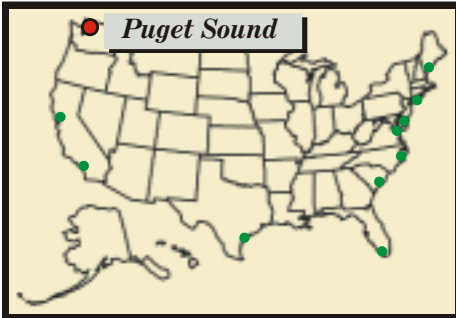




U.S. Fish & Wildlife Service

The Coastal Program

Success in Puget Sound



Caring for Our Coastal Habitats



Golden paintbrush.
Photo by Jon Gilstrom/USFWS

Conserving Coastal Uplands

Thanks to a number of effective Federal/State/private partnerships that have formed in the Puget Sound area, a variety of unique coastal upland habitats—including coastal open grasslands, meadows, dunes and beaches—are being protected or restored. These increasingly threatened coastal areas provide important habitat for several federally listed species in the Pacific Northwest, including the western snowy plover, golden paintbrush, and Oregon silverspot butterfly.

Partners Combine Strengths

For each of several projects, the U.S. Fish and Wildlife Service's Puget Sound Coastal Program has joined forces with between one and four partners, including The Nature Conservancy, Washington Department of Fish and Wildlife, Washington State Parks, Washington Department of Natural Resources, Seattle Pacific University and others. The U.S. Fish and Wildlife Service's Endangered Species Program also coordinated closely on these projects.

Projects Abound

In cooperation with partners, interpretive panels were designed and installed at western snowy plover nesting sites around the state that describe the nesting habits of these threatened birds and suggest ways for humans to avoid negatively impacting them. The number of signs delineating nesting areas was also increased to reduce human entry into these areas.

In another project, habitat restoration activities were conducted on two coastal golden paintbrush sites, a threatened plant species characterized by long, paintbrush-shaped stalks covered with golden flowers. Project activities included tree and shrub removal, mowing, and monitoring the locations and growth of this species.



Oregon silverspot. Photo by Paul Opler

In a third project designed to facilitate reintroduction of the threatened Oregon silverspot butterfly, coastal prairie meadow habitat was restored in the general location of the last sighting of this species in Washington. The site was first mowed to control shrubs and bracken ferns, then burned, and finally planted with native grasses, herbs, and *Viola adunca* (early blue violet) which is the sole larval food during developmental phases of this butterfly species.

Everything is Connected

Restoring Washington's unique coastal upland habitats not only helps recover listed species dependent on this ecosystem, but also benefits the many other species which depend on these systems. The partnership efforts described above either would not have occurred without support from the Puget Sound Coastal Program or, in the case of the Oregon silverspot butterfly, would have occurred on a much smaller scale and for an insufficient time period. The ecosystem-based partnership approach, focusing on cooperation with other Service programs and agencies, has proved highly effective in expanding existing recovery projects to more adequately meet recovery objectives, leveraging project funds, and implementing solutions across the landscape.

Duwamish River Estuary Restoration

Approximately 70% of coastal habitat resources have been lost and/or degraded throughout Puget Sound. Coastal wetlands, including intertidal marsh and mudflat and associated upland/riparian buffer areas, have been particularly hard hit, with significant implications for a broad range of trust resources that depend on the availability of estuarine habitats in the Pacific Northwest. These include juvenile salmonids, which are highly dependent on nearshore areas for rearing during outmigration. Other species observed using restored habitats include a broad range of estuarine fish, migratory waterfowl and shorebirds.

Joining Forces

Beginning with three pilot restoration projects (comprising less than three acres) completed under the Coastal America Program in 1993, the U.S. Fish and Wildlife Service's Puget Sound Coastal Program has been working with a diverse group of partners to restore the quality and quantity of coastal wetland habitats in this region. Partners include: U.S. Fish and Wildlife Service Puget Sound Coastal Program, U.S. Environmental Protection Agency, U.S. Army Corps of Engineers (COE), the Port of Seattle, Student Conservation Association, and People for Puget Sound.

Urban Habitat, Too!

The Duwamish River estuary is a highly urbanized system, around which the City of Seattle has developed. According to the People for Puget Sound newsletter: "Expecting juvenile salmon to survive a trip down the Duwamish River is akin to sending your 13-year-old out on the freeway to

find lunch. There's not much to eat, and there's a high risk of mortality." Loss of intertidal habitat in the lower Duwamish has been estimated at 98%. Despite this loss of habitat, a wide variety of fish and wildlife resources, including five species of salmonids, continue to use this system for important life history functions. In addition

"This is an exciting project. It's the first time there's been a commitment to watch and care for these sites after they are restored."

Tom Dean, People for Puget Sound restoration coordinator

to project implementation, the U.S. Fish and Wildlife Service has worked to develop citizen-based stewardship of restoration sites, facilitated



Photo by Curtis D. Tanner/USFWS

system-wide restoration planning and completed monitoring studies to evaluate the effectiveness of habitat development techniques. These lessons are being applied on a larger scale via implementation of compensatory mitigation activities and COE §1135 programs.

New Restoration Frontier

Restoration of coastal habitats in urban settings is a relatively new "science" and faces many challenges. The modest results of three pilot projects have snowballed into multi-agency restoration efforts focusing considerable

resources (land, staff time, financial) on this issue; eight larger scale projects (totaling about 18 acres) are in various phases of development and are scheduled for completion in 1999-2000.

Locals Get Involved

In addition to agency support for Duwamish estuary restoration, citizen interest in this issue is increasing. Work by the Student Conservation Association at these sites has involved high school students and greater emphasis is being placed on the education opportunities afforded by these urban oases. People for Puget Sound, a non-profit citizen action organization, recently received a grant to develop a

program of salmon habitat stewardship for the Duwamish. Program staff will serve as the scoping agent for this project, and act as a liaison to restoration project managers for People for Puget Sound.

Through an Urban resources Partnership/WaterWorks grant, local businesses, volunteers and urban youth will be organized to manage and maintain restoration projects along the Duwamish River.

The Service's Puget Sound Coastal Program staff and its

partners are literally changing the face of the Duwamish River estuary as its status evolves from decades of neglect to a major urban estuary restoration success.

"The Duwamish is an urban estuary at the heart of Puget Sound's economy and its environment. What better place to work together to bring back the wild salmon?"

Kathy Fletcher of People for Puget Sound