to discuss the region’s weed problem. The group decided to form a cooperative weed management area (CWMA), pooling expertise and resources to turn back the invasion of harmful weeds and to protect the region’s ecological and economic health. The Jordan Valley CWMA covers the Southwest corner of Owyhee County in Idaho and about three million acres from the Nevada border north to Malheur County in Oregon.

The partnership provides information and shares technology with members and the general public about the noxious weed problem in the two counties. It pools labor, funds, and equipment to educate,

inventory, control, monitor, and prevent the establishment and spread of key noxious weeds across jurisdictional and ownership boundaries.

### Examples of Key Partners

Owyhee County, Idaho, Malheur County, Oregon, Owyhee Soil Conservation District, Malheur Soil Conservation District, Idaho Departments of Fish and Game and Lands, Oregon Departments of Agriculture, Transportation, Fish and Wildlife, Division of State Lands; BLM Vale District, Oregon; and BLM Lower Snake River District, Idaho.

### Results and Accomplishments

Besides sharing equipment, funds, labor, and local information, partners also:

- Educate the public, landowners, and Jordan Valley high school students about weed identification and treatment, including integrated weed management.
- Train landowners and high school students to use Global Positioning System (GPS) technology for weed mapping.
- Use a watershed-based strategy for weed treatment across political jurisdictions and ownerships.
- Facilitate early detection and rapid response: several trainees have discovered and reported new weed locations.
- Increase private landowner participation through word of mouth.

### Innovation/Highlight

**The twelve public and private partners are managing weeds across two states and multiple ownerships.**

### Project Contact

Dennis Stanford  
Private Landowner and Chairman  
Jordan Valley Cooperative Weed Management Area  
541-583-2278



# Lakeface Lamb and Clearwater Stewardship Projects

## New Contracts Enhance National Forests and Community Relations

**Location:** Northern Idaho, Northwestern Montana

**Project Summary:** The Project's stewardship contracts engage local communities in collaborative forest management and help National Forests meet their forest restoration goals.

PHOTO BY LIZ JOHNSON-GEGBHART



**A high level of community participation and local agency dedication brings success to Lakeface-Lamb project.**

### Resource Challenge

In 1999, Congress passed legislation giving the USDA Forest Service the authority to bundle land management tasks into a single long term contract. The Act also allowed the agency to use these "stewardship contracts" to complete restoration projects and to use any revenue for recreation or other unfunded projects.

Two Stewardship Demonstration Projects show how flexible contracts accomplish forest goals while involving the community in managing their National Forests. Both projects improved relationships with communities and the local public. No longer operating from pre-determined agency actions, Forests are free to collaborate with communities and employ local workers to help manage National Forests.

### Examples of Key Partners

Lakeface-Lamb Stewardship Project: USDA Forest Service, Lakeface-Lamb Stewardship Monitoring Team, Priest River Development Corporation, local and State government, individuals, service organizations, and conservation interests; Clearwater Stewardship Project: USDA Forest Service, Pyramid Mountain Lumber Company, local subcontractors, Swan Ecosystem Center, Stewardship Monitoring Team, University of Montana, National Wildlife Federation, Water Board, and Trout Unlimited.

### Results and Accomplishments

The Lakeface-Lamb Land Stewardship Project involves 2,000 acres of private land and 5,200 acres of National Forest. The Priest Lake Ranger District developed the proposal in close cooperation with the communities. A broad-based stewardship committee was formed with financial backing from a non-profit organization.

### Innovation/Highlight

**The expanded contract authority allows National Forests more leeway in working with communities and in completing projects.**

The seven-year stewardship contract will employ local residents for projects such as replacing culverts, maintaining roads, constructing and maintaining new trails, building fishing access points, and thinning forests. Timber revenue will be dedicated to other projects on the forest. The Lakeface-Lamb achievements include:

- Reduced forest fuels on 8,500 acres.
- Repaired roads and rehabilitated trails.
- Repaired streams and removed damaged and failing culverts.

The Clearwater Stewardship Project, on the Lolo National Forest, was one of the nation's first stewardship contracts. Its goal was to improve grizzly bear habitat, reduce sediment in streams, treat noxious weeds, and improve wildlife habitat. Activities included reducing sediment, improving water quality, reintroducing low-intensity fires to restore ecosystems, and enhancing scenic vistas. The Clearwater project achievements include:

- Selectively cut and thinned timber on 640 acres.
- Treated 12.6 miles of roadside for noxious weeds.
- Installed 7 bridges or arch culverts.
- Retired and reconstructed 28 miles of roads.

### Project Contacts

Liz Johnson-Gebhardt  
Community Spokesperson  
Priest River Development Corporation  
208-448-0210  
lizjg35@hotmail.com

Tim Love  
Seely Lake Ranger District  
Lolo National Forest  
406-677-3905  
tlove@fs.fed.us

*Website: [www.fs.fed.us/forestmanagement/projects/stewardship/results/index.shtml](http://www.fs.fed.us/forestmanagement/projects/stewardship/results/index.shtml)*



# Lemhi County Planning and Restoration Project

## Shared Stewardship of Bureau of Land Management Lands

**Location:** Lemhi County, Idaho

**Project Summary:** The Lemhi County Project is a pioneer effort to integrate community into the planning and management of BLM lands and resources.



**View of the Eighteenmile WSA showing riparian, grazing, wilderness, and water quality values.**

### Resource Challenge

The town of Salmon in Lemhi County is located on the Salmon River in central Idaho along the old Lewis and Clark trail. Its wealth of natural assets includes a variety of threatened and endangered species; its historic past and outstanding recreational opportunities make it a popular destination. While not a large community, Lemhi residents face large-scale issues that could alter their way of life. Wildfires, endangered species, development, tourism, habitat restoration needs, and changing markets are just some of the challenges facing local people and affecting the long-term stewardship of USDI BLM lands.

Starting in the mid-1990s, the BLM, Lemhi County Commissioners, and the Mayor of Salmon initiated a partnership to protect open space, water quality, ESA fisheries, and to maintain the rural atmosphere and lifestyle treasured by Lemhi County residents. By working toward shared stewardship, citizens could be a driving force in public land management and public lands would contribute to maintaining privately-owned open space and the ecologically rich bottomlands they contain.

### Examples of Key Partners

Federal, State, and local governments, federal grazing permittees, conservation organizations, and others.

### Results and Accomplishments

One of the partnership's most innovative features is a conservation easement where development rights on ecologically less valuable BLM uplands would be exchanged for development rights on

ecologically sensitive, privately-owned bottom lands. This approach will help ensure that local agriculture remains viable and that critical threatened and endangered species habitats are conserved.

The partnership is working on a number of projects:

- Restoring habitat for threatened and endangered fish on a watershed basis, covering about 1 million acres in the Lemhi and Salmon sub-basins.
- Controlling and eradicating noxious weeds within the County.
- Entered into assistance agreements with Lemhi County and the City of Salmon for Lewis & Clark bicentennial planning, including funding for the Sacajawea Center, a city-owned interpretive and educational center.
- Completed three ecosystem-based cooperative watershed-level planning projects.
- Completed an Interdisciplinary Activity Plan for Fire Management that involved state and federal agencies, tribes, and the interested public.
- Initiated a comprehensive land use planning process including the BLM Salmon Field Office, the City of Salmon, and Lemhi County to determine the best areas for growth to protect the local community's character and values.

### Innovation/Highlight

**The BLM and Lemhi County are developing a conservation easement where development rights on public lands more suitable for development would be exchanged for development rights on bottomlands more suitable for species conservation.**

### Project Contact

Dr. Robert Cope  
Lemhi County Commissioners  
208-756-2124  
teacup@salmoninternet.com



# Lower Colorado River Multi-Species Conservation Program

## Meeting Today's Needs While Looking 50 Years Ahead

**Location:** Lower Colorado River, Arizona, California, and Nevada

**Project Summary:** The innovative project is the largest and longest-term major river system habitat restoration plan, designed to create habitat and protect listed and sensitive species.



Newly isolated backwater being prepared for the introduction of razorback suckers.

### Resource Challenge

More than 24 million people in Nevada, California, and Arizona depend on the lower Colorado River to support municipal, agricultural, and industrial water and power needs for homes, farms, and industry. The river is also a literal lifeline for many species of wildlife, especially migratory neo-tropical songbirds. Major portions of the lower river are designated critical habitat for six Federally-listed species.

To protect these species and their habitat, and to enable the use of river resources to continue, the federal government, Tribes, conservation organizations, water and power users, local governments, and others in California, Arizona, and Nevada are collaborating on a program to assure that current and future river operations and maintenance activities will comply with the Endangered Species Act (ESA). In addition, California agencies sought coverage under the California Endangered Species Act. The result is a program that anticipates potential changes on the lower Colorado River during the next 50 years, putting mechanisms in place now to meet future management challenges well in advance of any potential conflicts.

### Examples of Key Partners

The Arizona Department of Water Resources, Arizona Game and Fish Department, Arizona Power Authority, Central Arizona Water Conservation District, The Colorado River Board of California, California Department of Fish and Game, The Metropolitan Water District of Southern California, Colorado River Commission of Nevada, Southern Nevada Water Authority, Colorado River Indian Tribes, USDI, and others.

### Innovation/Highlight

A proactive, forward-looking plan protects species and supports economic prosperity in the lower Colorado region, meeting today's needs and anticipating future management challenges.

### Results and Accomplishments

Through the program, \$626 million, indexed annually, will be used to create and maintain habitat along the lower Colorado River. The Federal government will provide half of this funding, and the state and local program partners will provide the other half. In addition:

- The program will create more than 8,100 acres of new or restored cottonwood-willow, mesquite, marsh, and backwater habitat to benefit six endangered species and 20 additional species. The agreement covers a 400-mile stretch of the lower Colorado, about the same distance as New York City to Pittsburgh, Pennsylvania.
- Existing habitat will be enhanced and populations of endangered native fish augmented to ensure adequate genetic stock and numbers until a lower Colorado River recovery implementation plan is developed.
- An extensive science, monitoring, and adaptive management program will be implemented to ensure maximum benefit to the species.

