## Pacific Region 2012 -2016

# Strategic Plan Partners for Fish and Wildlife Program

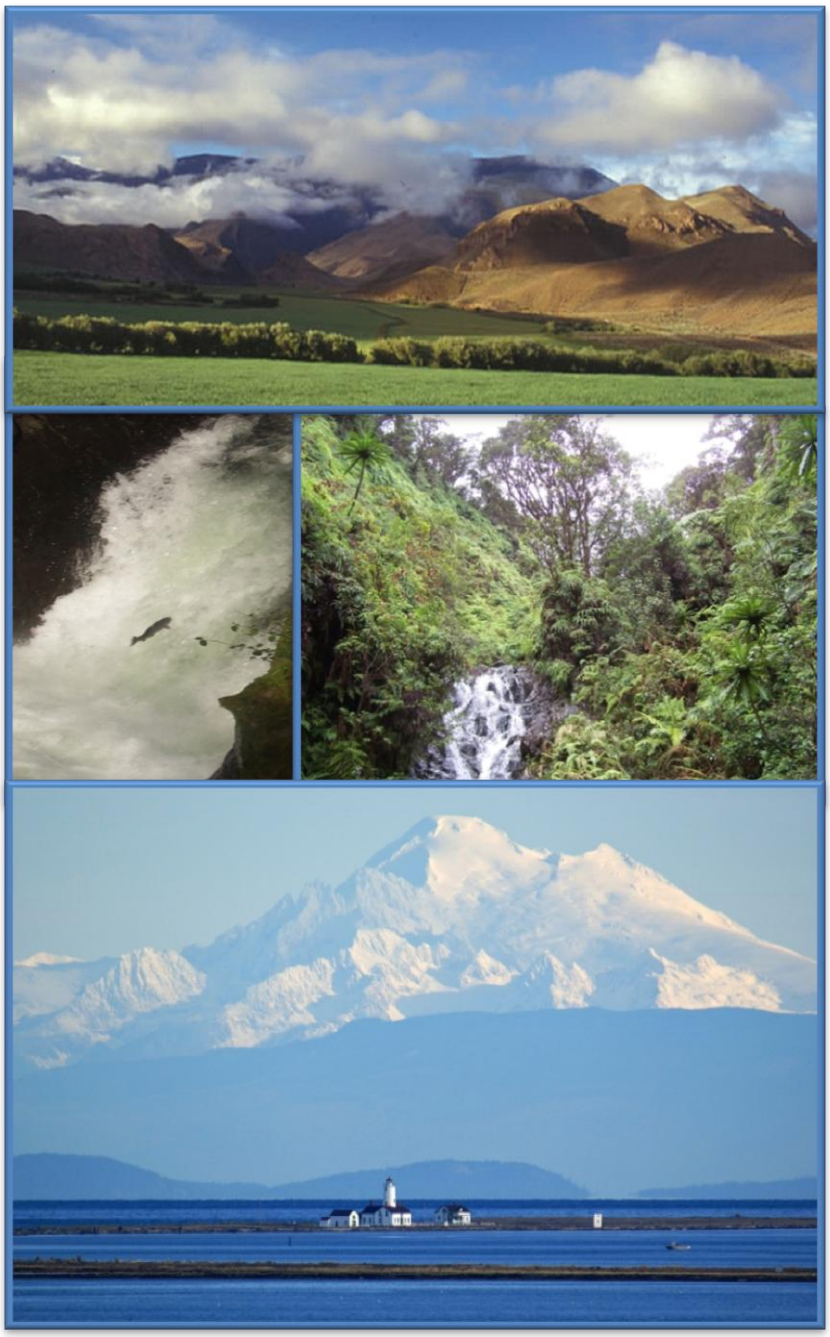
*Delivering Conservation on the Ground with Partners in:*

**Idaho**

**Oregon**

**Hawaii and the Pacific Islands**

**Washington**



*Cedar Creek Washington, washed out culverts,*
*Photo by J. Barenti, USFWS*

*Cedar Creek after installation of vehicle bridge to replace washed out culverts and prevent vehicles from driving through the creek.*
*Photo by J. Barenti, USFWS*

**Recommended Citation**:

U.S. Fish and Wildlife Service. 2012. Pacific Region Partners for Fish and Wildlife Strategic Plan: 2012-2016. U.S. Fish and Wildlife Service, Portland, OR.

**Cover photos**:

Top: Idaho landscape (USFWS photo)
Middle left: Wild Steelhead in Oregon (Amy Horstman, USFWS)
Middle right: West Wailua, Maui (USFWS photo)
Bottom: Puget Sound and Mt.Baker in Washington (Dow Lambert, USFWS photo)

## Message from the Regional Director, Robyn Thorson

As Regional Director of the U.S. Fish and Wildlife Service's (Service) Pacific Region, I am pleased to present this Strategic Plan for the Region's Partners for Fish and Wildlife Program (Partners Program). This is our second generation of Strategic Planning for the Partners Program. It covers the years 2012 – 2016, and builds upon the successes and lessons learned from the 2007-2011 Strategic Plan. Working together under the first generation Strategic Plan, we have accomplished great things, and now look to the future to strengthen our partnerships and accomplish even more with our second generation Strategic Plan.

The diversity of habitats and partners in the Pacific Region present many tremendous habitat restoration projects. Faced with this abundance of opportunity, the Partners Program must ensure that limited staffing and project dollars are allocated to benefit the highest priority resources and achieve the highest quality results for Federal trust resources. Strategic planning is an important tool to help ensure that we achieve new levels of efficiency in meeting our conservation objectives.

As with the 2007 – 2011 Strategic Plan, this Plan identifies Focus Areas for each of the four states and the trust territories in the Pacific Region, and sets realistic five-year habitat restoration targets. In addition, the plan includes goals and objectives for strengthening partnerships; improving information sharing and communication; enhancing our workforce; and, increasing accountability. This plan will help guide the Region in making private land habitat restoration decisions that are both fiscally responsible and provide the greatest good to Service Trust resources.

The closure of the 2007 – 2011 Strategic Plan is an opportunity to reflect on just how much we have accomplished. Concentrating efforts within the 35 geographic Focus Areas established in the first generation Strategic Plan has proven to be an extremely valuable approach to maximize the limited Partners Program resources, work more effectively with our many partners, and implement the highest priority projects within the Region. In some areas, the focus is on recovery of endangered species. In others, the focus is on habitat for migratory birds, or restoring fish passage for native fish. Some of our accomplishments during the first Strategic Plan include:

- Completed approximately 1,000 projects accomplishments
- Restored or enhanced over 43,000 acres of upland habitat
- Restored or enhanced over 21,000 acres of wetland habitat
- Restored or enhanced over 360 miles of riparian and instream habitat
- Removed or modified over 270 fish passage barriers
- Leveraged more than $5 for every $1 of Partners Program funding
- Developed a formal monitoring protocol
- Realigned Partners Program funding to those Focus Areas with the greatest opportunities to address multiple Service priorities collectively
- Worked with our Endangered Species programs to provide regulatory certainty for private landowners

These accomplishments could not have been realized without the help of our many partners, to whom we are grateful for their generous time, commitment to conservation, contribution of resources, and willingness to work cooperatively with the Service.

This Plan is similar to the first generation Strategic Plan, but changes are proposed to help raise the bar for fish and wildlife habitat conservation and public-private partnership. These changes include:

- A renewed emphasis to work directly with private landowners and local partners to restore habitat in a cost-effective manner that complements or enhances the efforts of communities dependent on natural resources (working landscapes, commercial or recreational fisheries, ecotourism and recreational use).
- Improving delivery of our services to partners by enhancing our efficiency and maintaining our program flexibility.
- Ensuring the use of sound science in our decisions, and increasing our monitoring efforts.
- Adjusting the borders of several Focus Areas.
- Outlining considerations for incorporating climate change adaptation strategies into conservation projects.

Partners Program staff worked with key partners, both within and outside the Service, to develop the second generation Strategic Plan. The collective insight, expertise, and dedication of these partnership efforts is apparent throughout the plan and further underscores the benefit of working together to advance a shared conservation vision. I look forward to working with all of you throughout the implementation of the second generation Strategic Plan.

*Molokai Cliffs, Photo by Jennifer Higashino, USFWS.*

**Table of Contents**

**Introduction** ..... **1**
Regional Overview
Program Overview
About this Document
Goals and Overarching Strategies
Summary of Stakeholder Input

**Goal 1 Conserve Habitat** ..... **4**
Focus Area Overview
Habitat Improvement Targets
Climate Change
Pacific Islands Focus Areas Summaries
Oregon Focus Areas Summaries
Idaho Focus Areas Summaries
Washington Focus Areas Summaries

**Goal 2 Broaden and Strengthen Partnerships** ..... **15**

**Goal 3 Improve Information Sharing and Communication** ..... **18**

**Goal 4 Enhance our Workforce** ..... **20**

**Goal 5 Increase Accountability** ..... **21**

**References** ..... **23**

**Appendix A.** Pacific Island Focus Area Narratives
**Appendix B.** Oregon Focus Area Narratives
**Appendix C.** Idaho Focus Area Narratives
**Appendix D.** Washington Focus Area Narratives

# Introduction

**Regional Overview**

The Pacific Region (Region 1) of the U.S. Fish and Wildlife Service (Service) includes over 158 million acres (almost 247,000 square miles) of land base in the states of Idaho, Oregon, Washington, Hawai'i, and other Pacific Islands. Not only is this land base large, it also spread over an even larger area of marine habitat. The Hawai'i and Pacific Islands area covers a geographic area larger than the continental United States, spanning 5 time zones and the International Date Line. The Pacific Islands Ecoregion includes the State of Hawai'i, the Commonwealth of the Northern Mariana Islands, the territories of American Samoa and Guam, unincorporated U.S. possessions like Palmyra Atoll and Midway Atoll, and independent nations with Compacts of Free Association with the U.S.—the Republic of Palau, the Federated States of Micronesia, and the Republic of the Marshall Islands.

The Pacific Region encompasses extraordinary ecological diversity with habitats ranging from tropical forest and coral reefs in Micronesia, to temperate old-growth rainforests west of the Cascade mountain range in Oregon and Washington, to high elevation lakes and streams in the Northern Cascades of Washington and Northern Rocky Mountains in Idaho, to arid shrub-steppe habitat in southern Idaho, eastern Oregon and eastern Washington. These habitats support over 450 endangered and threatened species, many unique and endemic plant and animal communities, and a variety of economic and land-use considerations. Our partners are varied: agricultural and natural resource dependent communities, rural and suburban interface landowners, Native American tribal governments, indigenous island communities, watershed councils, coral reef advisory groups, universities, land trusts, State, Federal, and local agencies, and many others.

**Program Overview**

The Partners for Fish and Wildlife Program (Partners Program) is the Service's vanguard for working with private landowners to voluntarily restore and conserve fish and wildlife habitat. Using non-regulatory incentives, the Partners Program engages willing partners to conserve and protect valuable fish and wildlife habitat on their property and in their communities. This is accomplished by providing the funding, technical, and planning assistance needed to make on-the-ground conservation affordable, feasible, and effective.

In the Pacific Region, the Assistant Regional Director for Ecological Services has oversight for the Partners Program. Our field presence is broad-based and cuts across Service program lines with Ecological Service, National Wildlife Refuge, and Fisheries field stations working together to deliver Partners Program projects. The Migratory Bird program provides valuable technical support, and the Division of Contracting and General Services helps us efficiently provide funds to partners.

**The Partners Program Mission:**

To efficiently achieve voluntary habitat restoration on private lands, through financial and technical assistance for the benefit of Federal trust species.

**About this Document**

This document is the Partners Programs Step-down Strategic Plan for the Pacific Region, Fiscal Years 2012 through 2016, and will be referred to as the Plan for the remainder of this document. This Plan builds upon the successes, as well as the lessons learned, from the Pacific Region 2007-2011 Step-down Strategic Plan. Similar to the previous strategic planning structure for the Partners Program, the national Partners Program Strategic Plan consists of three parts: Part 1 is the Vision Document (U.S. Fish and Wildlife Service, 2006). It provides a national overview of the Partners Program and establishes the five Program goals, Part 2 consists of regional strategic plans that "step-down" the national vision to the regional level; and Part 3 will be a national summary document. For each of the five Program goals in this Plan, we describe regional objectives, identify five-

year performance targets, and list key strategic activities that will help us meet our objectives.

This Plan is a living document and will be reviewed and adjusted periodically. We intend to revise this Plan, and/or individual Focus Area strategies as new information on climate change adaptation strategies or place-based methods to better increase ecosystem resilience and prepare for a changing climate is available. Elements of the Plan may also change as milestones are reached, or as unforeseen circumstances or new opportunities arise.

Each fall, the Regional Program Coordinator, in consultation with the State Partners Program Coordinators, will review the objectives and strategies identified in this Plan and will recommend which can be initiated or accomplished in the upcoming fiscal year considering expected budget and workforce scenarios. This information will then be provided to the respective Ecological Services, Refuge, and Fisheries Project Leaders through the annual Work Assignment Guidance issued by the appropriate Assistant Regional Director or Regional Refuge Chief.

**Goals and Overarching Strategies**

This Plan addresses each of the five Program goals established in the Vision Documents:

**Goal 1: Conserve Habitat**
**Goal 2: Broaden and Strengthen Partnerships**
**Goal 3: Improve Information Sharing and Communication**
**Goal 4: Enhance Our Workforce**
**Goal 5: Increase Accountability**

To achieve these goals efficiently and effectively, three overarching strategies will be implemented. These are:

**Strategic Habitat Conservation (SHC)** is a way of thinking and of doing business the Service is following to ensure that we accomplish the right things, in the right places, at the right times based on sound science. It requires that we set biological goals for priority species populations, allows us to make strategic decisions about our work, and encourages us to constantly reassess and improve our actions. These are critical steps in dealing with the range of landscape-scale resource threats. SHC consists of five parts: 1) Biological Planning; 2) Conservation Design; 3) Conservation Delivery; 4) Monitoring and Adaptive Management; and 5) Research. (http://www.fws.gov/science/shc/index.html)

*SHC Elements: Biological Planning, Conservation Design, Delivery, Monitoring, and Research. Credit: USFWS.*

SHC provides a framework upon which the Service can work with partners to connect site-specific Partners Program private land restoration projects with landscape-level biological goals and outcomes. The essence of SHC begins with setting measurable population objectives for selected species of fish, wildlife, or plants that will help conserve functional landscapes that support sustainable populations. Because it is impractical and inefficient to conserve landscapes by considering requirements for all species present, selecting a subset of species to serve as surrogates for a broader array of biological outcomes is a practical first step and helps fulfill an important step in the biological planning component of SHC. Work will soon be underway to identify the surrogate species for the Pacific Region, and

will be an important consideration in the refinement of this Strategic Plan.

Recognizing the value of SHC, the Pacific Region Partners Program is applying other elements of the SHC process now in many Focus Areas. Partners Program biologists use many biological planning and conservation design tools, relying on published scientific literature, conservation plans, species accounts, and recovery plans. Partners Program biologists often participate on local working groups providing input into the biological planning and conservation design process and helping to identify key geographic areas on the landscape for habitat restoration.

For example, in the Lower Columbia/N. Oregon Coast Focus Area, salmonid habitat projects are prioritized by identifying limiting factors for target species as systematically as possible and using multiple analyses documents as a 'road map' to prioritize key life history bottlenecks, target locations, and to identify needed restoration actions. Overall, watershed planning documents are nested within state-wide and regional conservation strategies and biodiversity analyses. These watershed plans contribute to a landscape scale conservation strategy that considers linkages, connections, and juxtaposition among sites to avoid fragmentation and isolation of the target species.

Partners Program projects for listed prairie species in the Willamette Valley and Western Washington Focus Areas are also part of a larger biological planning and conservation design effort. For these projects, the Partners Program and other partners rely on a landscape ecology approach targeting specific areas for habitat restoration based on existing habitat patches, pollinator/seed dispersal distances, and minimum patch sizes. The Natural Resource Conservation Service Sage Grouse Initiative is another example of a landscape ecology approach where the Intermountain West Joint Venture and multiple partners are targeting restoration and easement programs in sage grouse "core areas" using the SHC process.

The final step in the SHC process is monitoring and evaluation. The Pacific Region Partners Program monitoring protocol requires the assessment of site-specific projects; providing a feedback loop for individual projects and restoration techniques. Larger scale biological response monitoring called for with the SHC process is accomplished by working with partners through the Landscape Cooperative Cooperatives (see below) or other forums.

The Pacific Region Partners Program envisions using the SHC process for all Focus Areas by the end of this Strategic Plan. SHC has the potential to make the Partners Program more efficient, transparent, and effective in restoring habitat on private land for federal trust resources.

**Landscape Conservation Cooperatives**

Landscape Conservation Cooperatives are a network of self-directed partnerships that provide shared science capacity to inform resource management actions addressing climate change and other stressors within and across landscapes. They support biological planning, conservation design, prioritizing and coordinating research, and designing species inventory and monitoring programs. LCCs also have a role in helping partners identify common goals and priorities to target the right science in the right places for efficient and effective conservation. By functioning as network of interdependent units rather than independent entities, LCC partnerships can accomplish a conservation mission no single agency or organization can accomplish. The following LCCs encompass the Pacific Region:

* Pacific Island
* North Pacific
* Great Northern
* Great Basin

As LCCs become further integrated into the Service's model for achieving our conservation mission, the Pacific Region Partners will benefit as the LCCs provide a valuable bridge between applied science and conservation delivery.

**Efficiency and Flexibility**

Tough economic times have forced all of us to be more creative and innovative with the way

we do work. The Partners Program will continue to invest wisely using limited program resources on cost-effective projects that provide valuable wildlife benefits. Cost-sharing positions with other restoration programs and developing more efficient, simple, and nimble administrative processes can help us achieve greater efficiencies and achieve even greater conservation results.

**Summary of Stakeholder Input**

When we first initiated the national strategic planning process in 2004, information was gathered from internal Service programs and a variety of external stakeholders through mailed questionnaires, meetings, and personal interviews. This internal and external stakeholder feedback, coupled with scientific reports and conservation plans, were used to draft the national Strategic Plan Vision Document (U.S. Fish and Wildlife Service, 2006). For the Pacific Region 2007 – 2011 Step-down Plan, we worked with many of the same and some additional stakeholders to identify biological objectives and geographic Focus Areas in each State. In addition to hosting individual meetings, we posted Focus Area maps on our field station websites, explained the process and intentions of our Strategic Planning effort, and invited stakeholders to review and comment. For this Plan, we contacted stakeholders, shared our proposed updates with them, and solicited their ideas for how we could improve the program.

We are grateful for the information our many partners and stakeholders provided. Their input will help maximize our program efficiencies to provide the greatest good for Federal trust resources. We continue to welcome stakeholder input as we implement this Plan and will continue to seek new and innovative ideas for reaching our mutual conservation objectives.

## Goal 1: Conserve Habitat

**Focus Area Overview**

Concentrating efforts within the geographic Focus Areas established in the Pacific Region Strategic Plan for 2007-2011 has proven to be an extremely valuable approach. For this second generation strategic planning process, the Pacific Region reevaluated existing Partners Program focus areas, using new scientific data and GIS technologies to incorporate information such as species range limits, habitat associations, and private/public land ownership. The updated Focus Areas are displayed in Figures 1 and 2. Partners Program biologists also considered new and increased threats to priority habitats as well as opportunities that weren't available in the past.

Criteria used to develop these Focus Areas include:

- Importance of the area from a landscape ecology perspective (e.g., does the Focus Area link or connect important habitat types and reduce fragmentation of habitat?)
- Ability to address needs of multiple trust resources and habitats,
- Diversity, rarity, uniqueness, and health of the species and habitats present,
- State, national, and international designations (e.g. National Estuary Program, Wilderness, Biosphere Reserve, Western Hemisphere Shorebird Reserve Network),
- Imminence of threat (e.g., due to development, extinction, invasive species),
- "Recoverability" of ecosystem (can the threats be addressed?),
- Ability of the Service and willing partners to successfully address the resource needs (partners have capacity to deliver projects and landowners are willing to participate), and
- Presence of Service offices, biologists, and trust resources.

The final focus area decisions were made state-by-state, rather than at a regional level. This was done purposefully in order to involve all the key partners and constituents within each State and to consider specific land-ownership patterns and opportunities. Where focus areas adjoin along state borders, or more than one Service Program is working within a Focus Area, local Project Leaders are committed to work together.

**Habitat Improvement Targets**

Many projects implemented by the Partners Program benefit habitat, trust resources, or natural resource dependent communities (working landscapes, commercial or recreational fisheries, ecotourism and other recreational use) by providing technical assistance, initiating educational outreach, catalyzing or promoting natural resource stewardship, or otherwise participating in or influencing the planning and policy development processes of others. In addition, the majority of our work to control invasive species often requires a multi-year removal effort, followed up with additional years of monitoring, maintenance, and adaptive management in order to be effective. Significant Partners Program accomplishments that are not captured as acres or miles will be reported as Strategic Plan accomplishments in the national reporting database Habitat Information Tracking System (HabITS).

**Objective 1.1 Working with our partners, protect, restore, and enhance key habitats for the benefit of our priority Federal trust species identified in the Focus Area narratives.**

The habitat targets in Table 1 below are based on the assumption of stable program budgets. Project implementation is also affected by other conditions beyond our control such as reductions in partner funding; catastrophic changes to the environment (e.g., floods, typhoons, fire, new invasive species), additional regulatory and administrative compliance requirements; and increased costs of materials or fuels.

**Performance Targets**:

- See Table 1.

**Key Strategic Activities:**

- See Focus Area Narratives

**Climate Change**

Climate change is impacting our planet on a global scale (Intergovernmental Panel on Climate Change 2007). Climate change is affecting the migration cycles and body condition of migratory songbirds, causing the decoupling of the arrival dates of birds on their breeding grounds and the availability of the food they need for successful reproduction (Both et al., 2006). Climate change has very likely increased the size and number of wildfires, insect outbreaks, pathogens, disease outbreaks, and tree mortality (Backlund et al., 2008, Ryan et al., 2008). Evidence is also growing that higher water temperatures, lower summer and base flows, and increased magnitude of winter peak flows are all likely to increase salmon mortality in the Pacific Northwest (Battin et al., 2007). Hawaii's mid-elevation forests, where most of its native bird species are found, have been warming at a faster rate than regional projections. The birds will need to move upslope to cooler areas to escape from mosquitoes that transmit avian malaria. Coral reefs are also expected to be greatly affected by climate change. Anticipated 21st century climate change will increase ocean sea surface temperatures and ocean acidity, which will degrade corals and coral reef ecosystems and will eventually result in a functional collapse that affects reef-associated fisheries, coastal protection, tourism and people that rely on coral reefs for their livelihood (Hoegh-Guldberg et al., 2007). Sea level rise and expansion of invasive species challenges also call for changes in management responses.

The scale and scope of climate change impacts, together with the uncertainties and information gaps, call for a regional response, such as the multiple agency and stakeholder approach underway with the Landscape Conservation Cooperatives (LCCs). Downscaled, local climate models are needed to predict effects on fish, wildlife, plants and their habitats, as are risk and vulnerability assessments to identify the most sensitive species, habitats and ecological functions. Research is currently underway to provide additional details of what we can expect from global climate change, yet the need for action is pressing and immediate (Defenders of Wildlife and Oregon Department of Fish and Wildlife 2008). Rapid and constant changes in climate science and adaptation strategies will require that our approach be regularly revisited and updated, but we can start by prioritizing projects that promote or maintain ecosystem

resilience -- the most commonly recommended strategies for climate change adaptation.

*'I'iwi is one of many declining Hawaiian forest bird species moving upslope in response to climate change on the main Hawaiian islands. USFWS photo*

Adaptation strategies relevant for individual Focus Areas will vary considerably based on specific circumstances, however, several general adaptation principles are broadly applicable:

• **Reduce existing stressors**. Climate change will exacerbate many existing threats to our wildlife and natural ecosystems, such as the loss of habitat and spread of invasive species. Reducing those existing stressors that interact negatively with climate change will often be key to promoting ecosystem resilience.
• **Manage for ecosystem function**. Healthy and biologically diverse ecosystems will be better able to withstand or bounce back from the impacts of climate change.
• **Protect refugia and improve habitat connectivity**. Identifying and protecting both existing and possible future strongholds of plant and wildlife populations and corridors will be important. Ensuring connectivity among core habitat areas will facilitate the ability of species to shift ranges in response to changing climates.
• **Implement proactive management and restoration.** Efforts that actively facilitate the ability of species, habitats, and ecosystems to accommodate climate change—for example, enhancing marsh accretion, and planting climate change-resistant species—may be necessary to protect highly valued species or ecosystems when other options are insufficient (Glick et al., 2011).

**Objective 1.2:** Prioritize on-the-ground restoration projects that emphasize adaptability in consideration of anticipated climate change impacts.

**Performance Targets:** Fifty percent of the projects reported as habitat restoration accomplishments in HabITS will contain a brief narrative explaining how the project considers anticipated climate change impacts.

**Key Strategic Activities**:

- Stay abreast of Landscape Conservation Cooperatives (LCCs) biological planning and conservation design efforts.
- Participate in climate change training course, and technical forums to learn and share current information and science.
- Work collaboratively with partners to assemble best management practices for restoration project types and methods best suited for priority habitats in Focus Areas.
- Identify specific climate change restoration science needs.
- Work on protected lands to ensure the long-lasting benefit of Partners Program projects.
- Prioritize projects focused on maintaining, reconnecting, and reestablishing ecosystem processes and functions
- Revise this Plan and/or individual Focus Area strategies as new information on climate change adaptation strategies or landscape-scale priorities is available.

Table 1. Pacific Region Partners Program Focus Areas and Five-Year Performance Targets

| Focus Areas and Five-Year Performance Targets | | Wetland Acres | Upland Acres | Instream/ Riparian Miles | Fish Passage Barriers Removed |
|---|---|---|---|---|---|
| **PACIFIC ISLANDS** | | | | | |
| 1 | Kauai Island | 100 | 4,000 | 7 | 0 |
| 2 | Oahu Island | 0 | 200 | 0 | 0 |
| 3 | Molokai | 0 | 100 | 0 | 0 |
| 4 | Lanai | 0 | 100 | 0 | 0 |
| 5 | Maui Island | 0 | 500 | 2 | 0 |
| 6 | Hawaii Island | 0 | 1,000 | 1 | 0 |
| 7 | Island of Rota | 0 | 10 | 0 | 0 |
| **OREGON** | | | | | |
| 8 | Willamette Valley | 2,640 | 2,250 | 5 | 5 |
| 9 | Lower Columbia R - N. Coast | 50 | 20 | 25 | 25 |
| 10 | John Day Basin | 5 | 0 | 8 | 10 |
| 11 | Rogue, Umpqua, Coquille | 10 | 1,200 | 5 | 5 |
| 12 | Upper Deschutes | 10 | 100 | 3 | 8 |
| 13 | Closed Basin | 5 | 600 | 3 | 3 |
| 14 | Wallowa Mountains Region | 20 | 300 | 2 | 8 |
| 15 | Malheur River/Harney Basin | 10 | 400 | 1 | 4 |
| **IDAHO** | | | | | |
| 16 | Weiser | 10 | 500 | 1 | 0 |
| 17 | Danskin - Wood Rivers | 50 | 1,000 | 3 | 0 |
| 18 | Upper Snake River | 200 | 500 | 10 | 0 |
| 19 | Salmon/Lost Rivers | 100 | 200 | 20 | 0 |
| 20 | Bear River | 100 | 400 | 10 | 0 |
| 21 | Palouse-Clearwater | 70 | 400 | 4 | 0 |
| 22 | Pend Oreille (ID side only) | 5 | 25 | 4 | 2 |
| 23 | Owyhee | 50 | 1,000 | 2 | 0 |
| **WASHINGTON** | | | | | |
| 24 | Columbia Plateau | 50 | 400 | 1 | 0 |
| 25 | Methow | 50 | 250 | 3 | 2 |
| 26 | Palouse Prairie | 0 | 78 | 0 | 0 |
| 27 | Pend Oreille (WA side only) | 0 | 0 | 2 | 1 |
| 28 | Channeled Scablands | 500 | 1,000 | 0 | 0 |
| 29 | Yakima | 150 | 200 | 7 | 5 |
| 30 | N Puget Sound Salmonid | 0 | 0 | 1 | 0 |
| 31 | W Washington Prairies | 10 | 1,500 | 2 | 0 |
| 32 | W Washington Refuges | 100 | 200 | 3 | 2 |
| **TOTAL** | | **4,295** | **18,443** | **135** | **80** |

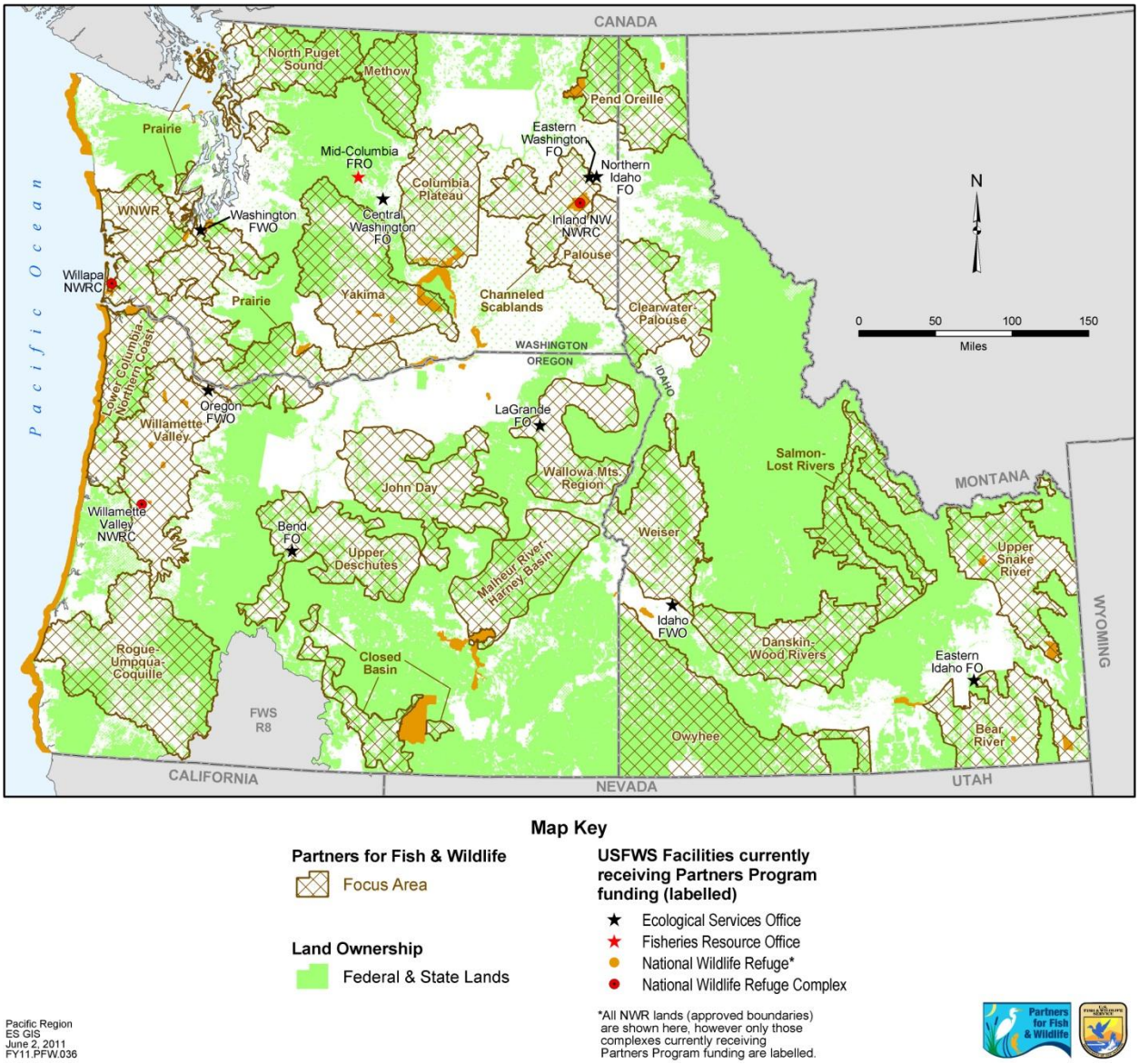



Figure 1: Regional Map of Pacific Northwest Partners Program Focus Areas

As illustrated in Figure 1., over 55% of the Pacific Northwest portion of the Pacific Region is in Federal or State ownership, often in an alternating checkerboard pattern of public and private lands, or with public ownership of the upper elevations and private ownership of the lower elevation. The lower elevation private lands often contain riparian and/or wetland habitats that are critical for breeding, over-wintering, or migratory components of many species lifecycles.

The Focus Areas delineated in Figure 1 contain a mix of public and private ownership, and approximately 42% of the land within the Focus Areas is in State or Federal ownership. The Focus Areas appear large in size, but only 24% of the land base within the Pacific Northwest Focus Areas is privately owned, and therefore eligible for the Partners Program. We kept the public lands within the Focus Areas in order to capture the smaller, but ecologically significant private lands within the public matrix, and to illustrate how the large contiguous blocks of public land and public-private checkerboard areas provide excellent opportunities for the Service to work together with partners to develop broad conservation agreements,

and achieve watershed-scale restoration. By working with key private landowners in a mixed ownership matrix, we have the opportunity to coordinate land use and management activities for both private and public landowners and increase our effectiveness in conserving ecological and economic interests.

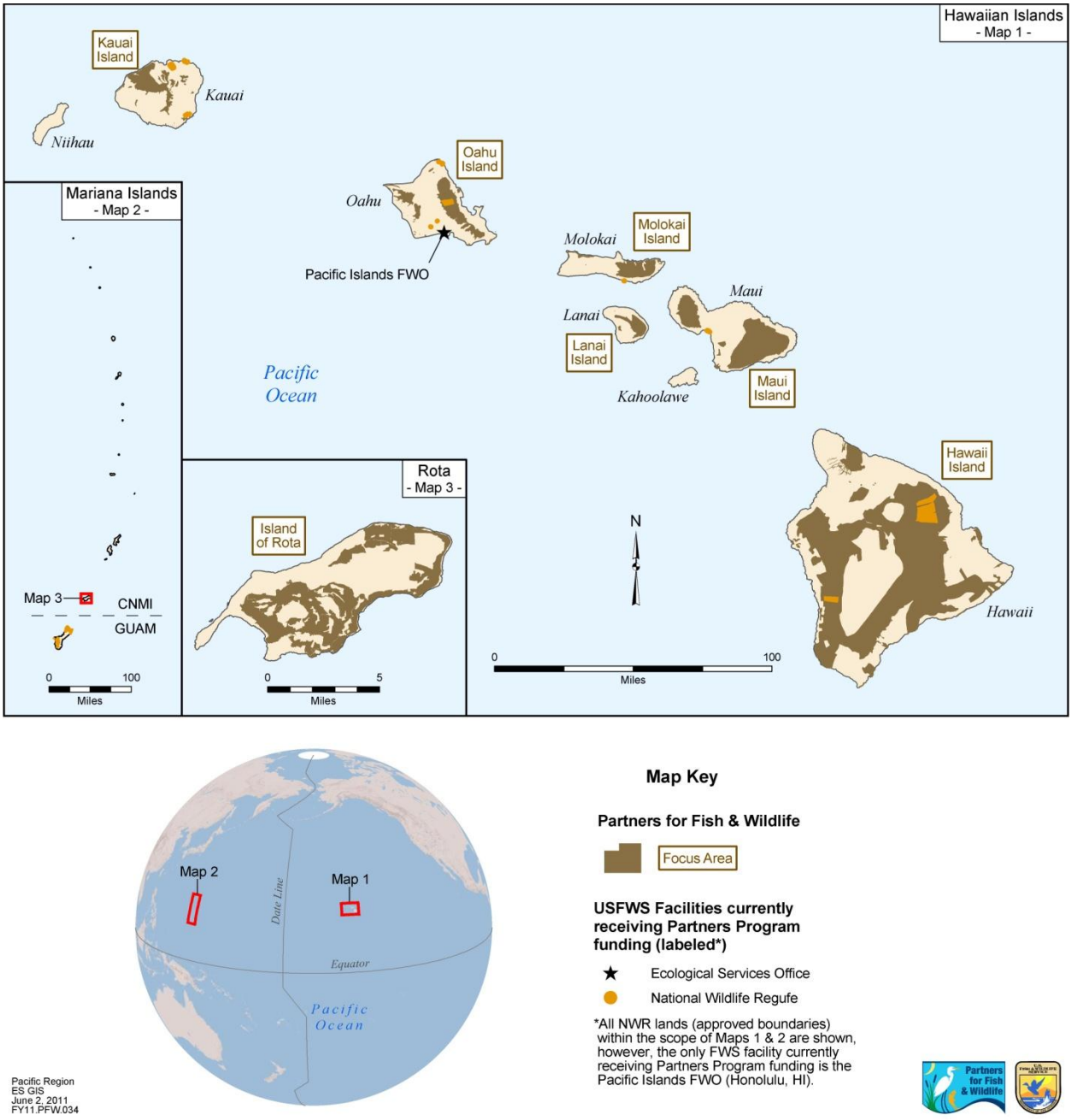



Figure 2: Regional Map of Pacific Island Partners Program Focus Areas

The Focus Areas depicted in Figure 2. also contain a mix of public and private lands, and are the priority landscapes for the Pacific Island Fish and Wildlife Office (USFWS 2011, .in press). The Partners Program will work on the privately-owned lands within these areas, and multiple Service program resources will work synergistically at an ecosystem level within the public/private matrix to conserve biodiversity.

**Pacific Island Focus Areas**

**The Kauai Island** Focus Area contains more endemic plant taxa (570) than any other island in the Hawaiian archipelago and is a hotspot for avian diversity with eight extant endemic species. Non-native feral ungulates and invasive plants are the primary threats to the native species on this island. Working with the Kauai Watershed Alliance, the Partners Program will protect and restore native habitats to benefit endemic plants, seabirds, forest birds and invertebrates.

**The Oahu Island** Focus Area covers the Koolau Mountains and the Waianae Mountains. These mountains contain viable native ecosystems at their summits, comprise headlands for continuous perennial streams, and contain patches of native forests for threatened and endangered species. The Partners Program will continue to work with the Koolau Mountains Watershed Partnership and the newly formed, Waianae Mountains Watershed Partnership to continue ungulate fencing, invasive plant removal and protect habitats where endangered plants still remain.

**The Molokai Island** Focus Area contains the east Molokai summit area and undeveloped north side which contain over 50 native natural communities, and the western coastal dunes which are habitat to a number of endangered plants and threatened wildlife, such as the green sea turtle. The Partners program will continue to work with private landowners and ranches to prevent further damage to the native forests and coastal areas through ungulate fencing, and removal of invasive species.

**The Lanai Island Focus Area** habitat restoration efforts will contribute to the recovery of endangered plants, endemic land snails, and endangered sea birds. Lanai island is the third smallest of the main Hawaiian Islands. It has a long history of overgrazing by cattle, goats, and axis deer which has cause severed soil erosion and has left few native-dominated natural communities. The Partners Program will continue efforts to construct a large ungulate proof fence surrounding Lanaihale and support the removal of non-native feral ungulates.

**The Maui Island** Focus Area habitat restoration efforts will be in partnership with three different watershed partnerships working across a number of native landscapes and habitats now overrun by invasive species. All of the work of these partnerships contributes to the recovery of endangered species. The Partners Program will continue to support these efforts for the long term conservation and recovery of Maui's native ecosystems.

**The Hawaii Island** Focus Area contains dry coastal areas and forests, wet forests, and subalpine habitats all of which contain endangered species that are under threat by introduced non-native feral ungulates. The Partners Program will continue efforts to restore habitats on Mauna Kea, Hawaii's tallest mountain, to help to recover the endangered Palila and re-establish bird fly-ways that will expand native habitats and watershed buffers.

**The Island of Rota** Focus Area is found in the Commonwealth of the Northern Mariana Islands. The Island of Rota is only 21,000 acres in size. The high central plateau called the Sabana, is the core of Rota's watershed, and contains the most intact native primary forests in the Mariana Island archipelago. The Partners Program will help to restore the limestone forest on the Sabana and protect critical habitat for the Mariana Crow and Rota bridled white-eye.

*Ungulate-proof fence that excludes feral pigs from Kanaele Bog. Photo courtesy The Nature Conservancy*

**Oregon Focus Areas**

**The Willamette Valley** Focus Area is over 90% privately owned, and less than 1% of the historic extent of the grassland and savanna habitat remains. The Service downlisted the Oregon chub from endangered to threatened status in 2010, primarily due to public/private partnerships successfully implementing recovery plan actions on private lands within the Willamette Valley. This same collaborative approach is being used to implement recovery actions for the Fender's blue butterfly, Kincaid's lupine, and other listed and sensitive plants. Based on current private landowner and partner requests to participate in the Partners Program, several of these species have an excellent chance of meeting downlisting or de-listing criteria within the next five years.