### Project Contact

Lorri Gray  
Program Director  
Bureau of Reclamation  
702-293-8555  
lgray@lc.usbr.gov

Website: [www.usbr.gov/lc/lcr/mscp](http://www.usbr.gov/lc/lcr/mscp)



# National Park Service and California State Parks

## Efficient Park Management through Joint Operations

**Location:** California

**Project Summary:** The National Park Service and California State Parks collaborate on management of adjacent parks for cost savings and enhanced visitor services.



**State and National Park Superintendents at tree planting ceremony.**

### Resource Challenge

In the early 1990s, Redwood National Park proposed taking title to three crown jewel State Parks located within its Congressionally-authorized boundary. Despite the close proximity of the parks and their similar missions, the State Parks and the National Park had been operating independently. Citizens took sides in the debate, sparking more controversy. In mid-1993, an outside interagency team concluded that the potential advantages of partnering far outweighed those of consolidation. The three State parks became part of an initial partnership with the National Park Service to explore the possibilities for collaboration. When the 5-year partnership agreement ended, there were enough successes to not only renew that agreement, but to expand the number of participating park clusters to fourteen.

The ongoing challenge for these partnerships is to achieve consistent operations, share facilities, tackle common resource management challenges, reduce costs of operation, and provide seamless service to park users. The degree of collaboration varies with each park cluster.

### Examples of Key Partners

California State Parks and the USDI National Park Service at 14 locations; interested partners and the public.

### Results and Accomplishments

The National Park Service and California State Parks have been collaborating under terms of a master cooperative management agreement since 1994. The collaboration has resulted in increased operational efficiency, reduced costs to both agencies, and improved services to the public. Improvements are exemplified by the

#### Innovation/Highlight

**The collaborative effort from sharing resources reaped cost savings and better service on adjacent National and State Parks.**

Redwood National and State Parks, now an integrated National/State park under a single name, with coordinated management and shared park operations. For example, because of the partnership, central maintenance facilities that needed to be moved because of seismic instability were located on state park lands. Joint operations have also allowed shared interpretation, law enforcement and emergency response, and shared maintenance equipment, crews, and expertise.

Other park clusters throughout California have reaped similar advantages. A third five-year agreement has recently been signed.

### Project Contact

Marilyn Murphy  
Redwood National and State Parks  
707-464-6101 x 5100  
Marilyn\_Murphy@nps.gov



# Nisqually River Collaborative Management

## Sustainable Stewardship Through Consensus-based Management

**Location:** Olympia, Washington

**Project Summary:** All-inclusive locally-based management of river basin created to resolve ecosystem health disputes and encourage economic vitality of the region.

PHOTO BY DAN KOWALSKI



**Nisqually River Council has been meeting monthly for 17 years to work on Nisqually watershed issues.**

### Resource Challenge

The Nisqually River, one of the state’s most pristine, flows 78 miles from its origin atop Mt Rainier to its confluence with Puget Sound. At the insistence of the watershed community, the Washington State Legislature created the Nisqually River Task Force in 1985 to develop a locally-based management plan, and the Nisqually River Council to oversee and implement the plan. Today, the Council helps resolve divisive issues such as timber harvesting and land use, salmon recovery under the Endangered Species Act (ESA), and water allocation. It is creating a sustainable development plan to support long-term economic vitality and ecosystem health.

Numerous locally-based programs, such as Stewardship Partners, compliment Council activities. The Nisqually Glacier to Sound Stewardship Corridor project illustrates linking “islands of habitat” and conserving watersheds using community-developed voluntary initiatives.

### Examples of Key Partners

Nisqually River Council, Nisqually Indian Tribe, USDI Fish and Wildlife Service, USDI National Park Service, U.S. Department of Defense, USDA Forest Service, Washington State Departments of Fish and Wildlife, Ecology, Natural Resources; University of Washington; Counties of Thurston, Pierce, and Lewis, Nisqually River Foundation, and others.

### Results and Accomplishments

The Nisqually River Council has created an effective umbrella for a range of watershed-based recovery activities. Locally-based groups

such as Stewardship Partners have expanded the Council’s capacity by bringing in private and public funding, and enlisting broad-based landowner and citizen support for watershed activities. Council contributions include:

- A Fall Chinook salmon recovery plan adopted three months after the fish was listed under the ESA. Created by the Nisqually Indian Tribe with Council support and endorsement, it was the region’s first.
- The Nisqually River Education Program, a curriculum for grades K-12 created in 1990, exposes thousands of students to watershed-based conservation.
- The Timber, Fish, and Wildlife agreement, which helps resolve longstanding timber harvest disputes, was inspired by Task Force and Council successes.
- Encouragement for a watershed-specific timber management approach in the Nisqually River Resource Management Plan.

Stewardship Partners, at the request of the Council, secured public and private funding to support the development of: 1) a Geographic Information System (GIS) database to identify fish and wildlife habitat and prioritize projects, 2) a Stream Catalogue that identifies habitat conditions and opportunities for landowner collaboration, 3) voluntary Low Impact Development Guidelines, Best Management Practices, and Architectural Design Guidelines for new construction, and 4) a Draft Nisqually Stewardship Plan that sets specific goals for the next five years and broad goals for the next 50 years.

### Innovation/Highlight

**An effective collaboration among governments, business, and citizens has produced effective conservation results for more than 20 years.**

### Project Contact

David Troutt  
Chair  
Nisqually River Council  
360.438.8687  
dtroutt@nwifc.org



*Website: [www.nisquallyriver.org](http://www.nisquallyriver.org)*

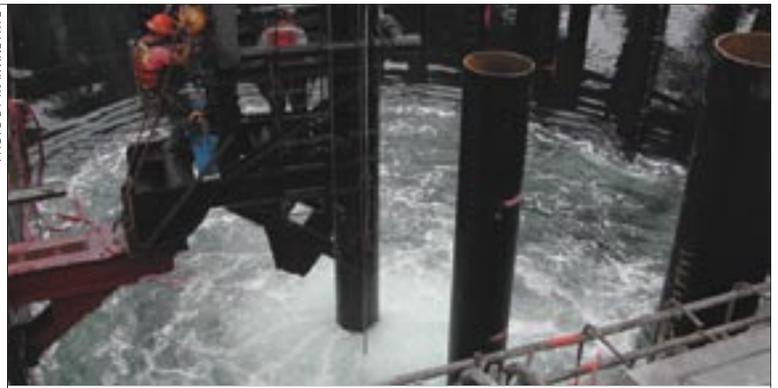
# Northwest Salmon Enhancement

## Sound Science Benefits the Sound

**Location:** Puget Sound, Washington

**Project Summary:** The Northwest Salmon Enhancement Program is a multi-agency effort to improve and protect habitat and prey for listed fish species in Puget Sound.

PHOTO BY MARVINE ERYE



**Compressed air pumped through perforated pipes provides sound attenuation from pile driving, reducing impacts to salmon.**

### Resource Challenge

Several threatened and endangered fish species live in Puget Sound's nearshore zones. Particular species of concern include the Hood Canal Summer Run Chum, Puget Sound Chinook, and Bull trout. Sandlance, Herring, and Surf Smelt serve as food for one or more of the endangered species and also need to be protected and conserved.

The Northwest Salmon Enhancement Program, a specially created joint federal/state/tribal government partnership, is working to ensure quality habitat for these species.

### Examples of Key Partners

Navy Region Northwest, Navy units in Puget Sound, National Marine Fisheries Service (NMFS), USDI Fish and Wildlife Service (USFWS), U.S. Environmental Protection Agency (EPA), Washington Department of Fish and Wildlife, Washington Department of Ecology, and the Suquamish Tribe.

### Results and Accomplishments

Numerous projects have been completed to remove culverts, install fish ladders, and restore miles of habitat and spawning areas. Projects include:

- The Crane Point Mitigation Project at Naval Magazine Indian Island, Port Hadlock, Washington, restored eelgrass beds, forage fish spawning areas, and juvenile Salmonid and Bull trout migration corridors. This project also improved overall water quality in Port Townsend Bay by repairing damage to the shore from World War II-era construction.

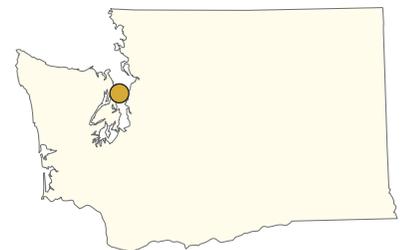
- Mitigation measures at a Naval Base Kitsap, Bangor service pier included a "bubble curtain" to reduce noise that scatters fish during pile driving. The Navy funded a project to establish sound energy data that the USFWS and NMFS can use to determine the degree of impact likely to occur at steel pile driving projects throughout the Puget Sound Basin.
- The Washington Department of Fish and Wildlife identified the Charleston Beach restoration project as the first in Washington designed specifically to benefit Surf Smelt and Sandlance. The project removed fill from shoreline areas and installed native shoreline vegetation as mitigation for replacing an old pier.
- The Sinclair Inlet Marine Sediment Cleanup at Bremerton, WA, removed polychlorinated biphenyls (PCBs) and mercury-contaminated sediments, and used clean sediment from the project nearshore to improve the habitat for juvenile salmon by decreasing the shoreline's slope. A citizen-based Restoration Advisory Board took part in the project.

### Innovation/Highlight

**Provided new data about how sounds in the water affect fish.**

### Project Contact

Randi Thurston  
Fisheries Biologist  
Washington Department  
of Fish and Wildlife  
360-895-6123  
Thurstrlt@telebyte.com



# Northwest Straits Marine Conservation Initiative

## Citizens Restoring and Protecting Marine Waters

**Location:** Northwest Washington State

**Project Summary:** A citizen-based approach to restoring and protecting marine species and habitats in the Northwest Straits region of Washington State.

PHOTO COURTESY FRIENDS OF THE SAN JUANIS



**Volunteer for Forage Fish Inventory Project sampling for surf smelt eggs.**

### Resource Challenge

The Northwest Straits is a spectacular stretch of marine environment that supports a great variety of habitats and species. By the mid-1990s, marine species such as salmon, orca, herring and rockfish were in rapid decline, and the loss of shoreline habitats was a major threat. Attempts to create a National Marine Sanctuary in the area met strong local opposition.

In 1998, Congress created the *Northwest Straits Marine Conservation Initiative*, directing the Northwest Straits Commission and its seven locally-based Marine Resources Committees (MRC) to launch an unprecedented experiment in citizen governance of a coastal area. Its charge was to bring local, tribal, state, community, organizational, and citizen interests together to protect and restore the marine environment. Each MRC is citizen-based and includes representatives from commercial, recreational, scientific, educational, and environmental interests, as well as local and tribal governments. Performance benchmarks help partners guide project development and evaluate success.

Congress required a program review after five years. In 2004, a panel of national experts found the Initiative to be an excellent investment. *“In these first five years, the Initiative has accomplished valuable research and restoration projects and has established a strong foundation of mechanisms, relationships and capacity,”* said William Ruckelshaus, former Environmental Protection Agency (EPA) Administrator and chair of the panel.

### Examples of Key Partners

Northwest Straits Commission, seven Washington Counties, Puget Sound Action Team, Washington Sea Grant Program, Northwest Washington Treaty Tribes, Washington State Departments of Ecology, Fish & Wildlife and Natural Resources, U.S. Congress (authorizing body), National Oceanic and Atmospheric Administration (NOAA) Community-based Restoration Program, and others.

### Results and Accomplishments

- Shoreline habitats have been surveyed and mapped in all seven counties.
- The Commission developed state policy to encourage reporting of lost or abandoned fishing gear, wrote protocols for safe gear removal, and initiated a derelict gear removal project that has pulled miles of gillnets, purse-seine nets, and hundreds of derelict crab pots from Northwest Straits marine waters.
- More than 275 volunteers surveyed and mapped 4,600 beaches, discovering 32.5 miles of potential spawning habitat for forage fish needed by salmon, marine fish, birds, and marine mammals. Maps were distributed to government agencies.
- Volunteers in three MRCs planted Olympia oysters in tidelands around the region to help restore this tiny native oyster.
- All seven MRCs work with and advise their county governments on marine resource issues and host regular outreach meetings with the public.

### Innovation/Highlight

**The first citizen-based framework for restoring, conserving, and governing a major U.S. Coastal area.**

### Project Contact

Tom Cowan  
Director  
Northwest Straits Commission  
360-428-1085  
cowan@nwstraits.org



*Website:* [www.nwstraits.org](http://www.nwstraits.org)

# O'ahu Conservation Partnership

## Diverse Interests, One Goal: Conserving Open Space

**Location:** Hawaii

**Project Summary:** The O'ahu Conservation Partnership is a consortium of agencies and conservation groups seeking to protect and restore natural and open spaces.

PHOTO BY BLAKE MCELHENY



**Examining plans for the Pupukea-Paumalu parcel from the athletic field of the neighboring Sunset Beach Elementary School.**

### Resource Challenge

Urbanization is spreading rapidly throughout Hawaii, especially on the island of O'ahu. Not surprisingly, Hawaii has also suffered the highest number of species extinctions. Today, it harbors the largest number of endangered species in the United States; indeed, one of the highest numbers in the world. As open space disappears, wildlife habitat and endangered species on and around military bases are becoming more important, making it more difficult for our military to balance conservation with its operations and training needs.

About 25 percent of O'ahu's land is dedicated to military facilities and training. As development spreads toward military installations, land use conflicts increase. To meet this challenge, the Services have been working closely with private and public partners to identify land outside these facilities that can be protected, providing a buffer for important training activities and conserving lands vital to threatened and endangered species.

### Examples of Key Partners

U.S. Army Hawaii, Marine Corps Base Hawaii, U.S. Navy, USDI Fish and Wildlife Service, Hawaii Army National Guard, Office of Hawaiian Affairs, City and County of Honolulu, Department of Parks and Recreation, State of Hawaii Department of Land and Natural Resources, The Nature Conservancy, Trust for Public Land, Conservation Council for Hawaii, Hawaii's Thousand Friends.

### Results and Accomplishments

In late 2004, the Army, together with the Trust for Public Land, the Office of Hawaiian Affairs, State, federal, and county agencies, and private conservation groups, formed a consortium called the O'ahu Conservation Partnership (OCP), whose mission is to protect and restore O'ahu's natural areas and open spaces.

The group is combining resources to develop a Geographic Information Systems-based tool (GIS) to assess the relative value of natural resources when setting protection priorities. The Partnership has identified 12,876 acres of land that could potentially be acquired by conservation organizations. Four large properties in these areas are likely to be available in the near future and discussion has begun between landowners and OCP members. Partners estimate that approximately one thousand acres will be protected in 2005 with funding from city, state, federal, and military sources.

### Innovation/Highlight

**A concerted effort to bring diverse interests together, including those who have often opposed each other but in reality share many goals in common.**

### Project Contacts

Mr. Joshua Stanbro  
Senior Project Associate  
The Trust for Public Land, Hawaii Field Office  
808-524-8564  
josh.stanbro@tpl.org

Mr. Joel Godfrey  
Chief, Environmental Division  
Directorate of Public Works  
U.S. Army Garrison of Hawaii  
808-656-2878 x1050  
joel.godfrey1@us.army.mil



# Olympia Oyster Restoration Project

## Re-seeding the Northwest's Only Native Oyster

**Location:** Puget Sound, Washington

**Project Summary:** A community-based effort reestablishing Washington's only native oyster restores an essential component of the marine ecosystem and builds diverse partnerships.

PHOTO BY TRISTAN PETER-CONTESSE



**Baseline monitoring underway in Liberty Bay prior to native oyster enhancement.**

### Resource Challenge

The *Olympia oyster*, the Pacific Northwest coast's only native oyster, ranges from southeastern Alaska to Baja, California. For thousands of years, Olympia oysters provided sustenance for tribes and habitat for a host of marine organisms. Until the late 1800s, Olympia oysters were the most abundant bivalves in Puget Sound, where they occupied thousands of acres of productive, diverse habitat. Over-harvesting, sediment loads, and pollution drove the oyster to near extinction. Today, it occupies a fraction of its former range and is a Candidate Threatened Species in Washington State and a priority species for restoration.

Since 1999, the Olympia Oyster Restoration Project has brought together more than 100 partners from the seafood industry, Indian tribes, state agencies, the U.S. Navy, local environmental organizations, schools, and property owners to: (1) identify appropriate habitats for oyster restoration, (2) modify substrate for growing oysters by adding old oyster shells, (3) propagate and seed oyster spat, and (4) monitor results.

### Examples of Key Partners

Puget Sound Restoration Fund, Washington Department of Fish and Wildlife, Taylor Shellfish Farms, National Oceanic and Atmospheric Agency (NOAA) Restoration Center, 7 Washington Tribes, U.S. Navy, Marine Resources Committees, Seattle Shellfish Company, Shell Puget Sound Refinery, 64 private tideland owners, and others.

### Results and Accomplishments

- Seeded more than 5 million oysters at 80 experimental sites across Puget Sound, with assistance from more than 100 partners.
- Intensified seeding at sites where exploratory plantings showed promising results.
- Modified substrate for growing oysters by adding old oyster shells.
- Collected wild seed stock and identified additional habitats to build long-term viability.
- Involved 64 private land owners in planting oysters on private tidelands.
- Involved State and tribal agencies and the University of Washington in monitoring efforts to increase the effectiveness of seeding methods and refine site selection criteria.
- Leveraged \$200,000 in federal funds from the NOAA Community-based Restoration Program to spur the involvement of state, local, and private partners.
- Convened a regional advisory group of shellfish farmers and scientists to add technical support.
- Initiated genetic research to guide restoration methods and safeguard genetic integrity.
- Obtained tidelands for the development of an income-generating oyster farm to support future efforts.

### Innovation/Highlight

**The Olympia Oyster Restoration Project created a commercial oyster farm to help seed future restoration projects.**

### Project Contact

Betsy Peabody,  
Executive Director  
Puget Sound Restoration Fund  
206-780-6947  
betsy@restorationfund.org



**Website:** [www.restorationfund.org](http://www.restorationfund.org)

# Pacific Northwest Conservation Reserve Enhancement Program

**Agencies, Tribes, Farmers and Ranchers Protect Salmon Habitat**

**Location:** Oregon, Washington

**Project Summary:** The Pacific Northwest Conservation reserve Enhancement Program (CREP) works with farmers to voluntarily establish and maintain long-term riparian buffers on agricultural lands.



PHOTO COURTESY WHATCOM CONSERVATION DISTRICT

**This is a 2-year old project along Johnson Creek north of the Town of Nooksack in Whatcom County.**

## Resource Challenge

Farmlands offer a valuable opportunity to restore watershed health. Streamside buffers on agricultural land can reduce the amount of sediment, excess nutrients, pathogens, and chemicals reaching lakes, rivers, and streams by as much as 90 percent. State, federal, and local partners in Oregon and Washington are using the federal Conservation Reserve Enhancement Program (CREP) to restore 200,000 acres of agricultural land along streams inhabited by eight species of endangered salmon and trout. In addition to the important role buffers play in filtering contaminants and sediment, they also provide valuable wildlife habitat and shade streams and rivers, helping to maintain the cooler water temperatures that salmon species need.

The Washington-Oregon CREP project uses federal and state dollars as part of the voluntary Federal conservation program. States choose the target areas for the program, the conservation issues to be addressed, and the conservation practices to be used, paying at least 20 percent of project costs.