*Fenders blue butterfly, USFWS photo*

**The Rogue/Umpqua/Coquile** Focus Area includes a part of the conifer-dominated Coast Range which contains the highest density of streams in the state, and also includes part of the Klamath Mountains Ecoregion which supports the highest diversity of species in Oregon, particularly plants, many of which are endemic to the region. Working with our partners in aquatic and wetland habitats, we will improve habitat conditions and address limiting factors for salmonid recovery and other native and anadromous species. Our primary upland restoration efforts will be focused on the Kincaid's lupine, in the most southern portion of its range, to complement similar work being done in the Willamette Valley, and for the rough popcorn flower in wetland prairie habitats in the northern portions of the county.

**The Lower Columbia/Northern Oregon Coast** Focus Area is a biologically rich and diverse area critical for the conservation and recovery of numerous Pacific salmon, trout, and lamprey species and the endangered Columbian White-tailed Deer. This complex and ecologically resilient ecosystem has excellent potential to provide large scale migratory bird conservation benefits through tidal wetland, riparian, and floodplain restoration activities as well as in oak woodland and grassland balds. The land-base is primarily in private ownership, providing strong opportunity and need for the Partners Program.

*Helicopter placement of large wood at the Walluski River Tidal Slough project.*
*Photo by Amy Horstman, USFWS*

**The John Day** Focus Area is characterized by steep basalt canyon walls, sagebrush dotted hills, and mixed ponderosa pine forest and the John Day River, which is the longest free-flowing river west of the Continental Divide, and the nation's longest Wild and Scenic River corridor. It also has the healthiest run of wild summer steelhead in the Columbia Basin. Working with partners, we will improve fish passage and irrigation efficiency at stream diversions and improve hydrologic and biologic function of streams, wetlands, and riparian areas.

**The Upper Deschutes** Focus Area encompasses the Crooked River, Metolius River, the Upper Deschutes River (upstream of Round Butte Dam) and their respective tributaries. The Focus Area is large and complex and is comprised of a diverse

landscape of mountain forest, juniper and sage rangelands, rugged outcroppings, and deep river canyons. In 2009, retrofits to the Pelton-Round Butte Dam hydropower system were completed and for the first time in nearly 40 years, salmon could swim downstream. The Partners Program is participating with a broad coalition of stakeholders to open and improve habitat for the reintroduced anadromous species, with the hope of creating a successful reintroduction and supporting returns of wild runs of anadromous species to the upper basin.

**Malheur/Harney Basin** Focus Area contains large swaths of core sage grouse habitat and much of it is on private lands. Working with private landowners, the Partners Program will continue to restore and protect sage grouse "strongholds" in this area. The upper forks of the Malheur River also support an important bull trout population that we are working with private landowners to recover by restoring habitat complexity and improving fish passage conditions.

*Sage grouse, USFWS photo*

**The Wallowa** Mountains Focus Area includes several major rivers that support important populations of bull trout, Chinook salmon, and steelhead. The major river valleys are predominately on private land. The area also includes the Zumwalt Prairie grasslands, the last, largest remnant grassland of its kind in the west. Vast expanses of public and privately held sagebrush-steppe habitat also exist inside the Focus Area boundaries including a relatively isolated population of sage grouse east of Baker City. In bunchgrass prairie, sagebrush steppe, and alkaline meadow habitats, our projects focus on controlling invasive species and improving native species composition. In riverine habitats, our projects focus on removing barriers to fish passage, increasing instream habitat complexity, and restoring riparian habitat.

**The Closed Basin** Focus Area is flanked on its south side by the Hart Mountain National Wildlife Refuge and encompasses many unique wetland habitat features, and large portion of sagebrush dominated privately owned lands that include the westernmost populations of sage grouse within its existing range. This Focus Area also includes the entire range of the federally listed Warner sucker, a species particularly affected by hydrologic impacts from stream channel and watershed degradation from livestock grazing, and agricultural diversion dams on creeks. The Partners Program will work within the ranching and agricultural communities to provide technical assistance and funding to restore stream, wetland, and sagebrush steppe habitats while sustaining healthy rangeland to benefit grazing.

**Idaho Focus Areas**

**The Upper Snake River** Focus Area encompasses the headwaters of the Teton, Henrys' Fork, and Snake Rivers and provides important habitat for Yellowstone cutthroat trout. Many wetland and upland habitats also exist in this area that will benefit migratory birds, greater sage-grouse, and Columbian sharp-tailed grouse.

**The Salmon-Lost Rivers** Focus Area is known for its historically diverse runs of salmon, steelhead, and bull trout and is an important resource for the recovery of native fish. We will focus on working with ranchers and other partners on projects to improve the aquatic environment while maintaining working ranches.

*Riparian fencing on Goldberg Creek, Idaho. Photo by Cary Myler, USFWS*

**The Bear River** Focus Area is characterized by valuable aquatic habitat for Bonneville cutthroat trout and other native fishes, and wetland and upland habitats for migratory birds, greater sage-grouse, and Columbian sharp-tailed grouse. Our goal is to continue and expand our past efforts to provide benefits to fish and wildlife resources on Bear Lake National Wildlife Refuge, remove passage barriers and reduce irrigation diversion impacts for Bonneville cutthroat trout; and restore shrub-steppe and native grassland habitat for Columbian sharp-tailed grouse and greater sage grouse.

**The Pend Oreille Idaho** Focus Area has core habitat for bull trout, westslope cutthroat trout, bald eagles, grizzly bears and an exceptional diversity of rare species and habitats. USGS research has shown than even with high risk climate change factors, a majority of the westslope cutthroat populations in the Clark Fork/Pend Oreille Basin will persist in the long term. The Service has a diversity of partners who have prioritized this area and work with us to identify projects, secure funding and help implement projects.

**The Palouse-Clearwater** Focus Area contains Palouse Prairie habitats and the Clearwater Basin. Palouse Prairie is one of the most endangered ecosystems in the United States, less than 0.1% remains in a natural state, and several Palouse Prairie plant associations are globally imperiled. The Clearwater Basin is a high priority area for salmon habitat restoration. Conservation priorities in this focus area are to restore, protect and reconnect intact Palouse prairie remnants, and vernal pool wetlands that support water howellia and other wetlands important for migratory birds.

**The Danskin-Wood Rivers** Focus Area encompasses key habitats in the interface between the central-Idaho mountains and the dry sagebrush-steppe "desert" areas of southern Idaho which are important for species such as greater sage grouse and bull trout and a variety of migratory birds that either move through this area in the spring or fall or breed here. The Service has developed a number of strong, key partnerships in the area over many years, and looks forward to continuing them.

**The Owyhee** Focus Area is one of the strongholds for greater sage-grouse in Idaho and is key for long-term conservation of the species. Other sensitive species in the area are Columbian spotted frogs and pygmy rabbits. Over the past several years the Service has initiated work with private landowners in this area and will build on that effort going forward.

**The Weiser** Focus Area in southwestern Idaho is a key area in Idaho for conservation of sensitive species and migratory birds. The area contains important populations of greater sage-grouse and Columbian sharp-tailed grouse, as well as the entire range of both the northern and southern Idaho ground squirrels, two species of endemic ground squirrels.

**Washington Focus Areas**

**The Methow Basin** Focus Area contains some of the most dramatic and pristine landscapes in Washington State and provides habitat for many ESA-listed species, including, salmon and steelhead, lynx, wolverines, spotted owls, and wolves. With ongoing development and climate change impacts at hand, we continue to work with our partners to protect and restore the all-important valley habitats, while looking for opportunities to provide connectivity to public and private lands for wide-ranging species.

*Methow Basin, photo by Robes Parrish, USFWS*

**The Channeled Scablands** Focus Area encompasses a globally unique landscape formed by Ice Age floods that scoured out numerous channels and potholes creating a mosaic of wetlands, aspen thickets, pine forests and sage and grassland steppe. Wetland densities in the Scablands rival those of the Prairie Potholes region of the Midwest. We will work with a diverse group of partners and landowners to restore wetlands, adjacent riparian, and upland habitats with support from NAWCA grants and Farm Bill programs.

**The North Puget Sound Salmonid** Focus Area includes the largest watershed in Puget Sound and has been identified as a high priority for recovery and restoration of Pacific salmon and bull trout. We will partner with others to support the restoration of aquatic habitats and their supporting landscapes. Our efforts will focus on restoring natural physical and biological processes that are essential for the recovery and restoration of these species.

**The Palouse Prairie** Focus Area contains one of the most imperiled ecosystems in the United States and supports many at-risk species, including the Federally listed Spalding's catchfly, five plant species of concern, many grassland birds, and the recently discovered Giant Palouse Earthworm. We will work with private landowners and other partners to restore native prairie remnants for native plant communities that support a variety of species, with emphasis on recovery of the Spalding's catchfly.

**The Pend Oreille Washington** Focus Area is a mountainous area with many glacial-origin lakes, rivers, and streams and bordering Idaho and British Columbia, and is a high priority area for bull trout and westslope cutthroat trout. Working with our partners, we will improve wetland, riparian and tributary habitat along the Pend Oreille River, restore hydrology and vegetation to valley bottom wetlands to improve habitat for wetland-dependent species, reduce habitat fragmentation, and accelerate successional stage in ponderosa pine stands

**The Western Washington Prairie** Focus Area contains globally imperiled oak woodland, savanna, and prairie habitats that support listed, candidate, species of concern, and other unique species. We will work with our partners to restore these habitats, assist with recovery actions for golden paintbrush, Kincaid's lupine, Bradshaw's lomatium, Nelson's checkermallow, and support recovery of the Taylor's Checkerspot butterfly and the Mazama pocket gopher.

*Puget Sound Prairies, photo by Judy Lantor, USFWS*

**The Western Washington Refuge** Focus Area contains a diverse network of coastal forests, riparian corridors, estuaries, streams, fresh and saltwater wetlands, coastal dunes, prairie, oak savanna and woodland habitats. These unique interconnected habitats are essential to various listed and candidate

species such as Columbian white-tailed deer, marbled murrelet, western snowy plover, Oregon silverspot butterfly, and Columbia River/Puget Sound salmonid species. This Focus Area contains stands of old-growth Sitka spruce, Douglas-fir and other conifers thought to be more than 800 years old. The Nisqually watershed is also in this Focus Area and is the only watershed in the United States with its headwaters in a national park and its delta in a National Wildlife Refuge. We will focus on working with private landowners and other partners to restore, enhance, and provide connectivity for these native coastal, terrestrial, and aquatic habitats for the recovery of listed species.

*Removing abandoned logging roads in the Western Washington Refuge Focus Area, USFWS photo*

**The Yakima Basin** has a diversity of habitat types ranging from wet conifer forests to dry oak/pine forest to desert shrub steppe. Primary species of concern include listed bull trout and steelhead, westslope cutthroat, and sage grouse. These habitats and species are heavily influenced by the basin's agriculture based economy. We will work with irrigators, landowners, and our partners to remove fish barriers, restore floodplains and instream habitat, and preserve diverse habitats.

**The Columbia Plateau** Focus Area is primarily an arid, low elevation desert containing numerous rare and disappearing habitat types. Native habitats found here are sagebrush and bitterbrush shrub-steppe, ponderosa pine inclusions, wetlands, springs, and riparian draws. Ice-age glacial recession and subsequent flooding have created unique topographical features, offering an amazingly diverse group of rare mammals, birds and plants. Focus species include one endangered, several candidates, and numerous species of concern. We will share our knowledge and experience with our diverse partnerships to restore these ecosystems and protect them from further decline. The NRCS is an important partner as we work with agricultural producers to voluntarily conserve greater sage-grouse populations on working landscapes.

## Goal 2: Broaden and Strengthen Partnerships

The Partners Program is based on effective, strategic partnerships – creating them, promoting them, nurturing them, and maintaining them. Finding common ground and cooperating with landowners and other partners to accomplish Service priorities is the foundation of the Partners Program. Direct landowner and local partner relationships, responsiveness, reliability, and providing high-quality customer service are necessary elements of successful Partners Program partnerships. As we foster landscape-level planning approaches that link individual actions to a broader landscape, and which necessarily involve multiple stakeholders and processes, effective partnerships will be even more important.

Many private landowners and local partners value fish and wildlife resources and are eager to make a difference on the landscape. They recognize that fish and wildlife habitat enhancement and restoration can complement their timber management, farming and ranching practices and help maintain working landscapes. Others recognize the importance of habitat restoration for communities dependent on natural resources such as ranching and other traditional rural lifestyles, commercial or recreational fisheries, ecotourism, and recreational use. The Partners Program has demonstrated expertise in partnership building and the delivery of cost-effective projects that improve fish and wildlife habitat and complement the continued functioning of private land activities. Given the necessary resources, the Partners Program can reach out to additional partners and bring an even greater level of natural resource conservation for the benefit of natural resource dependent communities.

*Meeting with a private landowner to discuss restoration plans. USFWS photo*

**Objective 2.1: Strive to increase direct relationships with private landowners and develop local partnerships that will promote habitat restoration in communities dependent on natural resources.**

One of the core tenets of the Partners Program is to work directly with private landowners and help them resolve conservation challenges. Working with local partners such as watershed councils and conservation districts is also important and can be an efficient approach for working with multiple landowners. Highly effective partnerships can be developed when an "agency leader" and a "community leader" work together to achieve the often overlapping objectives of protecting and enhancing natural resources while protecting and/or enhancing economic opportunities. Establishing relationships with individual landowners can also help build trust by bridging the gap between conservation science and local knowledge, linking the long-term economic viability of timber management, farming, or ranching operations with the biological values of the land.

**Performance Target**: For each State, the Partners Program will be actively involved with at least two private landowner-based, collaboration-focused, conservation partnerships that are striving to conserve fish and wildlife habitat and protect or improve the local economy.

**Key Strategic Activities:**

- Increase restoration staff biologist time and presence within each Focus Area and/or Pacific Island.
- Engage formal and informal community leaders.
- Emphasize landowner options and decision-making .
- Promote citizen and community-based stewardship efforts for fish and wildlife conservation.
- Celebrate landowner and partner successes within constituency groups (e.g., Farm Bureau, local cattlemen's associations, watershed councils, etc.).
- Be familiar with resources offered by other agencies to help when solutions are outside scope of the Partners Program.

*Restoration underway in the Lower Columbia – Northern Oregon Focus Area. Photo by Amy Horstman, USFWS*

**Objective 2.2: Leverage time, talent, and funds for projects**

The Pacific Region Partners Program has a proven track record of efficiently using limited funds to achieve tremendous conservation successes. In these times of financial hardship, we need to become even more efficient. The Partners Program is more than just a project funding entity. Partners Program biologists serve as project proponents and catalysts and can function as funding magnets to ensure that high quality habitat restoration projects are a priority for other funding sources. We will achieve greater efficiency by combining available partnership time, talent and funds to achieve greater conservation impact, reduce duplication of effort, promote innovative solutions, and increase public support.

**Performance Target**: Achieve a leverage funding ratio of 5 partnership dollars for every 1 Partners Program dollar.

**Key Strategic Activities:**

- Jointly fund positions with partners to meet Focus Area objectives.
- Train Partners Program biologists to achieve a high level of expertise in grant writing, and partnership building.
- Ensure all cooperator and partner funding contributions are entered into HabITS.

**Objective 2.3: Continue our leadership role in the restoration community for promoting recovery of Endangered Species Act special status species.**

Over 450 listed species, and over 80 candidates for listing occur in the Pacific Region. Our experience working with private landowners and local partners has affirmed our belief that landowners are essential and willing partners in the conservation of rare and/or declining species, if they have the right tools. These tools include financial, technical, and regulatory incentives such as streamlined Endangered Species Act (ESA) compliance and landowner assurance mechanisms. The Partners Program will ensure that landowners and local partners are informed of the ESA tools available to encourage farmers, ranchers, family foresters, and other landowners to develop or continue good stewardship practices. If an appropriate ESA tool is not readily available, the Pacific Region Partner Program will work with the Service ESA Program and other agency staff to seek solutions for our partners.

**Performance Target**: By 2016, ensure that effective ESA incentive tools are in place as needed for all ESA special status species identified as key Focus Area species.

**Key Strategic Activities:**

- Work with ESA leadership to maintain and/or update existing programmatic internal ESA compliance documents and with NOAA Fisheries for inter Service ESA compliance documents.
- Maintain and/or update the Safe Harbor Agreement for Willamette Valley species, and the Northern spotted owl.
- Continue to work with Service ESA Recovery and Fisheries programs to fulfill Recovery Plan objectives.
- Continue to use ESA Section 10 and 7 to address landowner's ESA regulatory concerns.
- Ensure partners are aware of Farm Bill Tax Deduction for landowner expenses incurred for actions benefiting the recovery of ESA listed species.

*During the M-DAC prairie restoration in the Willamette Valley Focus Area, the site hosted the second largest population of streaked horned larks in the world. The streaked horned lark is a candidate species. USFWS photo*

## Goal 3: Improve Information Sharing and Communication

Effective partnerships rely on trust and respect that is based on open communication and information sharing. To ensure success, the Partners Program needs to share information and communicate in the best possible manner with partners, stakeholders, decision –makers, and fellow scientists. A highly effective strategy for enhancing communication and information sharing is frequent and consistent personal interaction. Ideally, this interaction with local stakeholders and partners would occur as a result of Partners Program biologists living within and being part of a community in the Focus Area. Personal interaction with partners can also occur by taking initiative to reach out to our conservation collaborators through meetings and other opportunities. In addition, new social media tools are available to us to reach even broader audiences, but we need to be strategic in how we use those tools.

**Objective 3.1: Improve and expand our communication and information sharing with stakeholders and partners, to maximize conservation results and build credibility and trust.**

Effective communication and information sharing is essential to influence the thoughts and decisions of others relative to the conservation of fish and wildlife resources.

**Performance Target:** Each year, each Focus Area lead biologist will engage in at least three opportunities to share Focus Area biological and/or restoration information with stakeholders and partners.

**Key Strategic Activities:**

- Develop a State-wide or Focus Area specific outreach Plan
- Increase restoration staff biologist time and presence within each Focus Area and/or Pacific Island
- Participate in landowner/watershed meetings, Soil and Water Conservation District Meetings, conferences or workshops in the Focus Area
- Participate in State-led conservation and restoration venues
- Sponsor, or directly assist in, landowner tours that promote the Partners Program.
- Participate in USDA Natural Resources Conservation Service State Technical Committee meetings.
- Participate in congressional staff briefings regarding the Partners Program.
- Share restoration success stories using new social media tools.
- Involve local community or school groups in hands-on restoration projects or citizen-science data collection.

*Bear River Idaho Focus Area, photo by Cary Myler, USFWS*

**Objective 3.2: Promote and increase the public's awareness and understanding of our stewardship vision to encourage participation in conservation programs.**

**Performance Target:** Over the five year plan, each Focus Area will help develop a minimum of three education/outreach products that highlight a successful partnership initiative and project activities and make this information available to the public through one or more sources (Internet, local newspaper, Facebook, conference proceedings, etc.) Information will emphasize how our work is valuable for place-based conservation.

**Key Strategic Activities**:

- Develop Focus Area specific outreach plans
- Consider hiring a social media technician (at the Regional Office) to facilitate program outreach and highlight accomplishments
- Update and maintain Internet sites for each Partners Program field station and the Regional Office that highlight local projects and partners

**Objective 3.3: Improve internal communications within the Partners Program Regional Team so we function as a network, fully informed and working collaboratively on Program issues**

The Partners Program functions most effectively with strong leadership in the Regional and State Coordinator positions. In the Pacific Region, the Regional Coordinator does not supervise the State Coordinators, and the State Coordinators rarely supervise other Partners Program biologists. They provide program leadership by coordinating the work of other Partners biologists within their State and serve as the Partners Program spokesperson when working with other organizations at the State level.

**Performance Target:** Quarterly "all station" multi-program Regional Office and Field station conference calls.

**Key Strategic Activities:**

- Ensure local communication with monthly conference calls or meetings for Focus Areas with more than one Service restoration biologist.
- Hold annual Pacific Region Partners Program Team meetings and invite Endangered Species, Migratory Birds, Contaminants, Cultural Resources, and other programs.
- Continue hosting Regional Partners Programs Workshops or Web Ex sessions to exchange success stories and lessons learned and share ideas.
- Exchange information on innovative, practical and cost-effective habitat restoration techniques and methods on the regional share point site.