In Oregon, farmers and producers can enter into ten to fifteen year contracts to plant and maintain long term riparian vegetation. Producers who are irrigating their land are eligible for rental payments based on the value of irrigated land rather than the dry land rental rate. In return for the higher rate, producers agree to divert less irrigation water, allowing more water to stay in streams and rivers.

## Innovation/Highlight

**The CREP protects endangered aquatic species and reduces sediment, excess nutrients, and pathogens reaching surface water by planting trees along streams and rivers. States select project areas and conservation practices, paying at least 20% of the program costs.**

In Washington, producers receive a 50 percent higher incentive payment plus a 10 percent payment for lands protected as agricultural lands under the Washington Growth Management Act. Federal and State programs pay the cost of the conservation practices.

Volunteers help by growing and planting native trees, removing invasive species, monitoring restoration sites, counting salmon, participating in educational programs, and more.

## Examples of Key Partners

USDA Farm Service Agency, USDA Forest Service, USDA Natural Resources Conservation Service; States: Departments of Natural Resources, Agriculture, Forestry, Fish & Wildlife; Others: State Watershed Enhancement Board, National Marine Fisheries Service, USDI Fish and Wildlife Service, USDI Bureau of Land Management, American Indian Tribes, State Soil and Water Conservation Districts, and numerous local environmental and wildlife groups.

## Results and Accomplishments

The partners have completed work on 14,580 acres in Oregon and 9,395 acres in Washington. Also, the field staff is assisting farmers with project planning and implementation.

## Project Contacts

Debbie Becker  
 Washington State Conservation Commission  
 360-407-6211  
 dbec461@ecy.wa.gov

Stephanie Page  
 Compliance & Planning Leader  
 Oregon Department of Agriculture  
 Natural Resources Division  
 503-986-6486  
 spage@oda.state.or.us



*Website:* [www.oregon.gov/ODA/IRD/water\\_crep.shtml](http://www.oregon.gov/ODA/IRD/water_crep.shtml)

# Palos Verdes Blue Butterfly Recovery Program

## Butterfly Once Feared Extinct Discovered at Military Site

**Location:** Defense Fuel Support Point, San Pedro, California

**Project Summary:** The Defense Support Center is working with partners, on its lands, to enhance the only known population of Palos Verdes blue butterflies, and to restore it elsewhere.

PHOTO BY TRAVIS LONGCORE



The endangered Palos Verdes blue butterflies mate and lay eggs in these screen cages, which are placed over deerweed plants.

### Resource Challenge

The Palos Verdes blue butterfly, which lives in association with just one species of locoweed found in coastal shrub ecosystems, was listed as endangered by the USDI Fish and Wildlife Service (FWS) in 1980. Habitat losses due to urban development, invasive non-native plants, and offroad vehicles were the primary culprits. Within a few years, most experts considered the butterfly extinct. Then, in March 1994, a researcher from UCLA accidentally discovered the butterfly at the Defense Fuel Support Point (DFSP) in San Pedro, California. It remains the only known population.

Because the DFSP is a heavily used industrial facility, and because of the butterfly's precarious status, the Defense Energy Support Center/Defense Logistics Agency military facility is collaborating with other federal agencies, the California state government, the California University system, and numerous non-government organizations to protect the existing population, increase the number of butterflies, and, ultimately, to help restore them throughout their former range.

### Examples of Key Partners

U.S. Navy, San Diego; USDI Fish and Wildlife Service, DOD Defense Logistics Agency, Defense Energy Support Center, California State Government, California University system, the Urban Wildlands Group.

### Results and Accomplishments

Thanks to the dedication of many, the butterfly's population has doubled since its original discovery in 1994. The Soil Ecology Restoration Group, San Diego State, California provides restoration and habitat management expertise for the project. Key accomplishments include:

- Established a butterfly captive breeding program with guidance from the Urban Wildlands Group.
- Initiated population monitoring and a periodic census.
- Implementing a plan to restore ten acres of native plant communities; The Palos Verdes Land Conservancy maintains the butterfly habitat and is managing a plant nursery.

The project's ultimate goal is to replicate the DFSP habitat in other areas and to successfully introduce the butterfly to new sites.

### Innovation/Highlight

Successfully doubled the last known remaining population of Palos Verdes Butterflies.

### Project Contact

Mr. Dan Ryan  
Stewardship Director  
Palos Verdes Peninsula  
Land Conservancy  
310-541-7613 x 203  
dryan@pvplc.org



# Point Loma Ecological Reserve

## Protecting Sensitive Coastal Habitats

**Location:** San Diego, California

**Project Summary:** Landowners on Point Loma Peninsula joined with the U.S. Navy to establish a 650-acre Ecological Reserve Area to restore native coastal habitat.

PHOTO BY ANDY VATSKO



**Point Loma Ecological Conservation Area viewed to east across entrance to San Diego Bay toward Peninsula of San Diego.**

### Resource Challenge

Point Loma Peninsula is a four-mile long mosaic of development and sensitive natural areas unique in Southern California because of their climate and geology. Many of the peninsula’s natural communities remain intact because of limited development and public access at the U.S. Navy facility, the largest land holding on Point Loma.

With a growing scarcity of native coastal habitat, protection of Point Loma Peninsula is critical to maintaining healthy populations of native species, especially those that are vulnerable to non-native competition and predators. Balancing further development and use with habitat conservation is a particular challenge. To achieve this objective, landowners on the peninsula, including federal and local government agencies, joined together to protect and sustain sensitive habitat.

### Examples of Key Partners

U.S. Navy, USDI National Park Service, U.S. Coast Guard, US Department of Veteran’s Affairs, City of San Diego, University of California, Alliant International University, San Diego State University.

### Results and Accomplishments

Participants established a 650-acre non-contiguous Ecological Reserve Area (ERA) on Point Loma to protect sensitive biological areas they felt would be viable over the long term. Functional wildlife corridors provide important links between the biological resource areas.

Partners restore native habitat by removing invasive species, using erosion control, planting native seedlings, and monitoring for re-emerging exotic species. The ERA also facilitates cooperative planning and steers new construction projects away from these areas. Participants meet regularly to coordinate the management of their respective portions of the ERA and discuss proposed construction and resource management projects on Point Loma. New road construction is discouraged to prevent further fragmentation of the reserve. Existing security measures continue to allow only limited public access, further protecting the ERA.

### Project Contacts

Kim O’Connor,  
Director, Botany Program  
Environmental Department (N45RN)  
Commander, Navy Region Southwest  
619-524-6334  
kimberly.oconnor@navy.mil

Laura Ball  
City of San Diego  
Metropolitan Wastewater Department  
858-292-6417  
lball@sandiego.gov



### Innovation/Highlight

**Point Loma Partners created a natural resources management plan so the Navy could perform its training and not disturb the area’s biological diversity.**

# Puget Sound and Adjacent Waters Restoration Program

## Synergy in the Northwest Restores Puget Sound

**Location:** Northwest Washington State

**Project Summary:** The Puget Sound and Adjacent Waters Restoration Program (PSAWR) provides assistance to agencies to restore the tributaries, waters, and shorelines of Puget Sound.

PHOTO BY ANDREA TAKASH



**A Corps of Engineers' crew hoists a 600-foot derelict fishing net up on their boat.**

### Resource Challenge

Puget Sound is nourished by waters from 10,000 streams, 11 major rivers, and tidal surges along 2,500 miles of shoreline. The Sound supports thousands of species, including the world's largest clams and octopi, six-gilled sharks, Chinook salmon, and orca whales. Fish and wildlife-related industries bring millions of dollars into the economy.

The Puget Sound basin drains 15,000 square miles, inhabited by a human population expected to grow to 5 million by 2020. Despite its status as an "Estuary of National Significance," the Sound continues to be degraded by development pressure.

PSAWR was authorized after regional stakeholders sought US Army Corps of Engineers assistance from Congress. It focuses on restoring Puget Sound and its adjacent waters, including fresh water that drains directly into the Sound, the Strait of Rosario, Admiralty Inlet, Hood Canal, and the Strait of Juan de Fuca.

### Examples of Key Partners

U.S. Army Corps of Engineers (Corps), Puget Sound salmon groups, Hood Canal Coordinating Council, Northwest Straits Commission, Washington State Governor, Washington Department of Natural Resources, National Oceanic and Atmospheric Administration (NOAA) Restoration Center, Pacific Northwest National Laboratory, U.S. Geological Survey, USDI Fish and Wildlife Service, Salmon Recovery Funding Board, Puget Sound cities and counties watershed planning councils, and Northwest tribes.

### Innovation/Highlight

**Project selection criteria are developed through collaborative consultation. Timelines for accomplishing projects are shortened by using locally planned and designed restoration projects that meet program criteria.**

### Results and Accomplishments

PSAWR partners bring a wealth of skills to U.S. Army Corps of Engineers expertise on aquatic restoration projects. The Corps consults with stakeholders on priority needs, selects projects based on regional priorities and independent review, and relies on combined science, planning, and partner expertise to complete projects. The program emphasizes projects that will generate immediate, critically needed restoration. Examples include:

- **Seahurst Shoreline Restoration Project:** The Corps and City of Burien removed a 1,400-foot rock gabion seawall, added sand and gravel, and re-graded the shoreline. Eelgrass beds offshore should expand and provide a nursery for juvenile fish.
- **Derelict Gear and Vessel Removal:** Navy dive instructors learn techniques to safely remove tangled underwater fishing nets. Once trained, Navy divers, the Corps, and other partners will remove derelict gear from Puget Sound.
- **Skokomish Estuary Restoration and Lake Washington Beach Restoration** are currently underway.
- In May, the Corps and Governor's Action Team held stakeholder workshops to develop priorities for PSAWR restoration projects. More than 150 federal, state, county, city, Tribal, and non-governmental organizations attended.