**Objective 3.4: Improve internal coordination among Service restoration programs to maximize overall agency conservation effectiveness.**

One of the strengths of the Pacific Region Partners Program lies in its ability to conserve habitats through synergy with other Service programs. Partners Program funds are allocated to Ecological Service, National Wildlife Refuges and Fisheries field stations to work with partners and deliver projects. We have several examples where we have integrated individual programs' habitat conservation and restoration planning efforts into holistic, strategic, and geographically focused habitat actions.

One such example is the collaborative multi-program approach in the Willamette Valley Focus Area. In this arena, we work together with partners to restore a landscape-scale network of habitats that augment occupied core habitats and allow for restored metapopulation dynamics for five listed plants and one listed butterfly species

Each program has a role to play in the Willamette Valley Focus Area. The Refuge Program provides demonstration sites, seed sources, and restoration equipment. The Partners Program provides biologists skilled at working with private landowners, leveraging project funds with partners such as the National Resource Conservation Service, and implementing projects. The ESA Recovery biologists provide technical and funding support for critical research and species population surveys, and assist with streamlined compliance tools such as ESA Section 7 consultations and programmatic Safe Harbor Agreements.

*Partners Program and ESA Biologists work together to restore Willamette Valley prairie species. USFWS photo*

Another example is in the Lower Columbia Estuary-North Oregon Coast Focus Area, where the combined efforts of the Partners Program, Coastal Program, and Fisheries Habitat Program work with local watershed groups has allowed us to focus on ecosystem planning and assessment rather than on a project-by-project basis.

**Performance Target:** The Regional Coordinator will meet quarterly with other programs to explore and promote even greater cross-program coordination.

**Key Strategic Activities:**

- Develop Regional Office team to explore additional opportunities for greater program synergy.
- Explore opportunities for additional job sharing positions (e.g. combined Fisheries Habitat and Partners Program restoration biologist).
- Where not in place, integrate species action plans with restoration program priorities.
- Share program management efficiencies for the benefit of the Service (e.g. streamlined compliance processes).

*Camp Creek, John Day Focus Area, USFWS photo*

## Goal 4: Enhance Our Workforce

The Pacific Region Partners Program Team is comprised of highly skilled professionals that are well trained in partnering and restoration techniques, dedicated to public service and the fulfillment of the agency's mission. This team is the Pacific Region Partners Program's most important asset. In this goal, we address how to maximize the effectiveness of our workforce capabilities within our current budgetary limitations, prepare for reduced budgets, and enhance our technical and partnering skills.

### Objective 4.1: Maintain Partners Program capacity to deliver services in the Pacific Region.

We recognize our nation's current budgetary crisis, and realize that declining budgets are likely for all restoration programs, including the Partners Program. This will amplify the need to ensure that the locations of Program staff are well situated to addresses the priority habitats and geographic focus areas identified in this strategic plan. We will continue to pursue opportunities to collaborate with others (internally and externally) so that our workforce and our partnerships remain effective.

**Performance Target:** By the end of FY 2015, refine and implement a strategic workforce plan to ensure that the right skills are in the right location to deliver an efficient and effective habitat conservation program.

**Key Strategic Activities:**

- Work with Service leadership and external partnerships to reevaluate regional staffing needs and strategically locate Partners positions in focus areas with greatest potential for habitat restoration success.
- Pursue shared Service restoration positions to ensure continued capacity in Focus Areas with multiple Service trust priorities (adjacent to Refuges, priority area for Fisheries Habitat and Fish Passage programs, priority area for ESA species recovery).
- Consider co-locating positions with our key partners so that they can efficiently and effectively work together to accomplish technical assistance and habitat improvement for federal trust species.
- Continue to leverage project funds with partners.

**Objective 4.2: Maintain the institutional knowledge of the Partners Program and build on existing technical and partnerships skills.**

Our investment in people (e.g., training, participation in scientific organizations and conferences) increases our technical capabilities, enhancing our opportunity for success. Leadership and guidance will be provided by supervisors to encourage Individual Development Plans that provide a vision for each Partners Program employee. The ultimate measure of success under this goal is the contributions that Partners Program staff makes to the advancement of the habitat restoration field.

**Performance Targets:** 100% of Partners Program staff will develop an annual training plan (Individual Development Plan).

**Key Strategic Activities**:

- Attend training for professional development in support of the goals of this strategic plan.
- Encourage staff to participate in temporary details at Regional or Washington Offices to gain exposure to regional and national-level policy development and implementation.
- Support opportunities for shadowing details with senior restoration experts.
- Support staff participation in and attendance at professional societies' workshops and conferences on restoration techniques and methods.

## Goal 5: Increase Accountability

Accountability is an important responsibility for the Service and an important element of this Plan. For the Partners Program, we will ensure we are accountable by promoting transparency through open communication with internal and external partners, ensuring consistency with national policies, and reporting activities and accomplishments in a timely and accurate manner. We will measure, assess, and report on the effectiveness, efficiency, and fiscal integrity of our habitat restoration projects and activities.

**Objective 5.1: Ensure consistency with regional and national Partners Program guidance and policies.**

Periodic program reviews of field stations receiving Partners Program funds are required by the national policy and are a useful tool. The Pacific Region Partners Program uses these reviews as a forum for ensuring compliance with national policies and the Partners for Fish and Wildlife Act (P.L. 109-294), recognizing staff, sharing information, and proactively resolving potential issues.

**Performance Target:** Conduct program reviews of 2 field stations each year.

**Key Strategic Activities:**

- Run annual reports of budget object classes and salary charges by field station to determine compliance with the 70/30 policy (only 30% of Partners Program funds may be used for administrative expenses and 70% or more is for project delivery).
- Develop annual Work Assignment Guidance from Assistant Regional Directors and the Regional Refuge Chief to field Project Leaders to formally establish GPRA and Operational Plan targets and implement specific actions within this Plan.
- Ensure that all Project Leaders responsible for implementation of the Partners Program will have Partners Program specific performance standards in the performance plans for all staff that help deliver the Partners Program.
- Ensure that all Partners Program technical assistance and habitat improvement projects are entered into the HabITS database according to technical guidance and quality standards.

**Objective 5.2: Implement the Pacific Region Monitoring Protocol developed specifically for the Partners Program.**

One of the accomplishments from our 2007-2011 Strategic Plan was development of the protocol, "Monitoring Habitat Restoration Projects: U.S. Fish and Wildlife Service Pacific Region Partners for Fish and Wildlife Program and Coastal Program Protocol." We acknowledge that over time, full implementation of the Monitoring Protocol could potentially reduce the number of projects delivered each year. This is acceptable because learning more about our project successes and failures is critical to expand our collective knowledge of restoration science, fine tune restoration techniques, and enhance project maintenance regimes. In addition, the Monitoring Protocol was designed to maximize monitoring efficiencies and minimize impacts to project delivery, which remains the primary objective of the Partners Program.

**Performance Targets**:

- Conduct implementation monitoring for all restoration projects as described in Standard Operating Procedure (SOP) #1 of the Monitoring Approach, or in accordance with existing office procedures and protocols.
- Conduct effectiveness assessments as described in SOP #2 for 25% of the "major role" restoration project accomplishments.
- Be engaged in at least one validation or population response monitoring effort for each Focus Area.
- Share project successes and unexpected setbacks in annual regional meeting or web-ex session.

**Key Strategic Actions**:

- identify specific objectives for each project accomplishment prior to implementation;
- assess whether projects were implemented as intended;
- assess whether accomplishment-specific habitat objectives were achieved;
- standardize the reporting of monitoring results;
- enable staff to learn from each project and improve implementation of future projects;
- identify information and research needs;
- incorporate select individual Partners Program Projects in larger scale validation or population-response monitoring efforts.

*Fence line at Auwahi Dry forest, Ulupalakua Ranch, Island of Maui. Photo by Craig Rowland, USFWS.*

**References**

Backlund, P.A. Janetos, and D. Schimel (convening lead authors). 2008. The effects of climate change on agriculture, land resources, water resources, and biodiversity in the United States. Synthesis and Assessment Product 4.3. Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. U.S. Environmental Protection Agency, Washington, D.D. 362 pp.

Battin, J., M.W. Wiley, M.H. Ruckelshaus, R.N. Palmer, E. Korb, K.K. Bartz, H. Imaki. 2007. Projected impacts of climate change on salmon habitat restoration. Proceedings of the National Academy of Sciences 104:6720-6725.

Both, C., S. Bouwhuis, C.M. Lessells, and M.E. Visser. 2006. Climate change and population declines in a long-distance migratory bird. Nature 414:81-83.

Defenders of Wildlife and Oregon Department of Fish and Wildlife. 2008. `Preparing Oregon's Fish, Wildlife, and Habitats for Future Climate Change: A Guide for State Adaptation Efforts. Subcommittee on Fish, Wildlife, and Habitat Adaptation Oregon Global Warming Commission

Glick, P., B.A. Stein, and N.A. Edelson, editors. 2011. *Scanning the Conservation Horizon: A Guide to Climate Change Vulnerability Assessment.* National Wildlife Federation, Washington, D.C.

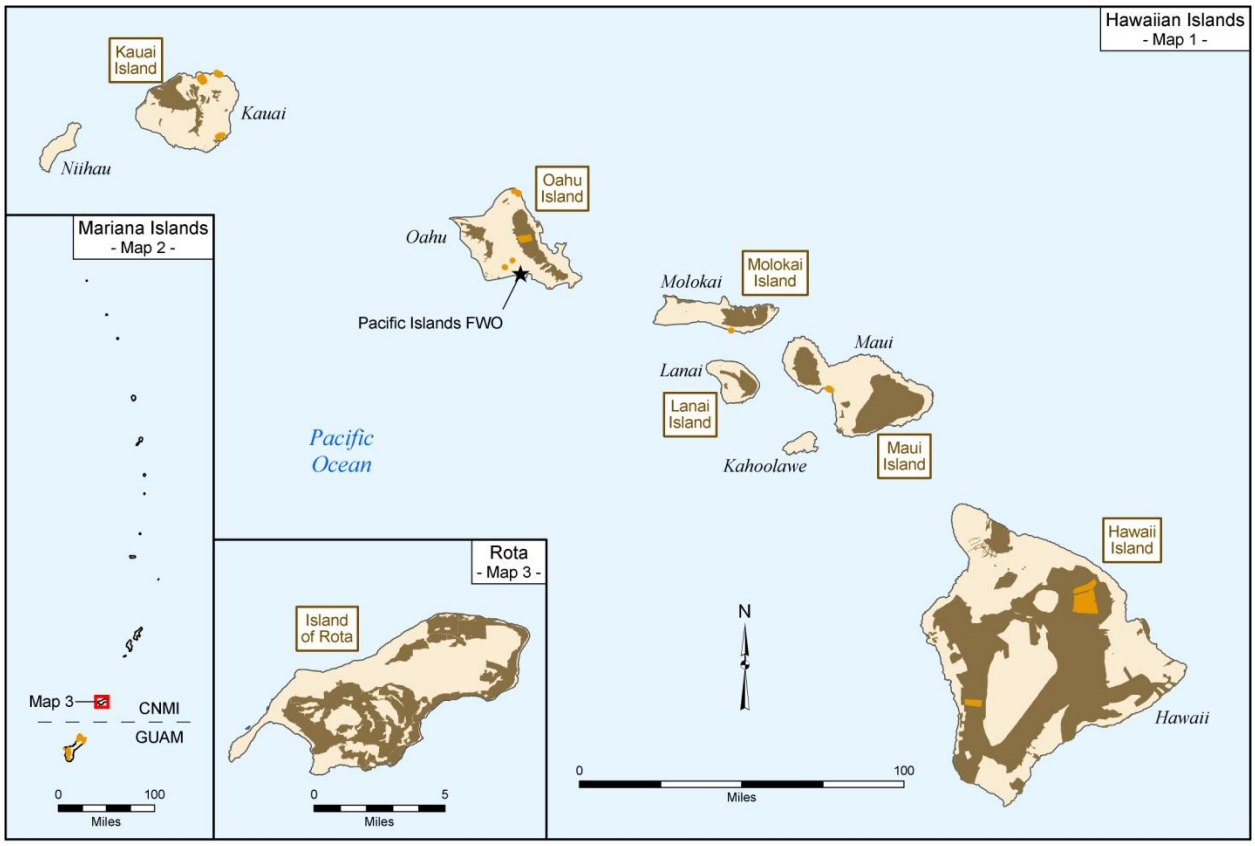
Hoegh-Guldberg, O., P. J. Mumby, A. J. Hooten, R. S. Steneck, P. Greenfield, E. Gomez, C. D. Harvell, P. F. Sale, A. J. Edwards, K. Caldeira, N. Knowlton, C. M. Eakin, R. Iglesias-Prieto, N. Muthiga, R. H. Bradbury, A. Dubi, M. E. Hatziolos. 2007. Coral reefs under rapid climate change and ocean acidification. *Science*, Vol 318: 1737-1742.

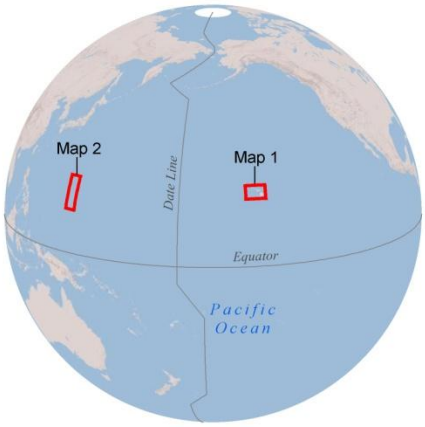
Intergovernmental Panel on Climate Change. 2007. Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II, III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K. and Reisinger; A. (eds.)]. IPCC, Geneva, Switzerland. 104 pp.

Ryan, M.G., S. Archer, R. Birdsey, C. Dahm,L. Heath, J. Hicke, D. Hollinger, T. Huxman, G. Okin, R. Oren, J. Randerson, and W.Schlesinger. 2008. Land resources. p.75–120. In: The Effects of Climate Change on Agriculture, Land Resources, Water Resources, and Biodiversity in the United States. Synthesis and Assessment Product 4.3. Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research. U.S. Department of Agriculture, Washington, D.C.

USFWS (U.S. Fish and Wildlife Service). 2006. Strategic Plan-The Partners for Fish and Wildlife Program Stewardship of Fish and Wildlife Through Voluntary Conservation. USFWS, Washington, DC.

# Appendix A – Pacific Island Focus Areas




**Map Key**

**Partners for Fish & Wildlife**

Focus Area

**USFWS Facilities currently receiving Partners Program funding (labeled*)**

★ Ecological Services Office

● National Wildlife Regufe

*All NWR lands (approved boundaries) within the scope of Maps 1 & 2 are shown, however, the only FWS facility currently receiving Partners Program funding is the Pacific Islands FWO (Honolulu, HI).

Pacific Region
ES GIS
June 2, 2011
FY11.PFW.034

# Kauai Island Focus Area

***Kauai Island Focus Area Target Goals for FY2012 – 2017***

*4,000 Upland Acres Improved*

*100 Wetland Acres (Montane Wet Forest and Bogs) Improved*

*7 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Alexander and Baldwin*

*Kokee Resource Conservation Program, Garden Island Resource Conservation and Development Inc.*

*National Tropical Botanical Garden*

*The Nature Conservancy*

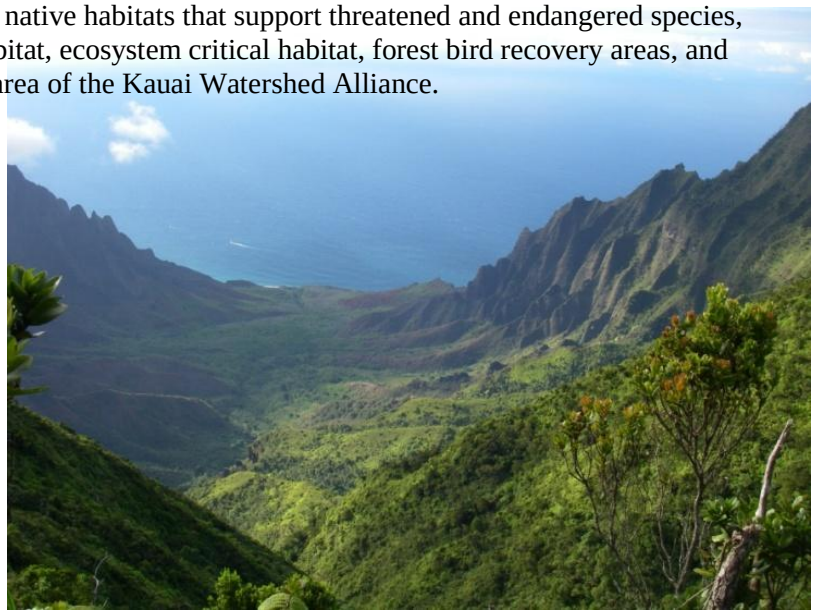
*Waipa Foundation*

**Description:** Kauai has more endemic plant species (over 225) than any other island in the Hawaiian archipelago. Kauai is also an important area for native bird diversity. There are eight remaining native forest bird species, five of which are endemic to Kauai. Kauai is extremely important for the recovery of the endangered Newell's Shearwater, Hawaiian Nene Goose, Band-rumped Storm Petrel and Koloa Duck. The Focus Area for Kauai includes all lands managed by the Kauai Watershed Alliance (KWA).

**Resource Issues:** In 2010, an additional 48 species were listed as endangered on the island of Kauai. There are now over 170 listed species occurring on Kauai. Feral pigs, goats, deer and invasive plants are the primary threats to threatened and endangered species and overall ecosystem health. Feral cats, barn owls and rats are serious threats to endangered birds. Rats and slugs also damage native plants by eating and destroying seeds and the plants themselves

**Restoration Potential, Strategies, and Partnerships:** Capitalizing on the previous five years of conservation, the Partners Program will continue its successful track record of restoration with valuable partners in the Kauai Island Focus Area. The Kauai Watershed Alliance has made great strides in beginning the management of trust resources at a landscape level with the implementation of the East Alakai Protective Fence Project. This project, funded by the Partners for Fish and Wildlife and Recovery Programs, protects and restores 1,405 acres of native, forested watershed in the Alakai Swamp, to benefit many endemic plants, seabirds, forest birds and forest invertebrate resources. Because of the success of this project, the Partners Program is helping to add a strategic fence and remove ungulates in Wainiha Valley, adjacent to Alakai. Additional potential landscape-scale, ungulate and invasive plant removal projects on private lands will continue in this important Focus Area.

**Scientific Rationale:** The Kauai Island Focus area was chosen due to the presence of intact native habitats that support threatened and endangered species, plant essential habitat, ecosystem critical habitat, forest bird recovery areas, and the management area of the Kauai Watershed Alliance.



*Kalalau Valley Lookout, northwestern Kauai, many island endemics here are threatened by ungulates and invasive plants, photo by L. Mehrhoff, USFWS*

***Island of Oahu Focus Area Target Goals for FY2012 – 2017***

*200 Upland Acres Improved*

***Key Partners:***

*Aloha Council Boy Scouts of America*

*Hawaii Department of Hawaiian Homelands*

*Hawaiian Electric Co.*

*Honolulu Board of Water Supply*

*Kaala Farm, Inc.*

*Kamehameha Schools*

*Koolau Agricultural Co. Ltd.*

*Kualoa Ranch*

*Manana Valley Farm LLC*

*Oahu Sugar*

*Tiana Partners*

*Waianae Mountains Watershed Partnership*

*Koolau Mountains Watershed Partnership*

# Oahu Island Focus Area

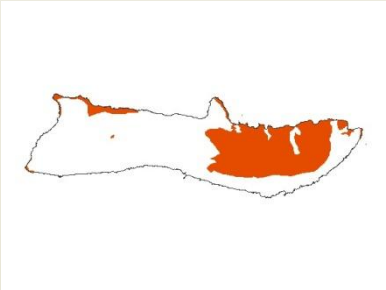
**Description:** In the previous Partners for Fish and Wildlife Strategic Plan (2007-2011), focus was on ungulate control in the Koolau Mountains. In this plan, the Waianae Mountains are added due to the recent formation of the Waianae Mountains Watershed Partnership. The Koolau and Waianae mountains contain viable native ecosystems at their summits, are vitally important for water, comprise headlands for continuous perennial streams, and contain patches of native forests for threatened and endangered species.

**Resource Issues:** Oahu contains 85 percent of the state's population. This has resulted in the destruction of the lowlands, leaving only the upper summits of the Koolau and Waianae as refugia for native ecosystems and rare species. However, in these areas too, native species are under threat from feral ungulates (primarily pigs) and a large variety of invasive alien plants, including Christmas berry (*Schinus terebinthifolius*), alien grasses, Koster's curse (*Clidemia hirta*), and strawberry guava (*Psidium cattleianum*). Alien grasses in dry settings contribute to a significant wildfire threat.

**Restoration Potential, Strategies and Partnerships:** An incipient goat population at Kualoa Ranch was removed under the previous strategic plan. In this plan the Partners plans to continue ungulate fencing in the central Koolau mountains. Ungulate fencing in the Waianae mountains will help to protect endangered plants and endangered Hawaiian land snails. Technical assistance will help to protect State protected areas at Honouliuli, Kaala and Pahole, and lands surrounding the Oahu Forest National Wildlife Refuge.

**Scientific Rationale:** This focus area was chosen due to its relatively intact native vegetation, suitable land ownership and threatened and endangered species habitats. The preservation of existing native ecosystems near the summits of the Koolau and Waianae mountains will provide potential habitats to species that may migrate into these areas due to climate change and global warming.

*Mt Kaala, highest mountain on island of Oahu, Photo by L. Mehrhoff, USFWS.*



***Island of Molokai Focus Area Target Goals for FY2012 – 2017***

*100 Upland Acres Improved*

*0 Wetland Acres Improved*

*0 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Dunbar Ranch*

*East Molokai Watershed Partnership*

*Hawaii Department of Hawaiian Homelands*

*Hui Malama O Moomomi*

*Kamehameha Schools*

*Ke Aupuni Lokahi Enterprise Community*

*Molokai Invasive Species Committee*

*The Nature Conservancy*

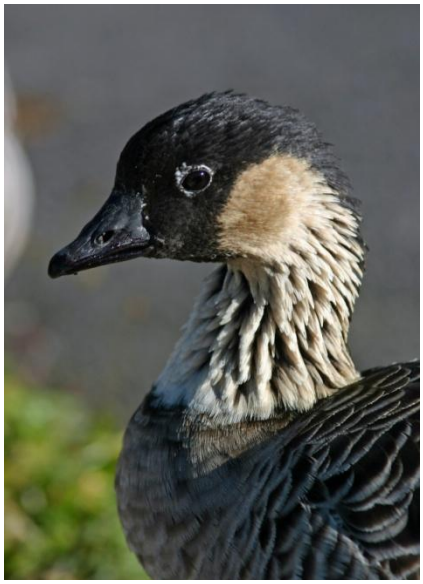
*Molokai Land Trust*

*NRCS*

*State Division of Forestry and Wildlife*

# Molokai Island Focus Area

**Description:** In the 2008-2011 Partners Strategic Plan, only the east Molokai forests were delineated as a focus area. These mountainous areas are the best remaining native forest watershed areas of east Molokai. This plan adds the western coastal dunes which are habitat to a number of endangered plants and threatened wildlife, such as the green sea turtle. While fairly small in geographic size, the island supports a wide-range of native habitats and a diversity of native wildlife.



*Nene, one of the focus species in the Molokai Focus Area, photo by L. Mehrhoff, USFWS*

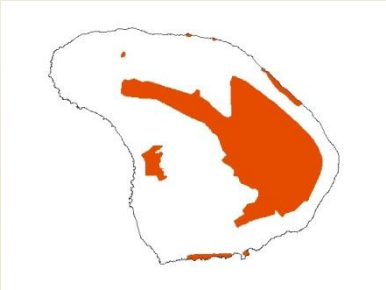
**Resource Issues:** The east Molokai summit area and undeveloped north side are an important watershed and contain over 50 native natural communities. On the southern slopes of east Molokai, feral goats are denuding the landscape, resulting in massive erosion and sedimentation that is damaging the fringing reef. Major threats include:

- feral ungulates such as goats, pigs, and axis deer;
- range expansions of invasive plants;
- wildfire.

**Restoration Potential, Strategies and Partnerships:** Ungulate fences have been constructed at Kawela and Dunbar Ranch in east Molokai. Ungulate fences are needed near the Nature Conservancy's Kamakou Preserve to protect rare land snails and plants. The coastal dune ecosystems are being managed and protected by the Nature Conservancy, Molokai Land Trust, and a local Hawaiian organization called Hui Malama o Moomomi. Previous conservation work at Moomomi included removal of the invasive kiawe tree from seabird sites and preventing trampling of endangered coastal plants. The Partners program hopes to expand these efforts.

**Scientific Rationale:** East Molokai is managed by the East Molokai Watershed Partnership which works across land boundaries to cooperatively protect the watershed from alien species and protect native habitats. The upland areas of this focus area also encompasses the majority of habitats for nearly 25 plants endemic to the island, and 39 endangered plants. The coastal dunes are important habitats for seabird and 6 endangered plants.

# Lanai Island Focus Area



***Focus Area Target Goals for FY2012 – 2017***

*100 Upland Acres Improved*

*0 Wetland Acres Improved*

*0 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Castle and Cooke*

*Hui Malama Pono O Lanai*

*Maui County*

*State Division of Forestry and Wildlife*

*NRCS*

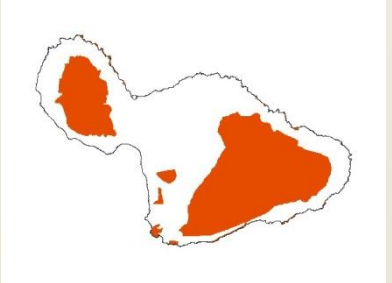
**Description:** Lanai Island is the third smallest of the Main Hawaiian Islands. This strategic plan continues working within the Lanaihale watershed but also adds the dry forest of Kanepuu. Lanaihale is the only true mountain on the island, and as such, is the major source of all fresh water on the island. It also contains the highest concentrations of endangered species and remaining native mesic and wet forests on the island. The dry forest at Kanepuu is highly fragmented and has areas of extreme erosion, but contains some very valuable endangered plant taxa.

*Lanai tree snail, USFWS photo*

**Resource Issues:** Lanai has a long history of overgrazing by cattle, goats, and axis deer which has caused severe soil erosion and has left few native-dominated natural communities. Lanaihale is dominated by ohia (*Metrosideros*) forest, and includes a diversity of rare plant species (27 listed), endemic snails, and a large colony of Hawaiian dark-rumped petrel (*Pterodroma phaeopygia sandwichensis*). The forest at Kanepuu is comprised of a *Nestegis*/*Diosypros* forest with many rare plant species. It is highly degraded and will require a major restoration effort to stabilize it. Major threats to Lanai's resources include axis deer (*Axis axis*), mouflon sheep (*Ovis aries*), weeds, and fire. The island of Lanai has plans to construct a large windfarm which will provide enough electricity for the island of Oahu.

**Restoration Potential, Strategies and Partnerships:** It is important to expand the removal of ungulates from areas of Lanaihale already fenced and to continue fencing due to the importance of this area to plants and birds. Ungulate management is the first step toward habitat stabilization, restoration and species recovery. As the only island wholly owned by one landowner, Castle and Cooke, it is important to provide technical assistance to the existing Lanai Forest Watershed Partnership to strengthen the partnership itself, strategize for ungulate removal, implement a weed control plan and assist with restoration planning for Kanepuu dryland forest.

**Scientific Rationale:** The focus area was chosen using the watershed partnership boundaries, critical habitat maps, and essential plant habitat maps. Continuing work in the Lanaihale watershed will provide opportunities for species which may migrate to higher elevation during times of global climate change.



### *Focus Area Target Goals for FY2012 – 2017*

*500 Upland Acres Improved*

*0 Wetland Acres Improved*

*2 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

### *Key Partners:*

*County of Maui*

*East Maui Irrigation*

*East Maui Watershed Partnership*

*Haleakala Ranch*

*Hawaii Department of Hawaiian Homelands*

*Kaonoulu Ranch*

*Leeward Haleakala Watershed Restoration Partnership*

*Maui Land and Pineapple Co.*

*Nuu Mauka Ranch*

*Hawaiian Islands Land Trust*

*Ulupalakua Ranch*

*West Maui Watershed Partnership*

*State Division of Forestry and Wildlife*

*Kipahulu Ohana*

*Nature Conservancy*

*Tri-Isle Resourre Conservation and Development*

# Maui Island Focus Area

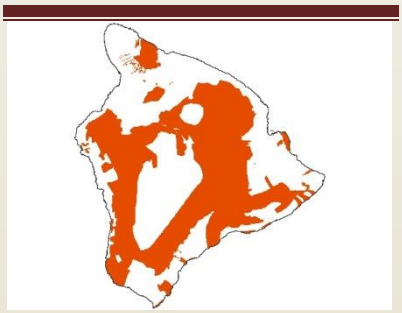
**Description:** The three focus areas from the previous strategic plan are combined into one for this strategic plan. Many of the ungulate fencing and weed control projects will be continued and partnerships with Haleakala and Ulupalakua ranches will be strengthened. East Maui supports intact ecosystems representing 30 percent of the entire island, and home to some of the most native areas in the State. This watershed is habitat for the world's greatest concentration of endangered birds, as wells as many plants and invertebrate species found nowhere else on the planet. The leeward side of east Maui is also important for endangered species, with native dryland habitats and remnant native koa forests. A prime example of this dryland forest is at Auwahi which provides habitat for many listed plants. West Maui is also home to species found nowhere else in the world and some, like the 'Eke Silversword (*Argyroxiphium caliginis*) are found only in West Maui.

**Resource Issues:** The wet montane forests of east Maui are dominated by ohia (*Metrosideros*.) and koa (*Acacia*) forests that are important native forest bird habitat. Upper elevations include montane lakes, montane bog communities, and subalpine native grasslands. This watershed is recognized as one of the most important conservation areas in the State because so much native habitat remains. The leeward area on the drier side of Haleakala supports dry to mesic forest types, often dominated by koa, mamane (*Sophora chrysophylla*), and wiliwili (*Erythrina sandwicensis*) trees. It hosts a surprisingly diverse array of native plant species (including over 18 endangered plants), and includes important habitat for the endangered Blackburn's sphinxmoth (*Manduca blackburni*). Major threats to the focus area include: Axis deer (*Axis axis*), pigs, and goats; habitat-modifying invasive plant species; wildfire.

**Restoration Potential, Strategies and Partnerships:** The Island of Maui has three watershed partnerships that cover a majority of the native habitats on private lands. Previous restoration efforts have focused at Auwahi on Ulupalakua Ranch and the upper wet forests of west Maui. Partners would like to expand these projects. Also there is the potential to work at Puuokali a dryforest located on the southwestern slopes of Haleakala and at Puu Pahu owned by Haleakala Ranch.

*Leeward Haleakala, USFWS photo*

**Scientific Rationale:** This focus area was chosen for its intact native habitats, forest bird recovery areas, essential plant habitat, and ecosystem critical habitat. This focus area also expands habitats at upper elevations that may become important areas for conservation for species facing global climate change.



### *Focus Area Target Goals for FY2011 – 2015*

*1,000 Upland Acres Improved*

*1 miles riparian restoration*

### *Key Partners:*

*Department of Hawaiian Home Lands*

*Kamehameha Schools*

*Kahua Ranch*

*Kohala Watershed Partnership*

*Kuakaiau Ranch*

*Laupahoehoe Nui LLC*

*Mauna Kea Watershed Partnership*

*Parker Ranch*

*Ponoholo Ranch*

*Queen Emma Land Company*

*Surety Kohala Corporation*

*The Nature Conservancy*

*Three Mountain Alliance*

# Hawaii Island Focus Area

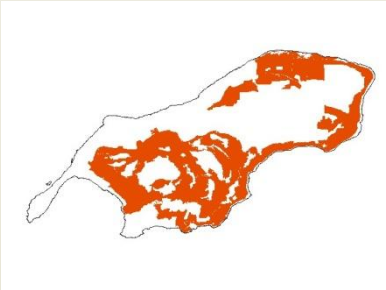
**Description:** The Hawaii Island Focus area encompasses 1,706,300 acres (67 percent) of Hawai‘i island’s total 2,573,400 acres. Habitats found in this focus area range from mesic koa (*Acacia*)-ohia (*Metrosideros*) forests to cliffs, from subalpine shrublands to grasslands, from dry forests to young lava flows and tubes. Collectively the focus area contains essential habitat for four species of endangered forest birds, and also supports the endangered nene (*Branta sandwicensis*), Hawaiian bat (*Lasiurus cinereus semotus*), and more than thirty rare and/or endangered plant species. This focus area combines into one the three focus areas previously identified in the 2007-2011 strategic plan.

**Resource Issues:** As the island with the tallest mountains, this focus area takes advantage of rising temperatures due to future climate change. Habitat management actions in this focus area are anticipated to mitigate some of the potential negative impacts of global climate change, including: maintenance of ecosystem resilience and landscape connectivity, minimization of habitat fragmentation, and protection of areas that may benefit threatened and endangered species during times of climate change. Major threats to watershed and habitat are feral ungulates, invasive alien plants, wildfire, logging and habitat clearing for agriculture.

**Restoration Potential, Strategies and Partnerships:** Actively managed areas within the Hawaii Island Focus Area include some of the best remaining native forest in Hawaii. One priority project is the completion of 3.5 miles of North Kona fencing at Lupea on Kamehameha Schools land. Upon completion, 6,000 acres of high elevation montane forest will be protected on the leeward slope of Mauna Loa. Priority in the Kohala Mountains is completion of two miles of fencing on privately owned land (Laupahoehoe Nui LLC) and protection of a recently discovered rare plant population also found on private ranch land. Priority for Mauna Kea is for the restoration of native koa (*Acacia koa*) and mamane (*Sophora chrysophylla*) forest above Hakalau Refuge in partnership with the Department of Hawaiian Home Lands. Continued restoration involves the expansion of watershed buffers and habitat linkages along Nauhi Gulch and Wailuku River for native species.

**Scientific Rationale:** Choosing watershed partnerships as components to this focus area allows for landscape level conservation planning across many land boundaries. Critical habitat maps, essential plant habitat maps, and the forest bird recovery maps were used along with the boundaries for the three watershed partners hips for this focus area.

*Kalopi Ranch Fence, Hawaii, FWS photo*



***Island of Rota Focus Area Target Goals for FY2012 – 2017***

*10 Upland Acres Improved*

*0 Wetland Acres Improved*

*0 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Mariana Public Land Authority*

*Rota Division of Fish and Wildlife*

*Rota Commonwealth Forestry*

*Stan Taisacan*

*University of Washington*

# Island of Rota Focus Area

**Description:** Rota, or Luta, the island's original Chamorro name, is the fourth largest in the Marianas Archipelago and the third largest of the 14 islands comprising the Commonwealth of the Northern Mariana Islands (CNMI). Rota is approximately 21,000 acres in size.

The island of Rota is composed of a series of coralline limestone terraces rising one above the other and set atop a volcanic core. The core appears as a knoll in the Sabana, the high plateau area located in the southwest portion of the island, and marks the islands highest elevation at 493 m (1,620 ft). The Sabana is also the core of Rota's primary watershed. Rota's forests comprise some of the most intact and extensive native primary forests remaining on any of the islands of the Mariana Archipelago.

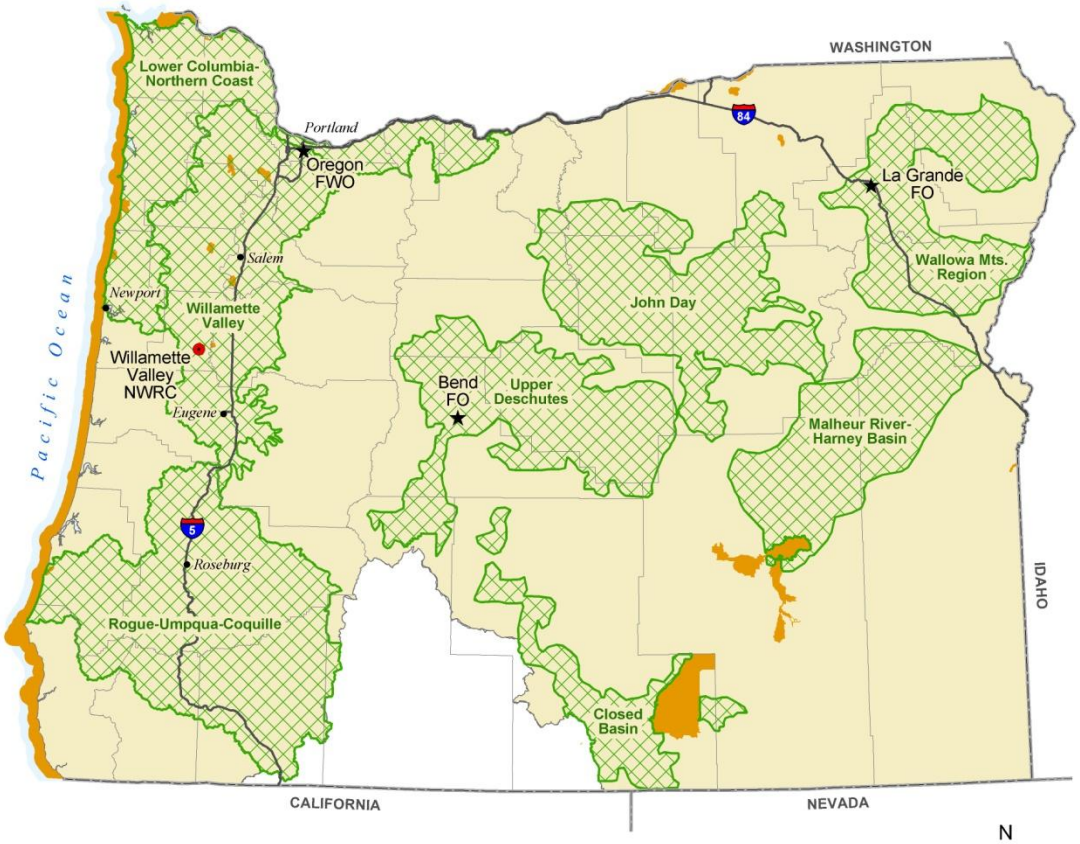
**Resource Issues:** Some of the lands on Rota identified for agriculture homesteading projects have the potential to adversely affect Mariana Crow habitat, as well as the habitats for other listed species. A habitat conservation planning effort is underway to address the conservation measures and the needs of listed species on the island. Another endangered species directly impacted by residents of Rota is the Threatened Mariana Fruit Bat (*Pteropus mariannus*). This species, called Fanihi, is a delicacy to many indigenous Chamorros, and has been declining in numbers due to illegal hunting. The endangered Rota bridled white-eye (Nosa Luta-*Zosterops rotensis*), is another species that has been declining as a result of alteration and degradation of habitat.

*Mariana fruit bat or Fanihi, photo by Ann Brooke*

**Restoration Potential, Strategies and Partnerships:** Sambar Deer (*Rusa unicolor*) were introduced to Rota and are the only known feral ungulate. Deer browsing is suspected to be the cause for declining habitat and population numbers for the Rota bridled white-eye and Mariana Fruit Bat. Decreasing deer numbers through hunting and fencing may help to protect the remaining forested habitat of this watershed. Stan Taisacan, a retired employee of the Commonwealth of the Mariana Islands Department of Forestry and Wildlife, is a potential partner and has restored habitat for the endangered *Osmoxylon mariannense*, a soft wooded tree in the ginseng family with 10 remaining individuals on the Sabana.

**Scientific Rationale:** The Rota Island Focus Area was chosen for containing the majority of the limestone forest on the island, the primary watershed, and critical habitat for the Mariana Crow and Rota bridled white-eye.

# Appendix B - Oregon Focus Areas




**USFWS Facilities currently receiving Partners Program funding (labelled)**

- ★ Ecological Services Office
- National Wildlife Refuge*
- National Wildlife Refuge Complex

*All NWR lands (approved boundaries) are shown here, however only those complexes currently receiving Partners Program funding are labelled.

N

0 50 100
Miles

Pacific Region
ES GIS
May 11, 2011
FY11.PFW.030

# Willamette Valley Focus Area

***Willamette Valley Focus Area Target Goals for FY 2012 – 2016***

*2,250 Upland Acres Improved*

*2,640 Wetland Acres Improved*

*5 Riparian, Instream or Shoreline Miles Improved*

*5 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Natural Resources Conservation Service*

*Oregon Department of Fish and Wildlife*

*The Nature Conservancy*

*The Institute for Applied Ecology*

*The Greenbelt Land Trust*

*Yamhill Soil and Water Conservation District*

*Marys River Watershed Council*

**Description:** The Willamette Valley contains globally imperiled oak savannah, wetland, upland prairie, wet prairie, and floodplain habitats which support 47 at- risk species, including 10 listed species, 2 candidate species, and 5 species of concern. These declining habitat types support unique and significant biological diversity, yet over 95% of potential and existing habitats are unprotected and in private ownership.