### Project Contact

Brad Ack, Director  
 Washington State Puget  
 Sound Action Team  
 360-725-5437  
 back@psat.wa.gov



**Website:** [www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=RPPS&pagename=home\\_page](http://www.nws.usace.army.mil/PublicMenu/Menu.cfm?sitename=RPPS&pagename=home_page)

# Puget Sound Nearshore Partnership

## Integrating Multi-Disciplinary Research to Address Restoration Needs

**Location:** Washington State

**Project Summary:** The Puget Nearshore Partnership is a collaborative research and restoration project to restore the health of the waters and fisheries of Puget Sound.



**USGS scientist working on near-shore study in Puget Sound.**

### Resource Challenge

Washington's Puget Sound has more than 2,000 miles of shoreline, forming a complex system of estuaries, channels, open water, and islands that harbor several species of endangered salmon. The Sound has three major seaports: Seattle, Tacoma, and Olympia. Declining fisheries are tied to the loss of ecosystem functions, the result of a degraded coastal habitat.

The Puget Sound Nearshore Partnership was formed to identify significant ecosystem problems in the basin, evaluate potential solutions, and develop a comprehensive plan to restore the health of Puget Sound while supporting the region's economy. One of the largest ecosystem restoration projects attempted in the region, the partnership involves government organizations, tribes, industries, and environmental organizations. Individuals and organizations contribute their time, leadership, monetary and in-kind services, data and expertise to help implement the scientific and restoration aspects of the project.

Federal, state, and local government scientists and resource managers are working together to address the effects of urbanization on fragile coastal environments. The U.S. Geological Survey (USGS) provides scientific expertise and leadership, technology development, and information to guide coastal restoration and to adaptively manage and conserve unique coastal resources.

Nearshore Partnership organizations implement restoration activities and collaboratively identify the science and information necessary to make informed decisions on priority restoration projects. Collaboration promotes common understanding and commitment to

restoration priorities, ensuring better coordination of Federal, state and local activities and greater operating efficiency.

### Examples of Key Partners

Puget Sound Nearshore Partnership includes the USGS, U.S. Army Corps of Engineers, USDI Fish and Wildlife Service, Environmental Protection Agency, National Oceanic and Atmospheric Agency, Washington State agencies, Puget Sound Action Team, Salmon Recovery Funding Board, King and Pierce Counties, City of Seattle, NW Indian Fisheries Commission, The Nature Conservancy, The National Wildlife Federation, People for Puget Sound, Universities, and others.

### Results and Accomplishments

The Partnership is producing scientific and technical documents and reports to guide the restoration planning process, including:

- Application of "Best Available Science" in Ecosystem Restoration.
- Lessons Learned from Large-Scale Restoration Efforts in the USA.
- Guidance for Protection and Restoration of the Nearshore Ecosystem of Puget Sound.
- Guiding Restoration Principles.
- Coastal Habitats in Puget Sound: A Research Plan in Support of the Puget Sound Nearshore Ecosystem Restoration Program.

The information in these documents helps guide multi-disciplinary research into ecosystem processes, and guidance to promote process-based ecosystem restoration.

### Innovation/Highlight

**The Puget Sound Nearshore Partnership used an interdisciplinary team to develop and implement a restoration plan for the nearshore ecosystem of Puget Sound.**

### Project Contact

Tim Smith  
Special Assistant to the Director  
Washington State  
Department of Fish and Wildlife  
360-902-2223  
smithtrs@dfw.wa.gov



*Website: [www.pugetsoundnearshore.org](http://www.pugetsoundnearshore.org)*

# Puget Sound Shared Strategy

## Building a Regional Strategy for Salmon Recovery

**Location:** Puget Sound, Washington

**Project Summary:** Using local conservation efforts already underway, the Shared Strategy is a ground-up approach to the development of a science-based, locally supported salmon recovery plan for Puget Sound.

PHOTO BY DAN KOWALSKI



**Citizens of Bainbridge Island study the way salmon use the nearshore environment of the region.**

### Resource Challenge

Ever since Puget Sound’s Chinook salmon, summer chum, and bull trout were listed under the Endangered Species Act, a growing sense of urgency has invaded the Pacific Northwest. Salmon numbers and harvests have fallen for decades despite actions taken by governments, Tribes, and industries to protect salmon.

Federal agencies usually write endangered species plans. Puget Sound regional leaders felt a new approach was needed to recover Puget Sound salmon: planning should build on local efforts already underway. Shared Strategy works from the ground up with support from citizens, local and tribal governments, environmental, and business interests. All levels of government are involved with local stakeholders, an effort made possible by the Washington State Legislature’s support for local and regional decision-making. National Oceanic and Atmospheric Administration (NOAA) Fisheries and the USDI Fish and Wildlife Service (FWS) support and participate in Shared Strategy.

### Examples of Key Partners

NOAA Fisheries, FWS, Olympic National Park, 15 Puget Sound Treaty Tribes; Puget Sound counties and communities, Puget Sound ESA Business Coalition, Washington Forest Protection Association, the agricultural community, and Washington State Departments of Fish & Wildlife, Natural Resources, and Ecology; Washington Environmental Council, and FutureWise, formerly 1000 Friends of Washington.

### Innovation/Highlight

**Creating a regional recovery plan by identifying local initiatives, sharing information, and building joint agreements for action from the ground up.**

### Results and Accomplishments

Shared Strategy is rolling local recovery plans into one plan for federal review this year. Their strategy:

- Identifies key elements of a recovery plan and assesses how current efforts support it.
- Sets recovery targets and ranges for Chinook populations in each watershed,
- Identifies watershed-level actions needed to meet targets,
- Determines if identified actions will lead to recovery; if not, makes adjustments,
- Secures commitments to complete the plan and implement agreed-upon actions.

Other activities and features of Shared Strategy include:

- Fourteen watershed groups and one nearshore marine group have developed local recovery plans.
- A non-profit organization staffs and facilitates the regional-scale process, providing tailored assistance to watersheds.
- A regional policy group, the SSPS Development Committee, represents all levels of government, tribes, businesses, and conservation groups. The Puget Sound Technical Recovery Team, an independent group of scientists, provides ESA delisting criteria and technical guidance for the recovery plan.

### Project Contact

Jim Kramer  
 Executive Director  
 Puget Sound Shared Strategy  
 206-447-3336  
 JKramer@sharedsalmonstrategy.org



**Website:**  
[www.sharedsalmonstrategy.org/](http://www.sharedsalmonstrategy.org/)

# Restoring the Deschutes River

## Increasing Water Flow by Voluntary Actions

**Location:** Central Oregon

**Project Summary:** The Deschutes River Conservancy (DRC) works with farmers, communities, agencies, and various organizations to voluntarily restore the Deschutes River.

PHOTO COURTESY UPPER DESCHUTES WATERSHED COUNCIL



**Youth volunteer willow planting, 2003.**

### Resource Challenge

The Deschutes River of central Oregon is a popular trout fishing and white water rafting destination. Unfortunately, portions of the River and its tributaries suffer from poor water quality, degraded riparian habitat, and inadequate streamflow because of irrigation diversions. Much of the river does not meet water quality standards. Its aquatic habitat is degraded in areas, threatening fish and wildlife and raising the possibility of legal challenges under the Clean Water Act and Endangered Species Act. A new fish passage at Pelton Round Butte Dam may increase that possibility, since endangered salmon will be able to reach the Basin for the first time in fifty years.

Congress created the DRC in 1996 to bring farmers, tribes, irrigation districts, cities, private business, public agencies, and environmental organizations together to voluntarily restore the River using market-based actions. The DRC makes all project decisions by consensus, creating win-win solutions that restore streamflow, remove fish barriers, improve fish habitat, restore damaged stream banks, and increase riparian vegetation.

### Examples of Key Partners

Confederated Tribes of Warm Springs, Portland General Electric, irrigation districts: Central Oregon, Swalley, Three Sisters, Lone Pine, and Tumalo; Environmental Defense, Cities of Bend, Redmond, Madras, and Sisters; Bureau of Reclamation, USDA Forest Service, U.S. Geological Survey, the Upper Deschutes and the Crooked River Watershed Councils, Bonneville Power Administration, Oregon Water Enhancement Board, Oregon Water Resources Department and Department of Fish & Wildlife, Ochoco Lumber, Norton Cattle Company, Brooks Resources, Deschutes Basin Land Trust; Fish &

Wildlife, National Forest Foundation, Bonneville Environmental Foundation, and Oregon Community Foundation; Meyer Memorial Trust, The Nature Conservancy, Oregon Trout, Water Watch, and others.

### Results and Accomplishments

The DRC has restored more than 30,000 acre feet of streamflow (the equivalent 30,000 acres covered by water one foot deep) and improved 100 miles of streamside habitat—without regulations. The achievements include:

- Leased 24,000 acre-feet of water to temporarily restore streamflow.
- Conserved and permanently protected 5,892 acre-feet of water instream.
- Acquired 2 water rights to restore 3 cubic feet per second (cfs) streamflow.
- Moved an irrigation diversion 7 miles downstream to restore steamflow in critical steelhead habitat.
- Planted 108,518 trees along 16.1 miles of stream bank.
- Installed 38.6 miles of riparian fencing.
- Removed 8 fish passage barriers.
- Built 47 off-site watering facilities.
- Restored 7,450 feet of stream channel.
- Developed 4.5 acres of new wetlands.
- Built 14,535 ft of terracing.
- Established 55 sediment control basins.
- Put 23,283 acres under no-till farming production.

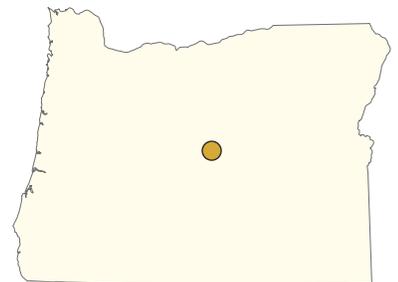
### Innovation/Highlight

**The DRC uses consensus and market-based solutions to resolve water issues.**

### Project Contact

Tod Heisler  
 Executive Director  
 Deschutes River Conservancy  
 541- 382-4077  
 tod@deschutesrc.org

**Website:**  
[www.deschutesrc.org](http://www.deschutesrc.org)



# Salt Pond Restoration in San Francisco Bay

## Wetlands Make Major Comeback in Bay Area

**Location:** San Francisco Bay, California

**Project Summary:** Restoration of 25,000 wetland acres at salt ponds around San Francisco Bay, with additional benefits from flood management, public access, and recreation.

PHOTO BY NOAA



Satellite photo of the South Bay salt ponds.

### Resource Challenge

San Francisco Bay is the largest estuary on the Nation's west coast. About 85 percent of the tidal marshes that once surrounded the Bay were displaced by development, agriculture, and salt production. Yet, the Bay still supports, and is essential to, commercial fisheries, migratory birds, and species unique to the Bay area, including the endangered California clapper rail and salt marsh harvest mouse.

In 1994, Cargill Salt, Inc. sold about 10,000 acres of salt evaporator ponds, marshes, and sloughs in the North Bay to the State of California. In 2003, California and the Federal government, with funding support from private foundations, acquired an additional 15,000 acres of South Bay salt ponds from Cargill.

Public agencies and a host of organizations are developing and implementing a series of ecosystem restoration projects for the salt ponds/wetlands. Associated goals include providing for flood management, public access, and recreation. Recycled water will be used to reduce salinity in some ponds in the North Bay.

### Examples of Key Partners

USDI Fish and Wildlife Service, National Oceanic and Atmospheric Administration (NOAA) Fisheries, US Environmental Protection Agency (EPA), U.S. Geological Survey, U.S. Army Corps of Engineers (Corps), California Department of Fish and Game, California State Coastal Conservancy, Water and Flood Control Districts, Cargill, Inc., Foundations including Hewlett, Packard, Moore, and Goldman Fund, City of San Jose, Save San Francisco Bay Association,

Ducks Unlimited, The Bay Institute, San Francisco Bay Joint Venture, Audubon Society, San Francisco Bay Conservation and Development Commission and others.

### Results and Accomplishments

- Acquired 15,000 acres of land for wetland restoration, flood management, and public access projects in the South Bay, and 10,000 acres of land for wetland restoration, recycled water reuse, and public access improvements in the North Bay.
- Completed a feasibility study for restoring 10,000 acres of North Bay salt ponds to tidal habitat along the Napa River, and to manage water depths and salinity in the remaining ponds.
- Scheduled the first restoration phase: The State will begin work on 3,000 acres of tidal lands and 1,400 acres of managed ponds in 2005. In phase 2, the Corps will restore 2,000 acres of managed ponds and construct a recycled water pipeline to help reduce salinity, once authorized by Congress.
- Working on a wetland restoration project that includes flood management for Silicon Valley and public access, scheduled to begin in 2008.

### Innovation/Highlight

Developed a set of regionally adopted, science-based goals that focus on habitat protection and improvement.

### Project Contact

Nadine Hitchcock  
San Francisco Bay Program Manager  
State Coastal Conservancy  
510-286-4176  
nhitchcock@scc.ca.gov



### Website:

[www.southbayrestoration.org/](http://www.southbayrestoration.org/) and [www.napa-sonoma-marsh.org](http://www.napa-sonoma-marsh.org)

# Seabird Protection Program

## How Red-footed Boobies Co-exist with a Military Firing Range

**Location:** Marine Corps Base Hawaii Ulupa'u Weapons Range

**Project Summary:** The Marine Corps Ulupa'u weapons range is the site for a collaborative effort to protect red-footed boobies through state-of-the-art conservation practices.

PHOTO BY TIM SUTTERFIELD



**Red-footed boobies (*Sula sula rubripes*) at protected nesting/roosting habitat at Ulupa'u Crater, Marine Corps Base, Hawaii.**

### Resource Challenge

Operating the Marine Corps Base Hawaii's Ulupa'u Weapons Range poses some unique problems: its 145 acres is sited in an extinct volcanic crater bordered by housing and oceanside cliffs. As an added challenge, the Base hosts an internationally renowned colony of more than 2,000 seabirds, the largest nesting population of red-footed boobies in the main Hawaiian Islands, atop the Crater.

The greatest threat to red-footed boobies is brush fires, easily triggered by ricochets in dry grass. Foreign grasses have invaded the Range landscape and lack natural controls. Traditional controls, such as mowing and controlled burns, are difficult because the area is likely to harbor unexploded ordnance.

As a matter of safety, the Marine Corps generally allows fires in impact areas to burn. In this instance, letting brushfires burn is unacceptable because of federal laws that protect the red-footed booby, potential adverse public reaction and lawsuits, and post-fire erosion runoff into pristine ocean waters.

### Examples of Key Partners

Hawaii Department of Land and Natural Resources, Marine Corps Base Hawaii, USDI Fish and Wildlife Service (FWS) Pacific Islands Office, Hawaii Audubon Society, and Sierra Club, Hawaii Chapter.

### Results and Accomplishments

For more than twenty years, base environmental staff, the FWS, and the Hawaii Department of Land and Natural Resources have teamed with Navy contractors, Marines, engineers, regulators, and fire and safety personnel, implementing more than \$5 million in range improvements aimed at reducing brush fire risks. The base has installed firebreaks, water delivery systems, fire response equipment, and, with the help of Hawaii Audubon Society, has installed artificial nesting trees, maintained by volunteers, that lure birds to less fire-prone areas.

The latest innovations include a \$350,000 geotextile groundcover, anchored by a gravel cover, to suppress grasses under nesting trees, as well as four solar-powered, remote-controlled water cannons to quickly extinguish grass fires. These innovations have lowered the frequency and intensity of brushfires and reduced the need for labor-intensive weed-control that interrupts training and jeopardizes safety.

Proactive measures have yielded multiple benefits: the Marines can continue training, the base and its partners helped protect the birds, and the base has built positive relationships with governments, environmental advocacy groups, and the public.

### Innovation/Highlight

**New technology, applied in cooperation with stakeholders, conserves bird habitat while allowing the military to continue using its firing range.**

### Project Contact

Ms. Elizabeth Kumabe  
 President  
 Hawaii Audubon Society  
 808-528-1432  
 hiaudsoc@pixi.com



## Southern Nevada Lands Partnership

### Agencies and Communities Conserving Land “Outside Las Vegas”

**Location:** Nevada

**Project Summary:** Multi-agency and community partnerships conserve and steward “Outside Las Vegas” using innovative funding and legislative authorities.



**Volunteers repair trails at Red Rock National Conservation Area.**

### Resource Challenge

Southern Nevada led the country in growth during the last decade, witnessing 5,000 new residents every month. Each year, more than 36 million people visit the region. Record growth and visitation, coupled with declining budgets, have dramatically affected the more than seven million acres of federal, state, and private lands around Las Vegas. Land managers fight litter, dumping, graffiti, illegal off-highway vehicle use, disturbance of fragile desert soils, cultural resources thefts, and exotic species, among other problems.

The USDI Bureau of Land Management (BLM), the USDI National Park Service, the USDI Fish and Wildlife Service, and the USDA Forest Service formed the Southern Nevada Agency Partnership in 1997. They identified 14 interagency initiatives including litter clean-up, volunteerism, law enforcement, resource protection, recreation, research, and education.

In 2000, the agencies reached out to the community, creating the Outside Las Vegas Foundation, which includes prominent leaders and private citizens. The Foundation and its parent organization, the Southern Nevada Interpretative Association, raise funds and engage the community in conservation activities and strategic initiatives.

The partnership benefits from innovative funding and authorities. The Southern Nevada Public Lands Management Act allows them to dispose of unwanted land and acquire environmentally sensitive parcels. The Clark County Multi-Species Habitat Conservation Plan addresses all of the region’s listed species under one comprehensive strategy. Other contributions come from the Outside Las Vegas license plate, donations, and retail sales.

### Innovation/Highlight

**Innovative funding and legislative authorities provide conservation flexibility to the partnership.**

Recently, the Nevada System of Higher Education established the Public Lands Institute at the University of Nevada, Las Vegas to implement landscape-wide conservation initiatives including volunteerism, education, science and research, and data management programs.

### Examples of Key Partners

Southern Nevada Agency Partnership includes the USDI Bureau of Land Management, USDI National Park Service, USDI Fish and Wildlife Service, and USDA Forest Service. Other key partners include: University of Nevada Public Lands Institute, Las Vegas, Southern Nevada Interpretative Association/Outside Las Vegas Foundation, municipal and county governments, and others.

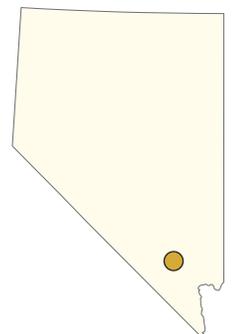
### Results and Accomplishments

- Created 14 Federal interagency implementation teams to work on projects.
- Used innovative funding sources, including the Southern Nevada Public Lands Management Act.
- Established a 16-officer interagency law enforcement and resource protection team.
- Expanded non-profit and University support for and participation in conservation strategies.
- Collaboratively designed a network of parks and trails to connect federal lands with communities.
- Launched an area-wide “Take Pride in America” Program.
- Maintained a volunteer clearinghouse with more than 1,200 interagency volunteers involved in conservation actions.
- Constructed new visitor and education facilities.