Population growth and accelerating development pressure continues to put rare and declining habitats and associated fish, wildlife, and plant species at increasing risk in the Willamette Valley. Urban development, expansion of the viticultural and Christmas tree industries, and altered forest successional patterns due to loss of historic disturbance regimes continue to jeopardize remaining Oregon white oak habitats. These habitats are critical to recovery of listed plant and invertebrate species as well as sustaining populations of native pollinators and migratory songbirds. Impaired water quality, altered flow regimes, loss of channel complexity, fish passage barriers, and lack of floodplain connectivity are primary threats to species dependent on aquatic systems in the Willamette River Basin.

**Resource Issues:** Listed species in the Focus Area include the Fender's blue butterfly, Oregon chub, Kincaid's lupine, Bradshaw's desert parsley, Willamette Valley daisy, Nelson's checkermallow, Taylor's checkerspot, golden paintbrush, Upper Willamette winter steelhead, Upper Willamette spring Chinook, bull trout, and multiple species of declining grassland and oak savannah associated birds.

A success resulting from implementation of the current Willamette Valley Partners Program Focus Area strategy was the downlisting Oregon chub from endangered to threatened status. Downlisting occurred in 2010, primarily due to public/private partnerships successfully implementing recovery plan actions on private lands within the Willamette Valley. This same collaborative approach is being used to implement recovery actions for the Fender's blue butterfly, Kincaid's lupine, Willamette daisy, Bradshaw's desert parsley, and Nelson's checkermallow as identified in the Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington. Based on current private landowner and partner requests to participate in the Partners Program, several of these species have an excellent chance of meeting downlisting or de-listing criteria within the next five years.

**Restoration Potential, Strategies and Partnerships:** The Willamette Valley Partners Program is part of a landscape scale restoration initiative that enjoys broad-based public support. Partners Program staff are involved with a broad array of stakeholder groups and conservation partners. Private landowners, Oregon Department of Fish and Wildlife (ODFW), NRCS, numerous local watershed councils, soil and water conservation districts, Institute for Applied Ecology, local land trusts, The Nature Conservancy, local governments, and area universities are among the many valued conservation partners working with the Service within the Willamette Valley Focus Area. Program focus will remain on providing technical, biological and financial assistance to our conservation partners. Two key partnerships

are implemented through agreements with ODFW and NRCS. These agreements increase the Partners Program's capability to leverage additional conservation funding and in-kind work to deliver restoration projects to private landowners.

Scientific analysis conducted within the Willamette Valley suggests that climate change could have long term consequences for at-risk species and habitats. Climate change effects may include reduced snow packs, increased threat of wildfire, and aspect and elevation shifts of suitable habitat for at-risk species. The Partners Program considers these climate change impacts when selecting, designing and implementing habitat projects. Monitoring of projects over the long term could help assess the effectiveness of habitat restoration strategies that address habitat resilience and resistance to climate change.

**Scientific Rationale:** Over the past five years several important landscape scale conservation planning efforts have been completed which provide a sound scientific basis for the Partners Program as it implements the 2012-2016 strategic plan.

*Willamette Synthesis Project* – Completed by The Nature Conservancy in late 2009, this geo-spatial analysis uses the best available science to coalesce numerous studies and assessments to identify the ecological baselines for the Willamette Valley and identifies numerous Conservation Opportunity Areas at a landscape scale. In order to best address the needs of focal habitats and at-risk species as well as the needs of Service partners, the Willamette Synthesis Area will be adopted as the focus area boundary for the Partners Program within the Willamette Valley.

*Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington* – The Service published this recovery plan in 2010 and provides recovery criteria for the Fender's blue butterfly and four listed plant species. Additional conservation measures are identified for golden paintbrush, Taylor's checkerspot butterfly (candidate), and six plant species of conservation concern. Assisting in the recovery of federally listed species has been, and will continue to be, an important goal of the Partners Program in the Willamette Valley Focus Area.

*Willamette Valley Conservation Study Area Preliminary Project Proposal* – Approved in February 2011, this proposal elevates the Willamette Valley landscape as a geographic priority for the National Wildlife Refuge System (NWR) to collaborate with partners to evaluate the NWR system's future role in developing land protection strategies that support the goals of the America's Great Outdoors Initiative. This initiative emphasizes working with private landowners as well as the importance of working farms and forests in connecting people to nature and implementing landscape scale conservation efforts.

*Willamette Valley Focus Area Native Meadow, USFWS photo*

***Lower Columbia – North Oregon Coast Focus Area Target Goals FY2011 – 2015***

*20 Upland Acres Improved*

*50 Wetland Acres Improved*

*25 Riparian, Instream or Shoreline Miles Improved*

*25 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Columbia Land Trust*
*Columbia River Estuary Study Taskforce*
*Ducks Unlimited*
*Lower Columbia River Estuary Partnership*
*North Coast Land Conservancy*
*Oregon Department of Fish and Wildlife*
*Oregon Watershed and Enhancement Board*
*Trout Unlimited*
*Natural Resource Conservation Service*
*NOAA Restoration Center*
*Bureau of Land Management*
*US Forest Service*
*Vernonia School District*
*Multiple County Governments*
*Multiple Local Municipalities*
*Multiple Oregon Watershed Councils*
*Multiple Soil & Water Conservation Districts*
*Numerous Private Landowners*
*Private Industrial Timber Owners*

# Lower Columbia – North Oregon Coast Focus Area

**Description: Description:** The Lower Columbia River estuary and north coast of Oregon is a biologically rich and diverse area critical for the conservation and recovery of numerous Pacific Salmon species and Service species of concern Coastal Cutthroat Trout, Pacific Lamprey, Western Brook Lamprey, and endangered Columbian White-tailed Deer. This complex and ecologically resilient ecosystem has excellent potential to provide large scale migratory bird conservation benefits through tidal wetland, riparian, and floodplain restoration activities as well as in oak woodland and grassland balds. The land-base is primarily in private ownership, providing strong opportunity and need for the Partners for Fish & Wildlife Program to continue high levels of engagement with local communities and project partners to provide technical project design input, local capacity building, and help select key local resource priorities to catalyze conservation.

**Resource Issues:** Our project design techniques and strategies strategically increase system-wide resilience and connectivity to provide a full range of habitat conditions to meet the natural life history variations and adaptive strategies inherent in healthy target populations for Salmonids and Lampreys, Columbia White-tailed Deer, and migratory birds. Climate change considerations that our project designs target include: a) amelioration of potential higher summer stream temperatures and movement corridor fragmentation by floodplain road removal and riparian establishment to provide multi-species benefits via green corridors that serve as fringing wetland, shade, and foraging and cover for deer movement; b) address increased peak flows and increased frequency and intensity of flooding by re-connecting floodplains via instream complexity, road removal, providing off channel habitat to reduce flood flow velocity and creating flow refugia; c) reduced aquatic migratory corridors and habitat connectivity are addressed via systematic removal of instream barriers (perched culverts, small dams, and other instream constrictions) to ensure that fish upstream and downstream movement corridors are accessible for all life history forms in a broad variety of flow regimes throughout the year. This will also provide for movement of bedload material, large wood, and nutrients throughout the ecosystem as well as for movement of a variety of fish and other species.

**Restoration Potential, Strategies and Partnerships:** These efforts emphasize restoration actions that both improve habitat conditions and work within natural watershed processes. This is accomplished with a mix of strategies involving the recovery of riparian canopies, addressing constrictions that limit species movement and stream processes, securing

headwater wood and substrate recruitment corridors, instream wood placement, road assessment/removal, easement acquisition and cooperative planning strategies. Our efforts are necessarily undertaken collaboratively with critical involvement and leadership at the local community level including local planning departments, school districts, and private industry. Our efforts will provide conservation as well as help address local needs and provide direct inputs into local economies and job creation. We will continue to work across Service programs (Fisheries, Ecological Services, and Refuges) to implement shared priorities while drawing on a wider range of tools and expertise.

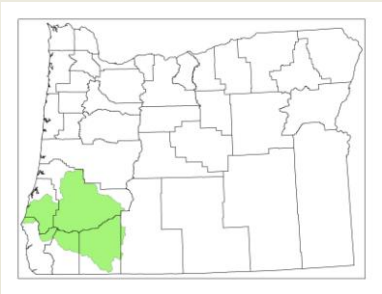
**Scientific Rationale:** Restoration projects are based on addressing identified limiting factors for target species as systematically as possible given limitations in partner capacity, funding, and a need to establish willing landowners as restoration partners. Limiting factors analyses are performed at the sub-watershed level, therefore, we will be operating using multiple analyses documents as a 'road map' to prioritize key life history bottlenecks, target locations, and identify restoration actions needed that best address them. Overall, watershed planning documents are nested within state-wide and regional conservation strategies and bio-diversity analyses. These watershed plans contribute to a landscape scale conservation strategy which provide an identified approach to systematically develop a network of restoration sites that considers linkages, connections, and juxtaposition among sites and will avoid fragmentation and isolation of the target species.

**Guiding Documents and Plans:**

- Scappoose Bay Watershed Assessment
- Scappoose Bay Barrier Assessment
- Necanicum River Watershed Assessment
- Lower Columbia River Restoration Prioritization Framework (LCREP)
- Status Review of Coastal Cutthroat Trout from Washington, Oregon, and California
- LCREP: Comprehensive Conservation and Management Plan
- Lower Columbia River-Clatskanie Subbasin Watershed Assessment
- Lower Columbia Salmon Recovery: Fish and Wildlife Subbasin Plan
- Draft Coastal and Estuarine Land Conservation Plan
- Draft Oregon Conservation Plan for Oregon Coast Coho
- Joint Venture Implementation Plan: Lower Columbia River
- Joint Venture Implementation Plan: Northern Oregon Coast
- ODFW Coast Range Subbasin Fish Management Plan
- ODFW Oregon Conservation Strategy
- Status of Oregon Coast Coho
- Withdrawal of Proposed Rule To List the Southwestern Washington/Columbia River Distinct Population Segment of the Coastal Cutthroat Trout as Threatened
- Northern Pacific Region Shorebird Conservation Plan

*Lower Columbia North Coast Focus Area, USFWS photo*

# Rogue-Umpqua-Coquille Focus Area



***Rogue-Umpqua-Coquille Focus Area Target Goals for FY 2012 – 2016***

*Upland Acres Improved: 1,200*

*Wetland Acres Improved: 10*

*Riparian, Instream or Shoreline Miles Improved: 5*

*Fish Passage Barriers Removed, Installed or Modified: 5*

***Key Partners:***

*The Coquille Watershed Association*
*The Nature Conservancy*
*The Oregon Department of Fish and Wildlife*
*Douglas County Soil and Water Conservation District*
*OR Department of Agriculture*
*USDA - Natural Resource Conservation Service*
*USDI - Bureau of Land Management*
*Numerous Private Landowners*

**Description:** Combinations of topography, geology, soils, and climatic influences have resulted in an array of habitats including late successional Douglas-fir forests, oak savannah, fresh water wetlands, vernal pools, wet meadows, alluvial valleys and estuary. The Coquille portion of this Focus Area is within the conifer-dominated Coast Range, which contains the highest density of streams in the state. The Rogue and Umpqua areas are part of the Klamath Mountains Ecoregion. It supports the highest diversity of species in Oregon, particularly plants, many of which are endemic to the region. Predominant land uses in this Focus Area include logging, grazing, farming, and mining.

**Resource Issues:** Focus habitats in the Rogue and Umpqua areas include vernal pools, wet meadows, oak woodlands/savannas, and old growth Douglas fir habitats. The vernal pools and wet meadows are impacted by development pressures that eliminate these wetlands altogether or affect their hydrological function through impacts to surrounding upland areas. These habitats contain threatened vernal pool fairy shrimp, endangered large-flowered meadowfoam, and endangered Cook's lomatium. Development and fire suppression have led to the loss of oak savannah habitat and declines in Kincaid lupine, Gentner's fritillary, and rough popcorn flower. Years of ongoing timber harvest in late successional Douglas-fir habitat have led to precipitous declines in the federally listed northern spotted owl and marbled murrelet. Other key wildlife species here include the Columbian white-tailed deer, western pond turtle, and migratory birds. Key habitats in the Coquille are those that support aquatic and wetland associated species. These include riparian areas, fresh and estuarine wetlands, and instream habitats. These habitats were impacted by past logging practices that included stream cleaning, splash damming, removal of streamside vegetation, and road building. In the Coquille River's alluvial valleys, fresh and estuarine wetlands were drained, diked and converted to pasturelands, and the river was dredged to improve navigability. Key fish species include the threatened Oregon coast coho salmon, Chinook salmon, steelhead, coastal cutthroat trout, and Pacific lamprey. The Coquille Valley is recognized as one of the most important coastal sites in the Pacific Flyway for waterfowl. In the estuary, migratory shorebirds forage extensively on exposed mudflats, and riparian areas are important nesting areas for breeding birds.

**Major Threats and Conservation Issues:** Areas within the Klamath Mountain Ecoregion have the second largest growth rate in the state and development pressure on private lands threatens many unique habitats that support many endemic and federally listed species. Fire suppression has altered disturbance regimes leading to the loss of early successional and fire-dependent habitats, particularly in oak savannah and meadow habitats. Invasive species out compete native plants, a particular concern for endemic or specialized species with narrow ecological niches. In southwest Oregon, rare vernal pool habitats are being impacted from conversion to several agriculture and ranching uses. Timber harvest of late successional Douglas-fir habitat, the primary roosting, nesting and forage habitat for the northern spotted owl, and nesting habitat for marbled murrelet, has led to loss of suitable habitat for both species.

In the Coquille River Watershed, current populations of Oregon coast coho, chum,

spring Chinook, and sea-run coastal cutthroat trout are only a small fraction of the stock sizes that existed before 1900. Key factors limiting anadromous fish production are poor water quality, high rates of sedimentation and erosion, elevated temperatures, loss of channel complexity, isolation of the floodplain, and lack of riparian vegetation.

Sea level rise may submerge estuarine wetlands thus changing the composition of upriver wetlands. Predicted changes in precipitation volume and timing as a consequence of climate change will alter aquatic habitats via increased sediment loads, stream velocities and baseflows, and changes to riparian vegetation (among other impacts). Higher flows and sedimentation affect overwintering juvenile salmonids by increasing their energy expenditure and altering their ability to forage and rest. In addition, the ability of streams to capture and retain spawning gravels is diminished under high flow regimes, and increased flooding will inundate off-channel refugia habitats. Through the use of various upland habitat restoration techniques, such as thinning, exotic species removal, and prescribed fire, we are systematically preparing our rare and declining upland habitats to handle more severe climactic events.

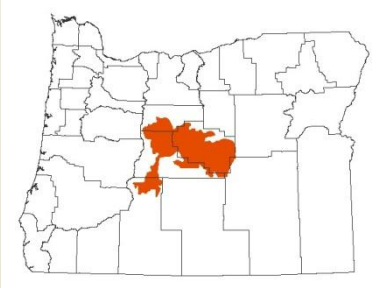
**Restoration Potential, Strategies and Partnerships:** Primary upland restoration efforts will be focused on the Kincaid's lupine, in the most southern portion of its range, to complement similar work being done in the Willamette Valley, and on the rough popcorn flower in wetland prairie habitats in the northern portions of the county. Projects will focus on exotic species control, thinning of invasive conifers or oaks due to suppression of fire regimes, reintroducing key ecosystem-regulating disturbance regimes, and developing native grass and forb seed sources to provide key habitat constituents for Columbian white-tailed deer and Kincaid's lupine to eventually augment the existing listed species plant populations. In 2010, a large partnership effort consisting of multiple government and non-governmental entities worked together on an oak restoration strategy for Southern Oregon and Northern California, and through those partnering efforts, a Cooperative Conservation Partnership Initiative application was submitted to NRCS for additional Farm Bill funding for FY2011-2013. Additionally, NRCS, in cooperation with the Partners program and the Oregon Department of Forestry, will administer Healthy Forest Reserve Program funding to landowners for retention and development of old growth conifer, restoration assistance, and long term easements on their properties for the benefit of northern spotted owl through FY2013.

In the Coquille, restoration will focus on aquatic and wetland habitats with an emphasis on improving habitat conditions and addressing limiting factors for salmonid recovery and other native and anadromous species. Projects will focus on improving winter refugia habitats, juvenile rearing habitats, and spawning habitats and will include restoration of fish passage, instream habitat complexity, floodplain connectivity, off-channel habitats, riparian habitats, and reduction of livestock impacts.

**Scientific Rationale:**

- The Oregon Conservation Strategy (ODFW 2006)
- The Pacific Coast Joint Venture's Strategic Plan (1994)
- The Oregon Plan for Salmon and Watersheds (Oregon Coastal Salmon Restoration Initiative 1997).
- The Coquille Watershed Association's Action Plan (2003)
- The Coquille River Subbasin Plan (2007) Coquille Indian Tribe.
- Columbian White-Tailed Deer Post-Delisting Monitoring Plan
- Oregon Coast Coho Conservation Plan (ODFW 2007)
- PIF Conservation Strategy for Landbirds in Lowlands and Valleys of Western Washington and Oregon

# Upper Deschutes Focus Area



***Upper Deschutes Focus Area Goals for FY 2011 – 2015***

*100 Upland Acres Improved*

*5-10 Wetland Acres Improved*

*3 Riparian, Instream or Shoreline Miles Improved*

*8 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Deschutes River Conservancy*
*Crook County Soil and Water Conservation District*
*Crooked River Watershed Council*
*USDA - Natural Resources Conservation Service*
*Oregon Department of Fish and Wildlife*
*Trout Unlimited*
*Upper Deschutes Watershed Council*

**Description:** This area includes the upper Deschutes and lower Crooked River subbasins. The majority of the land is in Federal ownership and is comprised of a diverse landscape with deep canyons, high mountain meadows and arid deserts. Fish resources are a primary program focus, with populations of listed bull trout and interior redband trout, a Service species of concern. One of the primary issues driving actions in this Focus Area is Service support for the reintroduction of anadromous species above the Pelton Round Butte Complex. In 2009, the one hundred million dollar Selective Water Withdrawal went online at Round Butte Dam to facilitate downstream passage of smolts for the first time since the 1960s. Anadromous species, including steelhead, fall Chinook, and sockeye, have been reintroduced into the upper basins, so the Partners program is participating with a broad coalition of stakeholders to open and improve habitat for the reintroduced anadromous species, with the hope creating a successful reintroduction and to see wild runs of anadromous species return to the upper basin.

Instream habitats are influenced by low and unnatural stream flows due to irrigation and dam operations in the system. Small scale irrigation diversions are a primary source of passage barriers and can result in in entrainment and mortality of aquatic organisms in ditches when unscreened. Wetland habitats along rivers provide important functions in maintaining base flows and providing migratory bird habitat, as well as supporting critical populations of Oregon spotted frog in specific areas, such as the Little Deschutes. Wetlands have been degraded throughout the basin from drainage, the loss of floodplains from channelization, down-cutting and river regulation. Uplands in this focus area are characterized by expansive sage brush communities, including a portion of the sage-grouse range in Oregon.

**Resource Issues:**

Focal Habitats – In-stream habitats, riparian and floodplain habitats, wetlands, and sage shrub-steppe.

Focal Species – Federally listed bull trout and steelhead, Federal candidate species greater sage-grouse and Oregon spotted frog, species of concern: Redband trout, Chinook salmon, Columbia spotted frog; riparian dependent migratory birds.

Resource Concerns – Fish / aquatic organism passage, stream dewatering, water quality, sage shrub-steppe conversion, wet meadow loss, and riparian corridor loss.

**Restoration Potential, Strategies and Partnerships:** Restoration for the Upper Deschutes Focus area will seek to improve aquatic passage at road crossings, improve passage, screening, and irrigation efficiency at stream diversions, restore and enhance riparian areas through use exclusion or intensively managed riparian pastures, and to improve hydrologic and biologic function of streams, wetlands,

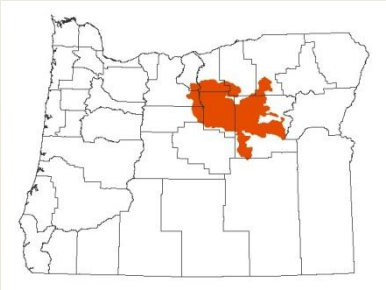
and riparian areas through geomorphic adjustments. A focus for this area will include improving sage grouse habitats through vegetation, weed, and land use management. Additionally, restoration activities will seek to improve habitat resiliency in the face of uncertain climatic predictions. The Service will continue to provide technical assistance to partners in developing long term strategy documents and in implementing restoration in the Upper Deschutes.

**Scientific Rationale:** Over the past five years several important landscape scale conservation planning efforts have been completed which provide a sound scientific basis for the Partners program as it implements the 2012-2016 strategic plan.

- 2006 Oregon Spotted Frog Conservation Assessment
- 2011 Sage-Grouse Conservation Assessment and Strategy for Oregon
- 2009 Conservation and Recovery Plan for Oregon Steelhead Populations in the Middle Columbia River Steelhead Distinct Population Segment
- 2009 Middle Columbia River Steelhead Distinct Population Segment ESA Recovery Plan
- 2010 Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States; Final Rule
- 2010 The Potential Influence of Changing Climate on the Persistence of Inland Native Salmonids; USGS, TU and USFS.

*Natural fish bypass constructed around irrigation dam on Crooked River. Photo: D. Renner, USFWS*

# John Day Focus Area



***John Day Focus Area Goals for FY 2011 – 2015***

*5 Wetland Acres Improved*

*8 Riparian, Instream or Shoreline Miles Improved*

*10 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Bonneville Power Administration*
*Confederated Tribes of the Warm Springs*
*Grant County Soil and Water Conservation District*
*North Fork John Day Watershed Council*
*Oregon Department of Fish and Wildlife*
*Wheeler County Soil and Water Conservation District*

**Description:** The John Day River is the second longest free-flowing stream in the United States, running nearly 300 hundred miles. The country is characterized by steep basalt canyon walls, juniper, and sagebrush dotted hills, and mixed ponderosa pine forest. This is one of the most culturally rich river corridors in the state with human presence in the system spanning more than 10,000 years. The John Day has historically diverse fish runs of steelhead and is famous for Columbia River chinook salmon which reached over 100lbs. The system has one of the last all-wild runs of anadromous fish east of the Cascade Mountains. It has no major dams and supports one of the largest and most viable runs of wild steelhead in the Northwest. This river is a particularly important resource for the recovery of wild salmon runs since it has never had any hatchery operations. Bull trout, Pacific lamprey, redband trout, Columbia spotted frog, and westslope cutthroat trout are also important species in the John Day Focus Area, that will benefit from the continued support of the Service.

**Resource Issues:**

Focal Habitats – Instream habitats, riparian corridors, and wetlands.

Focal Species – Federally listed bull trout and steelhead; species of concern redband trout, Pacific lamprey, Chinook salmon, Columbia spotted frog; riparian dependent migratory birds.

Resource Concerns – Fish / aquatic organism passage, stream dewatering, water quality, wet meadow loss, and riparian corridor loss.

**Restoration Potential, Strategies and Partnerships:**

Restoration activities in the John Day Focus Area will seek to improve aquatic passage at road crossings, improve passage and irrigation efficiency at stream diversions, restore and enhance riparian areas through use exclusion or lightly grazed riparian pastures, and to improve hydrologic and biologic function of streams, wetlands, and riparian area through geomorphic adjustments. Additionally, restoration activities will seek to improve habitat resiliency in the face of uncertain climatic predictions. The Service will continue to be active and support the success of existing effort in the Basin, there are several drainages in the system where partnerships with local stakeholders have developed strategic restoration focus area and important progress has been made in improving habitat and water quality in addition to improving aquatic organism passage. The Partners Program will continue to assist the focus area partners in developing long term watershed guiding documents to strategically implement restoration in the John Day.

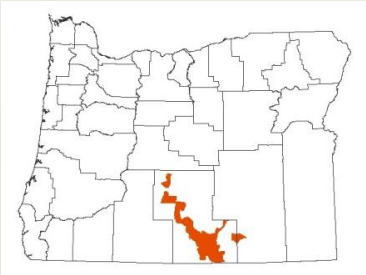
**Scientific Rationale:** Over the past seven years several important landscape scale conservation planning efforts have been completed which provide a sound scientific basis for the Partners program as it implements the 2012-2016 strategic

plan.

- 2005 John Day Subbasin Revised Draft Plan, Northwest Power and Conservation Council
- 2009 Conservation and Recovery Plan for Oregon Steelhead Populations in the Middle Columbia River Steelhead Distinct Population Segment
- 2009 Middle Columbia River Steelhead Distinct Population Segment ESA Recovery Plan
- 2010 Revised Designation of Critical Habitat for Bull Trout in the Coterminous United States; Final Rule
- 2010 The Potential Influence of Changing Climate on the Persistence of Inland Native Salmonids; USGS, TU and USFS.

*Cathedral Rock and John Day River. Photo: D. Renner, USFWS*

# Closed Basin Focus Area



***Closed Basin Focus Area Goals for FY 2011 – 2015***

*600 Upland Acres Improved*

*2- 5 Wetland Acres Improved*

*3 Riparian, Instream or Shoreline Miles Improved*

*3 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Lake County Umbrella Watershed Council*
*Lake County Resource Initiative*
*Lake County Soil and Water Conservation District*
*USDA - Natural Resources Conservation Service*
*Oregon Department of Fish and Wildlife*

**Description:**

This focus area encompasses the closed stream systems of Summer Lake, Chewaucan River to its terminus in Lake Abert, Honey, Twentymile, and Deep Creeks, and the Warner Lakes. The topography is rocky, rugged with steep canyon headwaters, streams flow from dry forest headwaters to flat high desert terminal lakes. Irrigation is prevalent with complex ditch systems. Wetland habitats and seasonal meadows persist in the lowlands and along the margins of the lakes. Seasonally available water results in abundant spring migrant bird habitat in playas, meadows, marshes, and alkali flats. Uplands are characterized by expansive sage brush communities, including a significant portion of the sage-grouse range in Oregon.

**Resource Issues:**

Focal Habitats – In-stream habitats, riparian and floodplain habitats, wetlands, and sage shrub-steppe.

Focal Species - Listed Warner Sucker, candidate greater sage-grouse, species of concern redband trout, Columbia spotted frog and riparian dependent migratory birds.

Resource Concerns – Aquatic organism passage and screening, water quality, recreation, poor livestock management, energy development, sage shrub-steppe conversion.

Greater sage-grouse have declined throughout their range and in 2010, the species was added to the candidate species list. They are a high priority species to recover and through work with landowners in this Focus Area and elsewhere restorations actions may help to prevent the species from full listing. Sage-grouse habitat is being impaired from juniper encroachment, energy development, and in some cases livestock management practices.

Equally important, this Focus Area encompasses the entire species range for Warner sucker. Warner suckers were listed as threatened in 1985 and have been detrimentally affected by stream diversions, impaired water quality, and the introduction of nonnative fishes. It is a high priority for the Partners Program to assist landowners in actions that will benefit this imperiled species. Private lands in this focus area are located in key areas for partnerships such as along major waterways, floodplains, and wetlands and the Service intends to continue to build partnership capacity in this area.

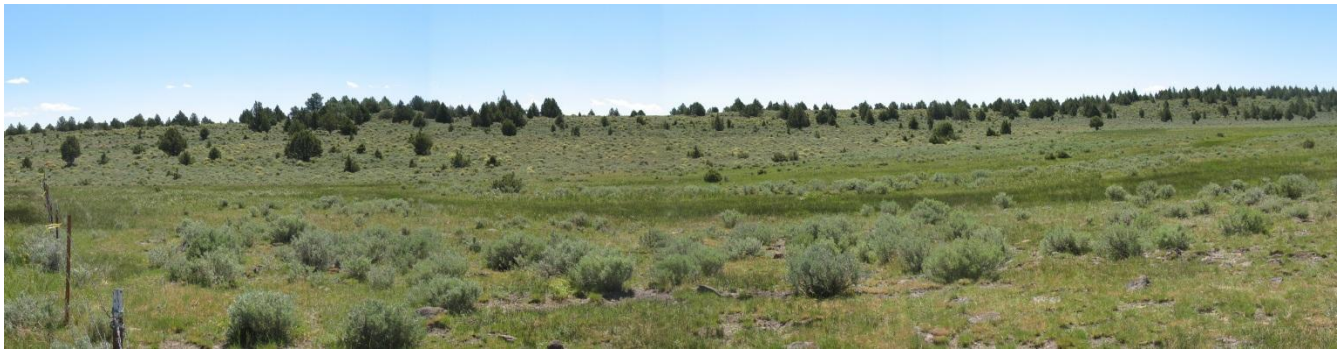
**Restoration Potential, Strategies and Partnerships:**

Restoration for the Closed Basin Focus Area will seek to benefit Warner sucker and Redband trout through improvements to stream diversions which result in

passage and screening. Often these actions will seek landowner participation by improving irrigation efficiency or operations. The program will seek to restore and enhance riparian areas through use exclusion or managed riparian pastures in coordination with NRCS and Oregon Department of Fish and Wildlife, and to improve hydrologic and biologic function of streams, wetlands, and riparian areas through geomorphic adjustments. Additionally, a priority focus for this area will involve improving sage-grouse habitats through vegetation, weed, and land use management. Restoration activities will seek to improve habitat resiliency in the face of uncertain climatic patterns. The Service will provide technical assistance to partners in developing long term guiding documents to strategically implement restoration in the Closed Basin Focus Area.

**Scientific Rationale:** Over the past decade several important landscape scale conservation planning efforts have been completed which provide a sound scientific basis for the Partners Program as it implements the 2012-2016 strategic plan.

- 2011 Sage-Grouse Conservation Assessment and Strategy for Oregon (Draft)
- 2010 Oregon Sage Grouse Improvement Initiative, NRCS
- 2010 The Potential Influence of Changing Climate on the Persistence of Inland Native Salmonids; USGS, TU and USFS.
- 1998 Recovery Plan for the Native Fishes of the Warner Basin and Alkali Subbasin: Waner Sucker, Hutton Tui Chub, Foskett Speckled Dace.



*Warner Mountains sage shrub-steppe, juniper encroachment. Photo: D. Renner, USFWS*

# Wallowa Mountains Focus Area

***Wallowa Mountains Focus Area Target Goals for FY 2011 – 2015***

*300 Upland Acres Improved*

*20 Wetland Acres Improved*

*2 Riparian, Instream or Shoreline Miles Improved*

*8 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Baker, Eagle Valley, Keating, Union, & Wallowa SWCDs*

*Numerous Private Landowners*

*Grande Ronde Model Watershed*

*Oregon Dept. of Fish & Wildlife*

*The Nature Conservancy*

*Wallowa Resources*

*Nez Perce Tribe*

*Ducks Unlimited*

**Description:** Surrounding the granite peaks and forests of northeast Oregon's Wallowa Mountains is a diverse landscape, with Palouse prairie to the north, sagebrush-steppe rangelands to the south, and broad irrigated valleys sustained by rivers flowing out of the mountains. This rural, agricultural region that spans Wallowa, Union, and Baker counties is a rich area for partnering with private landowners to restore fish and wildlife habitat.

**Resource Issues:**

Salmonid Fish Recovery: This is a high priority area for recovery of Chinook salmon, steelhead, and bull trout. On the north side of the Wallowa Mountains, the Imnaha, Wallowa, and Grande Ronde rivers support all three of these threatened fish. To the south, the Powder River, Eagle Creek, and Pine Creek support bull trout. The Wallowa Mountains are higher in elevation than other mountain ranges in the region and thus the cold-water streams that originate in them are predicted to be more resilient to the rising temperature trajectory associated with climate change.

Sage-Grouse Recovery: The sagebrush-steppe rangelands to the south of the Wallowa Mts. are identified as high priority sage grouse habitat in Oregon Department of Fish and Wildlife's (ODFW) Oregon Conservation Strategy. This is the northernmost extent of the sage-grouse range in Oregon and is one of the few areas where juniper encroachment has not yet occurred.

Prairie Restoration: Zumwalt Prairie is the largest and highest-quality expanse of Palouse bunchgrass prairie remaining in North American. It hosts more than a dozen rare plant and animal species, including Spalding's catchfly and Columbian sharp-tailed grouse.

Wetland Restoration: The Grande Ronde and Powder River valleys historically supported large marshlands. Most were drained years ago for agricultural development; however there have been several wetland restoration efforts in recent years. Howell's spectacular thelypody, a threatened plant, occurs in wet meadows near the Powder River.

**Restoration Potential, Strategies and Partnerships:** Fish Habitat: Utilizing guidance from local Subbasin Plans and species' recovery plans, we have focused on three priorities: (1) modifying irrigation diversions to deliver agricultural water in a manner that does not block fish passage or result in loss of fish in ditches; (2) restoring stream habitat quality & complexity in areas that have been degraded due to past channel realignments & land use practices; and (3) improving riparian habitat through practices such as fencing, bank stabilization, off-stream livestock water developments, and riparian pasture management. To accomplish this work, we partner extensively with the local SWCDs and the Grande Ronde Model Watershed, and receive funding from the Oregon Watershed Enhancement Board.

As the rivers leave the mountains and enter the valleys, there are numerous irrigation diversions that funnel surface water into ditches for agricultural production. These diversions often create barriers to fish passage, and the ditches need to be screened to

keep fish from being entrained in them. Working with irrigators to improve these diversions is a substantial part of our workload.

In addition, many of the rivers were historically straightened to open up more land for agriculture. This has resulted in simplified habitat conditions, with swifter flows and less pool habitat. In recent years, some landowners have initiated projects to restore meanders and side-channels to their streams. These projects require careful planning and engineering designs, but they have proved successful and there is increasing interest in this type of treatment.

Sage-Grouse: We are utilizing guidance in ODFW's Sage-Grouse Conservation Strategy to plan habitat improvements for sage-grouse. We are currently working with landowners on projects to put reflectors on fences to reduce collision hazards, and controlling the spread of invasive annual grasses such as medusahead rye grass. This highly invasive, non-native grass forms monocultures and provides no habitat value.

Prairie Restoration: The Nature Conservancy is leading efforts to restore the Zumwalt Prairie. We are partnering with them on projects to convert old agricultural fields back to native bunchgrasses and to restore native hardwoods.

Wetland Restoration: Ducks Unlimited and ODFW have been active in local efforts to restore wetland habitats. We are partnering with DU on wetland restoration in the North Powder area.

**Scientific Rationale:** Over the past decade several important landscape scale conservation planning efforts have been completed which provide a sound scientific basis for the Partners program as it implements the 2012-2016 strategic plan.

- 2011 Sage-Grouse Conservation Assessment and Strategy for Oregon (Draft)
- 2010 Oregon Sage-Grouse Improvement Initiative, NRCS
- 2002 Draft Bull Trout Recovery Plan
- 2004 Grande Ronde & Powder River Subbasin Plans
- 2002 Recovery Plan for Howell's Spectacular Thelypody

*Wallowa Mountains, Oregon, USFWS photo*

# Malheur River/Harney Basin Focus Area

***Malheur River/Harney Basin Focus Area Target Goals for FY 2011 – 2015***

*400 Upland Acres Improved*

*10 Wetland Acres Improved*

*0.5 Riparian, Instream or Shoreline Miles Improved*

*4 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Numerous Private Landowners*

*Harney & Malheur SWCDs*

*Malheur Watershed Council*

*Oregon Dept. of Fish & Wildlife*

*Burns Paiute Tribe*

*Ducks Unlimited*

## Description:

Sagebrush dominates the landscape in northern Harney and Malheur counties, but the area also contains three important rivers flowing south out of the Strawberry Mountains. These ribbons of water and lush vegetation provide vital habitat for wildlife and humans alike in the otherwise arid high desert. To the west, the Silvies River runs down into the wide, flat Harney Basin, a closed basin that drains into Malheur Lake. Further east, the Middle and North Forks of the Malheur River are sizeable rivers that support ribbons of irrigated pasturelands along their lower reaches. This is a sparsely population area with high fish and wildlife resource values.

## Resource Issues:

Bull Trout Recovery: The Middle and North Forks of the Malheur River support populations of bull trout.

Sage-Grouse Recovery: Extensive sagebrush-steppe rangelands in this area are identified as high priority sage grouse habitat in Oregon Department of Fish and Wildlife's Oregon Conservation Strategy. The higher elevation sagebrush habitat in this area could be particularly important for sage-grouse as climate change alters other parts of the species range. The lack of major energy development in this area is also another valuable feature.

Wetland Restoration: The Harney Basin and Malheur Lake support large marshlands. Most were drained years ago for agricultural development, however there have been several wetland restoration efforts in recent years.

## Restoration Potential, Strategies and Partnerships:

Fish Habitat: We are working with livestock producers along the Middle and North Fork Malheur Rivers to modify irrigation diversions to deliver agricultural water in a manner that does not block fish passage or result in loss of fish in ditches, and to improve riparian habitat through bank stabilization and riparian pasture management. These sections of the Middle and North Forks are overwintering and migratory habitat for bull trout, and improvement of these habitats has been identified as a priority in the draft Bull Trout Recovery Plan and the local Subbasin Plan. We have screened 10 ditches so far and improved 5 diversion structures, but there are more that need to be addressed. To accomplish this work, we partner extensively with the Harney SWCD and the Malheur Watershed Council.

In addition, many of the rivers were historically straightened to open up more land for agriculture. This has resulted in simplified habitat conditions, with swifter flows and less pool habitat. In recent years, some landowners have initiated

projects to restore meanders and side-channels to their streams. These projects require careful planning & engineering designs, but they have proved successful and there is increasing interest in this type of treatment.

Sage-Grouse: This focus area is a high priority area for sage-grouse and we are working with ODFW, NRCS, and the local SWCDs to develop and implement habitat improvement projects for this species, based on recommendations in ODFW's Sage-Grouse Conservation Strategy. We are currently working with landowners on juniper removal efforts and a project to improve brood-rearing habitat through better management of irrigated fields. We are also developing projects to control the spread of medusahead rye grass and to install reflectors on fences to reduce collision hazards.

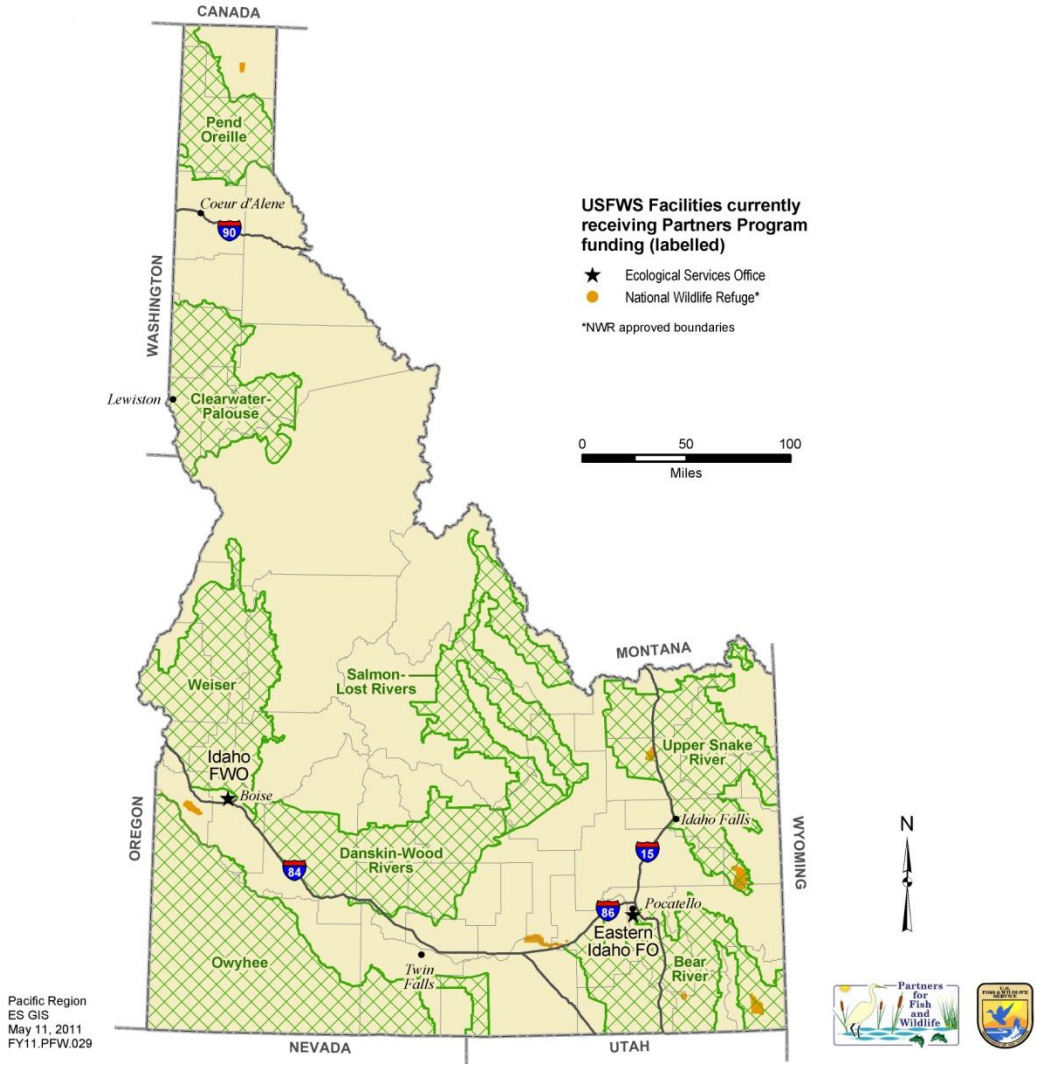
Wetland Restoration: Major wetland restoration efforts are being initiated in the Harney Basin, primarily in association with the Malheur National Wildlife Refuge. Ducks Unlimited is spearheading efforts to obtain a large NAWCA grant to support restoration efforts.