### Project Contact

Alan O’Neill  
Executive Director  
Outside Las Vegas Foundation  
702-461-6162  
aoneill@outsidelasvegas.org

*Website:* [www.snlandspartnership.org](http://www.snlandspartnership.org)

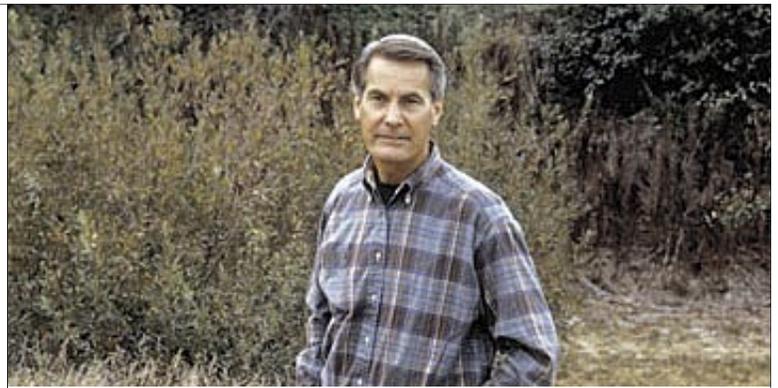


# Sustainable Wine Grape Growing in California

**Producers Thrive Using Sound Economic, Social, and Environmental Practices**

**Location:** California's Central Valley and North and Central Coasts

**Project Summary:** California winegrowers use innovative partnerships to advance projects ranging from habitat restoration to "green building."



**Habitat restoration and grape cultivation co-exist on 6,500 acres farmed by Lange Twins in Lodi.**

## Resource Challenge

Explosive population growth in many California communities is creating intense pressure and competition for natural resources. Demographic changes and development have led the wine industry to adopt innovative practices that use resources wisely and maintain harmonious relationships with their neighbors. Practices include placing lands in conservation easements, replanting eroded riparian areas and native oaks, encouraging migratory bird habitat, and providing for endangered species.

Community-based sustainability programs work closely with the wine industry. By participating in shared federal, state, and local partnerships, the California wine industry influences and advances environmental practices, not only for their industry, but for agriculture as a whole. The Sustainable Winegrowing Program helps growers and vintners improve their practices through voluntary self-assessment and benchmark reporting. More than 1,250 participants from 1,060 vineyards and wineries participate in a voluntary, statewide Sustainable Winegrowing Program. Lange Twins Vineyard, Fetzer Vineyards, and Kendall Jackson Winery are representative of statewide conservation efforts.

- *Lange Twins Vineyard* is one of many stakeholders on the Lower Mokelumne River, a 65,000-acre watershed supporting many species but facing degradation of riparian habitat.
- *Fetzer Vineyards* has been a leader in applying environmentally friendly, socially responsible practices for more than 15 years. Dedicated to sustainability, they are motivated by concerns about resource stewardship, health and well-being of employees and neighbors, and long-term business viability.

## Innovation/Highlight

**California's wine community has demonstrated that voluntary conservation programs can work as well as, or better than, regulations.**

- *Kendall Jackson Winery* faced the prospect of not being able to use land for agriculture due to endangered tiger salamanders on the property. Under traditional regulation, there was no incentive to enhance habitat.

## Examples of Key Partners

Private landowners, community members, Resource Conservation Districts, East Bay Municipal Utility District, USDI Fish and Wildlife Service (FWS), Environmental Defense, CALFED, regional winegrower associations, Agricultural Commissioners, University of California.

## Results and Accomplishments

*Lange Twins* – Completed the first programmatic Safe Harbor Agreement (SHA) in the nation to protect the elderberry beetle and maintain landowner property rights in the context of riparian restoration. The SHA is watershed-wide, extending to adjacent landowners.

*Fetzer* – Implemented watershed conservation, including streambank protection, erosion prevention, stream water flow improvements, species conservation, and effective biological control by beneficial insects.

*Kendall Jackson* – Signed a cooperative agreement with the FWS to protect the endangered tiger salamander. Key points include: creating buffers around existing breeding pools, adding at least one new breeding pool, ensuring pools are filled for the requisite time and depth, and funding research to better understand compatibility between salamander habitat and viticulture.

## Project Contact

Karen Ross  
President  
California Association of  
Winegrape Growers  
916-924-5370  
karen@cawg.org

*Website:* [www.cawg.org](http://www.cawg.org)



# The Irvine Ranch Land Reserve

## Private Ranch Serves Public Conservation Interests

**Location:** Orange County, CA

**Project Summary:** The Irvine Company and partners created a 50,000 acre urban reserve for education, recreation, and conservation, a model for sustainable development.

PHOTO BY STEVEN FRANCIS



**A hiker explores a trail at Irvine Ranch Preserve.**

### Resource Challenge

The Irvine Ranch Land Reserve is a 50,000 acre greenway and wilderness oasis stretching from the California coast to the inland foothills. Its origin traces back 150 years, but its recent history is the product of rapidly-vanishing open space, imperiled species, and a developer's vision.

The Irvine Company, owner of the core Irvine Ranch and a major developer in Orange County, had a vision for sustainable development: growth accompanied by land conservation. Sharing the developer's vision, eight private and public landowners, including the State of California and The Nature Conservancy, joined with the Company to create the 50,000-acre Irvine Ranch Land Reserve Trust.

Today, The Irvine Ranch Reserve is a mosaic of parks, wilderness areas, and greenways managed by the Trust and citizen volunteers for multiple sustainable uses, including public access, recreation, and conservation education. In addition, the Trust manages the Reserve for globally significant natural resources, contributing by its stewardship to a local Habitat Conservation Plan covering 60 species.

### Examples of Key Partners

The Irvine Company, Irvine Ranch Land Reserve Trust, The Nature Conservancy, California Department of Parks and Recreation, County of Orange, City of Irvine, USDI National Park Service, USDA Forest Service, and other local non-profit conservation organizations, city governments, community stakeholders and landowners.

### Results and Accomplishments

By working together, the landowners and the Reserve's Trust managers, led by The Irvine Company and The Nature Conservancy, have produced some notable achievements, including:

- Performed extensive resource inventories and monitoring projects.
- Removed exotic plants on more than 5,000 acres.
- Developed ecologically-based fire management protocols for local fire agencies.
- Trained naturalists at a local community college, graduating more than 1,000 expert volunteers to help manage the Reserve.
- Developed long-term programs to protect regionally important habitats with high biological value.
- Removed invasive wildlife species.
- Created a GIS environmental database to assist land managers.
- Held Land Managers Forums for training and information sharing.
- Created a 193-member volunteer docent corps which helped open more than 45 miles of public trails.
- Constructed staging areas and trailheads to facilitate public access.
- Coordinated nature programs with local schools, reaching more than 11,000 students.
- Collaborated on scientific and academic research with several universities and colleges, using the Reserve as a living laboratory.

### Innovation/Highlight

**A privately-led stewardship initiative for landscape-level conservation in an urban environment.**

### Project Contact

Mike O'Connell  
Executive Director  
Irvine Ranch Land Reserve Trust  
949-720-5568  
moconnell@irlrtrust.org

**Website:**  
[www.irvineranch.com/irvineranch/irvineranch.asp](http://www.irvineranch.com/irvineranch/irvineranch.asp)



# Tomales Bay Watershed

## Collaborative Stewardship for Watershed Enhancement

**Location:** Marin County, CA

**Project Summary:** The “all-stakeholder” Tomales Bay Watershed Council (TBWC) formed in 2000 and its 30 members unanimously adopted a 135-page watershed plan in 2004.

PHOTO © ROBERT CAMPBELL



**STRAW project (Students and Teachers Restoring a Watershed) sponsored by the Marin Resource Conservation District.**

### Resource Challenge

The Tomales Bay is on the California coast 40 miles north of San Francisco. Nearly 900 plant species, 490 species of birds, hundreds of invertebrates, and several listed species—including the coho salmon, brown pelican, and Steller Sea Lion—inhabit the bay and its watershed. Past and present human uses have affected the Bay: sedimentation has reduced the Bay’s size, while salmon runs have dropped by 80 percent. The Tomales Bay, Lagunitas, and Walker Creeks are also impaired because of pathogens, nutrients, sediment, and mercury.

Because of commercial oyster growing activities, the State Health Department requires stringent water quality testing. Recently, that testing led to human health advisories for water contact and fish consumption. An outbreak of illness from human sewage galvanized local action.

The TBWC formed in 2000, following citizen initiatives dating back to the 1980s. Council members agreed to protect the Tomales Bay ecosystem, maintain the watershed’s rural nature and quality of life, use a collaborative approach to sustain agriculture, mariculture, homes, recreation, and natural resources, and to strike the appropriate balance between voluntary and regulatory efforts.

The Council’s broad-based membership represents residential and community groups, agriculture, conservation, mariculture, recreation, public agencies, and interested citizens.

### Examples of Key Partners

Marin Agricultural Land Trust, West Marin Chamber of Commerce, Point Reyes Village Association, California State Agencies (Parks,

Fish and Game, Health Services), Inverness Yacht Club, Audubon Canyon Ranch, Environmental Action Committee of West Marin, San Geronimo Valley Planning Group, Blue Waters Kayaking, Hog Island Oyster Company, Marin Municipal Water District, Tomales Bay Association, Point Reyes National Seashore, Marin Resource Conservation District, UC Cooperative Extension, Tomales Bay Agricultural Group, Marin County Farm Bureau, Inverness Association, East Shore Planning Group, Marin County, Gulf of the Farallones National Marine Sanctuary, San Francisco Regional Water Board, Salmon Protection and Watershed Network, and property owners.

### Results and Accomplishments

Council members regularly involve all members in joint fact finding, allowing them to effectively integrate science and collaborative planning. It recently completed a citizen-based draft watershed plan.

Other Council activities include:

- Sampling plankton over the long term.
- Supporting the Tomales Bay Agricultural Group to respond to water quality issues.
- Advising the Regional Water Quality Control Board on the Pathogen Total Maximum Daily Load (TMDL) standards.
- Supporting and facilitating several other projects, including a \$500,000 study and restoration grant in Lagunitas Creek.

### Innovation/Highlight

**The Council’s informal structure allows full participation by all stakeholders, including all local, state, and federal agencies with regulatory responsibilities.**

### Project Contact

Neysa King  
Watershed Coordinator  
Tomales Bay Watershed Council  
415-663-9092  
tbwc@horizoncable.com

**Website:**  
[www.tomalesbaywatershed.org/index.html](http://www.tomalesbaywatershed.org/index.html)



# Washington State Military Sustainability Program

## Sustaining Natural Resources and Military Preparedness

**Location:** Washington State

**Project Summary:** The military sustainability program uses a multi-stakeholder process to integrate conservation and sustainable land practices into military operations.



**Senior Airman of the 92nd Logistics Readiness Squadron, Fairchild Air Force Base, WA fills facility vehicle with Biodiesel.**

### Resource Challenge

Sustainability is the foundation of a new military strategy for the environment, a proactive approach to minimizing potential conflicts associated with military training. Senior military leaders in the State of Washington launched the Washington State Military Sustainability Partnership in 2003 to focus on sustainability as a concept, believing that military land use and resource conservation can be compatible, and that sustainable military operations can be developed.

The Partnership's goal is to show leadership by developing sustainable military operations that go beyond solving today's problems to laying a foundation that balances mission, well being, and the environment in the long term. Partners agreed to establish a strategy for their own organizations, to share goals, and to seek additional partners from Federal, tribal, state and local organizations.

### Examples of Key Partners

Units from the U.S. Army, Navy, Air Force, and the U.S. Coast Guard (Joint Regional Flag Officer Council), Washington State National Guard, Office of the Federal Environmental Executive (OFEE); State of Washington Governor, Governor's Executive Policy Office, Washington State University, Washington State Military Department; Washington State Department of Fish & Wildlife, EPA Region 10; Natural Capitalism Group, and NIKE Corporation.

### Results and Accomplishments

The Partnership has drafted a formal Charter, agreed to joint sustainability goals, sponsored a Sustainability Education Day for Military Leadership, provided Sustainability Training Workshops for each of the military services, and offered Service Sustainability Training to several hundred military participants. Soon, the Partnership will move beyond goal-setting and educational programs to on-the-ground activities.

The Partnership has reinforced positive relationships with environmental agencies and surrounding communities. OFEE, EPA Region 10, the State of Washington, NIKE Corporation, and the Natural Capitalism Group have provided encouragement, expertise, and guidance. In the future, the Partnership plans to integrate other federal, state, and tribal regional sustainability goals into its own.

Ultimately, this multi-stakeholder process will leverage resources and integrate sustainable land management practices, thereby improving the military's ability to organize, equip, train, and deploy personnel while protecting the environment and strengthening community ties.

### Innovation/Highlight

**Applying natural resource sustainability as a concept to military activities and land use.**

### Project Contact

Katherine Baril, Director  
Washington State Governor  
Locke's Institute for  
Sustainability and Innovation  
360-379-5610 x202  
kbaril@wsu.edu



*Website: <http://www.afcee.brooks.af.mills/lsed/>*

# Water Without War: Cooperative Salmon Restoration

## The Walla Walla Way of River Restoration

**Location:** Washington and Oregon

**Project Summary:** The river collaboration restores threatened fish by improving in-stream flow, habitat and water quality, while sustaining local farms and communities.

PHOTO BY U.S. ARMY CORPS OF ENGINEERS



**Spring Chinook salmon returning to the Walla Walla River after flows are restored.**

### Resource Challenge

The tribal name, Walla Walla, means “many small waters,” which well describes the braided-stream system that flows from the mountains of two states. Its abundant resources sustained Native Americans for generations.

The inland West receives abundant winter precipitation but has arid summers; during the mid-1800s, Euro-American settlers started to divert Walla Walla Basin rivers to irrigate farms. By the 1920s, irrigation dams had extirpated abundant runs of native Chinook salmon. Periodic flooding of developing towns prompted extensive channeling projects, helping to create a seasonally dry river that required annual rescues of stranded fish.

In 1998 and 1999 respectively, bull trout and summer steelhead were listed as Threatened under the Endangered Species Act (ESA). In 2000, faced with enforcement actions by the National Marine Fisheries Service and the USDI Fish and Wildlife Service, and a lawsuit by a coalition of environmental organizations, irrigators chose a proactive, innovative solution. They engaged federal agencies and environmentalists in conversations to create shared understanding. Reaching out to the Confederated Tribes of the Umatilla Indian Reservation, irrigators pledged to “help bring back their fish,” prompting a partnership with the Tribal Council to “keep farmers farming.”

### Examples of Key Partners

Gardena Farms, Hudson Bay, and Walla Walla River Irrigation Districts, Confederated Tribes of the Umatilla Indian Reservation, Walla Walla, Columbia and Umatilla Counties; Walla Walla City, Oregon Watershed

### Innovation/Highlight

**The Walla Walla Way, rooted in a trusting belief that cooperation gets things done, made a healthy river the foundation for the development of a Basin-wide Bi-State Habitat Conservation Plan.**

Council; Washington Watershed Planning Unit, Snake River Salmon Recovery Board, Kooskooskie Commons, Watershed Alliance. Tri-State Steelheaders, and others.

### Results and Accomplishments

For the first time in 100 years, the Walla Walla River flows year-round, thanks to a settlement among three irrigation districts, Tribes, and federal agencies. These flows supplement earlier Tribal, state, and landowner partnerships to improve fish passage and habitat, enabling reintroduced Chinook salmon to return to the river. A flow enhancement feasibility study and spring Chinook hatchery are underway. Notable outcomes of the collaboration are:

- 25 cubic feet per second (cfs) flow remains in the river in Oregon.
- 18 cfs flow remains in the river in Washington.
- 12.6 miles of irrigation delivery ditches piped.
- 18 fish migration passage barriers removed.
- 85 farms converted to efficient sprinklers.
- 300 fish screens installed for irrigation and Walla Walla City diversion intakes.
- 323 in-stream structures installed to improve habitat.
- 142 miles of riparian buffers planted and protected.
- 195,000 upland farm acres in conservation tillage and reserves to retain soils.

### Project Contact

Kevin Scribner  
Walla Walla Watershed Alliance  
509-520-8040  
ktscribner@my180.net

*Website:* [www.wallawallawatershed.org](http://www.wallawallawatershed.org)



# West Eugene Wetlands Partnership

## Urban Wetlands Spark Community Conservation

**Location:** Eugene, Oregon

**Project Summary:** An eight-organization partnership has implemented land acquisition, habitat restoration, environmental education and recreation facilities development over a 13-year period.



The city's wetlands provide many recreational opportunities, including nature observation, bicycling, and hiking.

### Resource Challenge

A 1987 natural resource study of the Willamette Valley found that the best remaining examples of wet prairie habitat were in the middle of Eugene's industrial zone. It was an important find; just one percent of the Valley's original wet prairie habitat remains, harboring several threatened or endangered species.

The community embarked on creating a comprehensive wetland management plan, involving more than 1,500 citizens in local discussions and decisions about the wetlands. The West Eugene Wetlands Plan, an effort to balance wetlands protection, recreation, and sound urban development, was adopted in 1992. In 1994, local, state, and federal governments and non-profit organizations formed a partnership to begin implementing the Plan's goals. Each signed a Statement of Partnership, indicating support of the partnership's mission, goals, and objectives.

### Examples of Key Partners

City of Eugene, USDI Bureau of Land Management (BLM), The Nature Conservancy, U.S. Army Corps of Engineers, Oregon Youth Conservation Corps, USDI Fish and Wildlife Service (FWS), McKenzie River Trust, and Willamette Resources and Educational Network.

### Results and Accomplishments

For 13 years, the partnership has successfully implemented projects for land acquisition, habitat enhancement and restoration, recreation facilities, environmental education, and scientific research. Highlights include:

- Acquired and permanently protected 3,000 acres of wetlands and associated uplands. Hydrologically and ecologically connected,

they provide high habitat connectivity, flood control capacity, and natural water purification.

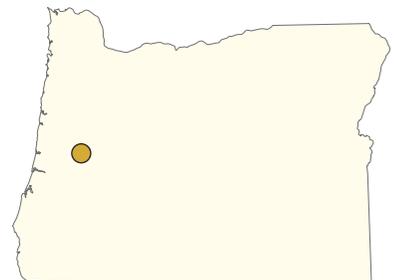
- Enhanced or restored 800 acres of wetlands and approximately 12,000 linear feet of streams to improve wildlife habitat and wetland functions, helping to stabilize or expand the population of four endangered species.
- Provided year-round environmental education programs for adults and children, reaching 3,000 students each year with classroom and field-based wetland education; developed a formal curriculum for 3rd through 5th graders; installed interpretive signs in the wetlands.
- Constructed 2.5 miles of multi-use trails and 1.5 miles of walking trails, widely used by walkers, bikers, runners, and wildlife observers; installed rest benches, picnic tables, and parking areas.
- Fostered substantial natural science and social science research, including many master's theses, Ph.D. dissertations, and other published investigations.
- Implemented the above projects using partnership-based programs and initiatives, including:
  1. City of Eugene stormwater program and mitigation bank program.
  2. Cooperative Conservation Initiative.
  3. Land and Water Conservation Fund.
  4. North American Wetland Conservation Act.
  5. Water Resources Development Act.
  6. Challenge Cost Share Program.
  7. Wetland Development Grants Program.
  8. Oregon Watershed Enhancement Board grant programs.

### Innovation/Highlight

**Adoption by City and County elected officials of a multi-objective land use plan protecting 79 percent of urban wetlands and enabling progressive community development.**

### Project Contact

Eric N. Wold  
City of Eugene,  
Parks and Open Spaces  
541-682-4888  
eric.n.wold@ci.eugene.or.us



**Website:**  
[www.ci.eugene.or.us/parks/wetlands](http://www.ci.eugene.or.us/parks/wetlands)