**Scientific Rationale:** Over the past decade several important landscape scale conservation planning efforts have been completed which provide a sound scientific basis for the Partners program as it implements the 2012-2016 strategic plan.

- 2011 Sage-Grouse Conservation Assessment and Strategy for Oregon (Draft)
- 2010 Oregon Sage-Grouse Improvement Initiative, NRCS
- 2006 Oregon Conservation Strategy
- 2004 Malheur River Subbasin Assessment and Management Plan
- 2002 Draft Bull Trout Recovery Plan

*Partners Program Biologist and Volunteers pause for the camera, USFWS photo*

# Appendix C - Idaho Focus Areas



***Danskin-Wood Rivers Focus Area Target Goals for FY 2012 – 2016***

*1,000 acres of upland habitat*

*50 acres of wetland habitat*

*3 miles of riparian habitat*

***Key Partners***

*Multiple private landowners,*

*Idaho Department of Fish and Game*

*North American Grouse Partnership*

*The Nature Conservancy*

*Natural Resource Conservation Service*

*Wood River Land Trust*

*Ducks Unlimited*

*NAWCA*

*and other partners in this area.*

# Danskin-Wood Rivers Focus Area

*Sage Grouse Habitat and Silver Creek, USFWS Photo*

**Area Description:**
The area includes the upper Boise River watershed, the Danskin Mountains area east of Boise and north of Interstate 84, and the Big and Little Wood Rivers, Silver Creek, Camas Creek, and Copper Basin watersheds in central Idaho. The area is characterized by forest-covered mountains, dissected by broad valleys that are dominated by shrub-steppe, native grassland rangeland, and farmland. The mountain and arid rangeland areas are administered by the U.S. Forest Service or the U.S. Bureau of Land Management, and the more productive rangeland and farmland are generally in private ownership. The area supports a variety of sensitive species including several ESA-listed and candidate species, and is also an important area for migratory birds. The area is over 2.7 million acres in size with 39% (1.07 million acres) private land, 54% federal land, and 7% state land.

**Resource Issues:**
*Key Habitats and Species:* wetland, wet-meadow, instream/aquatic, riparian, shrub-steppe, and native grassland habitats. Wetland, grassland and riparian dependent migratory birds, and sensitive species such as greater sage-grouse, Columbian sharp-tailed grouse, mountain quail, yellow-billed cuckoo, greater sandhill cranes, long-billed curlew, white-faced ibis, pygmy rabbit, trumpeter swans, slickspot peppergrass, Wood River sculpin, and bull trout, are key species in this focus area.

*Conservation Issues:* Native habitats in the area have been impacted by agriculture and water use activities such as livestock grazing, crop production, irrigation water withdrawal and transportation, and other activities. The areas of greatest impact (valley bottoms) are primarily private land and active habitat restoration and management are needed to conserve key focus area species and habitats.

**Restoration Potential:**
Conservation priorities in this focus area are restoration or enhancement of wetland and riparian habitats, primarily through restoration of original hydrologic function; riparian and instream/aquatic habitat protection and restoration through managing livestock grazing, vegetation planting and active stream channel restoration; removal of fish passage barriers and instream restoration of fish habitat; restoration or enhancement of shrub-steppe and native grassland habitat through upland seeding and livestock management; and control of invasive plant species.

**Scientific Rationale:**
Conservation plans with relevance to this area include the Coordinated Implementation Plan for Bird Conservation in Idaho developed by the Intermountain West Joint Venture, the Intermountain West Regional Shorebird Plan, the Idaho Comprehensive Wildlife Conservation Strategy, the Western Native Trout Initiative, the Conservation Plan for the Greater Sage-Grouse in Idaho, and others.

# Owyhee Focus Area

***Owyhee Focus Area Target Goals for FY 2012 – 2016***

*1,000 acres of upland habitat*

*50 acres of wetland habitat*

*2 miles of riparian habitat*

***Key Partners***

*Multiple private landowners,*

*Idaho Department of Fish and Game*

*Natural Resources Conservation Service,*

*Soil and Water Conservation Districts*

*and other partners in this area.*

**Area Description:**
The area includes Owyhee County, and other areas of southwest Idaho generally south of the Snake River from the Oregon border east to Bruneau, Idaho, and then generally southeast along the Bruneau River, East Fork of the Bruneau River, Devil Creek, Salmon Falls Creek and Deep Creek south of Twin Falls, Idaho, then south to the Nevada border. The area is generally characterized by forest-covered mountains, with large contiguous areas of shrub/steppe habitat, dissected by valleys and the Owyhee and Bruneau River canyons. These lands cover a very diverse array of habitats including wetland, upland shrub/steppe, riparian, forest, and instream/aquatic habitats. The arid rangeland areas are generally federal land, administered by the U.S. Bureau of Land Management. The area supports a variety of sensitive species including ESA-candidate species and other sensitive species. The focus area is over 5 million acres in size with 16% (816,000 acres) private land, 75% federal land, 6% state land, and 3% tribal land.

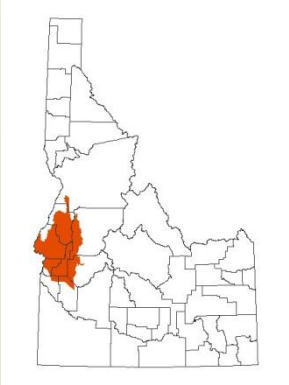
*Greater sage grouse, USFWS photo*

**Resource Issues:**
*Key Habitats and Species:* Riparian, aquatic, wetland, shrub-steppe, and forest habitats. Greater sage-grouse, pygmy rabbits, Columbia spotted frogs, Columbian sharp-tailed grouse, long-billed curlew, slickspot peppergrass, Bruneau hot springsnail, Goose Creek milkvetch, northern leatherside chub, redband trout, and migratory birds are key species.
*Conservation Issues:* The area has been heavily impacted from agriculture (livestock grazing, crop production, and irrigation), and mining that have resulted in degradation of shrub/steppe, riparian, wetland and instream/aquatic habitats. Invasive plant species, such as cheatgrass, are a serious threat to native shrub-steppe habitat and the associated wildlife species in this area. These impacts are widespread; active habitat restoration and management are needed on private land to conserve key habitats and species.

**Restoration Potential:**
Conservation priorities in this focus area are restoration or enhancement of wetland habitats through wetland construction, or restoration of the original wetland hydrologic function; riparian habitat enhancement or restoration through managing livestock grazing, vegetation planting and management; restoration or enhancement of shrub-steppe and native grassland habitat through upland seeding and livestock management, juniper removal, and control of invasive plant species. The Bureau of Land Management has indicted interest in providing similar conservation benefits on adjacent Federal lands.

**Scientific Rationale:**
Conservation plans with relevance to this area include the Idaho Comprehensive Wildlife Conservation Strategy, the Conservation Plan for the Greater Sage-Grouse in Idaho, and others.

# Weiser Focus Area



***Weiser Focus Area Target Goals for FY 2012 – 2016***

*500 acres of upland habitat,*

*10 acres of wetland habitat*

*½ mile of riparian habit*

***Key Partners***

*Multiple private landowners,*

*Idaho Department of Fish and Game,*

*Natural Resources Conservation Service, and*

*Pheasants Forever,*

**Area Description:** The area includes the Weiser River, Payette and lower Boise River watersheds, and the Little Salmon River watershed within the New Meadows Valley in southwestern Idaho. The area is generally characterized by forest-covered mountains, dissected by broad valleys which are dominated by shrub-steppe and native grassland, and farmland. The mountain and arid rangeland areas are generally federal land, administered by the U.S. Forest Service or the U.S. Bureau of Land Management. The more productive rangeland and farmland are generally in private ownership. The area supports a variety of sensitive species including several ESA-listed and candidate species and other sensitive species; it is also an important area for migratory birds. The focus area is over 2.8 million acres in size with 59% private land (1.6 million acres), 33% federal land, and 8% state land.

**Resource Issues:** *Key Habitats and Species:* Wetland, instream/aquatic, riparian, grassland, and native shrub-steppe are key habitats. Greater sage-grouse, mountain quail, Columbian sharp-tailed grouse, southern Idaho ground squirrels, northern Idaho ground squirrels, pygmy rabbits, bull trout, Indian Valley sedge, long-billed curlew, and other migratory birds are key species. *Conservation Issues:* The area has been heavily impacted from agriculture (livestock grazing, crop production, and irrigation), mining, logging, water use and urbanization activities that have resulted in degradation of shrub/steppe, riparian, wetland and instream/aquatic habitats. Invasive plant species, such as cheatgrass, are a serious threat to native shrub-steppe habitat and the associated wildlife species in this area. These impacts are widespread; active habitat restoration and management are needed on private land to conserve key focus area habitats and species.

**Restoration Potential:** Conservation priorities would be restoration or enhancement of wetland habitats through wetland construction, or restoration of the original wetland hydrologic function; riparian habitat enhancement or restoration through managing livestock grazing, vegetation planting and management; restoration or enhancement of shrub-steppe and native grassland habitat through upland seeding and livestock management; and control of invasive plant species. The Bureau of Land Management has indicted interest in providing similar conservation benefits on adjacent Federal lands.

.

**Scientific Rationale:** Conservation plans with relevance to this area include the Coordinated Implementation Plan for Bird Conservation in Idaho developed by the Intermountain West Joint Venture, the Intermountain West Regional Shorebird Plan, the Idaho Comprehensive Wildlife Conservation Strategy, the Programmatic Southern Idaho Ground Squirrel Candidate Conservation Agreement with Assurances, the Conservation Plan for the Greater Sage-Grouse in Idaho, and others.

*Southern Idaho ground squirrel, USFWS photo*

# Upper Snake River Focus Area

***Upper Snake River Focus Area Target Goals for FY 2012 – 2016***

***Five-Year Habitat Targets:***

*500 acres of upland habitat*

*200 acres of wetland habitat*

*10 miles of riparian habitat.*

***Key Partners***

*Multiple private landowners*

*Idaho Department of Fish and Game*

*Natural Resources Conservation Service*

*Soil and Water Conservation Districts*

*Trout Unlimited*

*Teton Regional Land Trust*

*The Nature Conservancy*

*And other partners*

**Area Description**: This Focus Area includes the Teton River and Henry's Fork and much of the upper Snake River plain watersheds in eastern Idaho. The area is generally characterized by forest-covered mountains, dissected by broad valleys which are dominated by shrub-steppe, native grassland, wetland and riparian habitats. The mountain and arid rangeland areas are generally federal land, administered by the U.S. Forest Service or the U.S. Bureau of Land Management. The more productive rangeland and farmland are generally in private ownership. The area supports a variety of sensitive species including ESA listed species, candidate species, and other sensitive species; it is also an important area for migratory birds. The area is over 2.8 million acres in size with 66% (1.9 million acres) of private land, 23% federal land, and 11% state land.

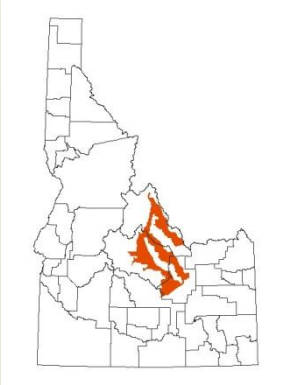
**Resource Issues:** *Key Habitats and Species:* wetland, wet-meadow, instream/aquatic, riparian, shrub-steppe, and native grasslands are key habitats. Grassland, riparian, and wetland dependent migratory birds, and sensitive species such as trumpeter swans, great blue herons, greater sandhill cranes, greater sage-grouse, Columbian sharp-tailed grouse, long-billed curlew, white-faced ibis, pygmy rabbits, Yellowstone cutthroat trout, bald eagle, and Ute ladies' tresses are key species for this focus area.
*Conservation Issues:* Native habitats in the area have been impacted by agriculture and water use activities such as livestock grazing, crop production, irrigation water withdrawal and transportation, urbanization, and other activities. The areas of greatest impact (valley bottoms) are primarily private land where active habitat conservation is needed to conserve focus species and habitats.

**Restoration Potential:** Projects in this area will concentrate on conserving upland, wetland, wet-meadow, and instream/aquatic habitats to benefit grassland, riparian and wetland dependent migratory birds, and sensitive species such as trumpeter swans, greater sandhill cranes, greater sage grouse, Columbian sharp-tailed grouse, long-billed curlew, white-faced ibis, pygmy rabbits, Yellowstone cutthroat trout, and Ute ladies' tresses.

**Scientific Rationale:** Conservation plans with relevance to this area include the Coordinated Implementation Plan for Bird Conservation in Idaho developed by the Intermountain West Joint Venture, the Intermountain West Regional Shorebird Plan, the Idaho Comprehensive Wildlife Conservation Strategy, the Western Native Trout Initiative, and the Conservation Plan for the Greater Sage-Grouse in Idaho, and others.

*Teton Range in background, USFWS photo*

# Salmon-Lost Rivers Focus Area



***Salmon-Lost Rivers Focus Area Target Goals for FY 2012 – 2016***

***Five-Year Habitat Targets:***

*200 acres of upland habitat*

*100 acres of wetland habitat*

*20 miles of riparian habitat.*

***Key Partners***

*Multiple private landowners*

*Idaho Department of Fish and Game*

*Natural Resources Conservation Service*

*Lemhi SCWD and Upper Salmon Basin Watershed Project*

*Trout Unlimited*

*Lemhi Regional Land Trust*

*The Nature Conservancy*

*Shoshone-Bannock Tribes*

*And other partners*

**Area Description:** This area includes the upper Salmon River watershed (Main Salmon, Lemhi, Pahsimeroi and the East Fork Salmon River watersheds), and the Big and Little Lost River watersheds in central Idaho. The Salmon and Little Lost River watersheds are important for bull trout conservation; while bull trout do not occur in the Big Lost River, Big Lost mountain whitefish do occur in the river and are considered a sensitive fish species by the U.S. Forest Service. The area is generally characterized by forest-covered mountains, dissected by broad valleys which are dominated by shrub-steppe, native grassland, wetland and riparian habitats. The mountain and arid rangeland areas are generally federal land, administered by the U.S. Forest Service and the U.S. Bureau of Land Management. The area supports a variety of sensitive species; it is also an important area for migratory birds. The focus area is over 2.3 million acres in size with 23% (528,000 acres) private land, 72% federal land, and 5% state land.

*Sockeye salmon, USFWS photo*

**Resource Issues:** *Key Habitats and Species:* wetland, wet-meadow, riparian, shrub-steppe, native grassland, and instream/aquatic are key habitats in this focus area. Grassland, riparian and wetland dependent migratory birds, and sensitive species such as bull trout, sockeye salmon, Chinook salmon, steelhead, westslope cutthroat trout, Big Lost whitefish, Pacific lamprey, greater sage-grouse, long-billed curlew, pygmy rabbits, and Salmon twin bladderpod are key species.
*Conservation Issues:* Native habitats in the area have been impacted by agriculture and water use activities such as livestock grazing, crop production, irrigation water withdrawal and transportation, and other activities. The areas of greatest impact (valley bottoms) are primarily private land and active habitat restoration, establishment and protection are needed on these private lands to conserve key species and habitats.

**Restoration Potential:** Projects in this area will concentrate on conserving upland, wetland, wet-meadow, and instream/aquatic habitats to benefit grassland, riparian and wetland-dependent and other sensitive species. Restoration or enhancement of those habitat types, removing barriers to bull trout, westslope cutthroat trout, salmon, and steelhead passage; reducing impacts of irrigation diversions on native salmonids; restoration or enhancement of shrub-steppe and native grassland habitat to conserve Columbian sharp-tailed grouse and greater sage-grouse; and control of invasive plant species. Many existing partnerships already exist in this watershed, the Partners Program has cooperated on numerous projects , and we expect more opportunities into the future.

**Scientific Rationale:** Conservation plans with relevance to this area include the Coordinated Implementation Plan for Bird Conservation in Idaho developed by the Intermountain West Joint Venture, the Intermountain West Regional Shorebird Plan, the Idaho Comprehensive Wildlife Conservation Strategy, the Western Native Trout Initiative, the Conservation Plan for the Greater Sage-Grouse in Idaho, and others.

# Bear River Focus Area

***Bear River Focus Area Target Goals for FY 2012 – 2016***

***Five-Year Habitat Targets:***

*400 acres of upland habitat*

*100 acres of wetland habitat*

*10 miles of riparian habitat.*

***Key Partners***

*Multiple private landowners*

*Idaho Department of Fish and Game*

*Natural Resources Conservation Service*

*Soil and Water Conservation Districts*

*Trout Unlimited*

*PacifiCorp*

*Idaho Department of Environmental Quality*

*And other partners*

**Area Description:** This area covers the Bear River watershed as well as the Portneuf River, Bannock Creek, and Rock Creek in southeastern Idaho. The area is generally characterized by forest-covered mountains, dissected by broad valleys which are dominated by shrub-steppe and native grassland, rangeland, and farmland. The mountain and arid rangeland areas are generally federal land, administered by the U.S. Forest Service or the U.S. Bureau of Land Management. The more productive rangeland and farmland are generally in private ownership. The Bear River watershed originates in Wyoming and flows north into Idaho to Bear Lake, and then turns west and south and flows into the Great Salt Lake in Utah. The area supports a variety of sensitive species including ESA-candidate species and other sensitive species; it is also an important area for migratory birds. The area is over 2.6 million acres in size with 71% private land, 23% federal land, and 6% state land.

**Resource Issues:** *Key Habitats and Species:* wetland, wet-meadow, riparian, shrub-steppe, native grassland, and instream/aquatic are key habitats. Grassland, riparian and wetland dependent migratory birds, and sensitive species such as trumpeter swans, great blue herons, greater sandhill cranes, greater sage-grouse, Columbian sharp-tailed grouse, long-billed curlew, white-faced ibis, pygmy rabbits, Bonneville cutthroat trout, and bald eagles are key species in this focus area.
*Conservation Issues:* Native habitats in the area have been impacted by agriculture and water use activities such as livestock grazing, crop production, irrigation, water withdrawal and transportation. As a result, there has been considerable degradation of key habitats important to migratory birds and sensitive species. Active habitat restoration, enhancement and protection are needed on private lands in the area to conserve focus fish and wildlife species and their habitats.

**Restoration Potential:** Projects in this area will concentrate on conserving upland, wetland, wet-meadow, and instream/aquatic habitats to benefit grassland, riparian and wetland dependent habitats and associated species. Restoration or enhancement of wetland, riparian and instream/aquatic habitats; removing barriers to Bonneville cutthroat trout passage; reducing impacts of irrigation diversions on Bonneville cutthroat trout; restoration or enhancement of shrub-steppe and native grassland habitat to conserve Columbian sharp-tailed grouse and greater sage grouse; and control of invasive plant species will be typical project types. Many existing partnerships already exist in this watershed, the Partners Program has cooperated on numerous projects, and we expect those opportunities to continue into the future.

**Scientific Rationale:**
Conservation plans with relevance to this area include the Coordinated Implementation Plan for Bird Conservation in Idaho developed by the Intermountain West Joint Venture, the Intermountain West Regional Shorebird Plan, the Idaho Comprehensive Wildlife Conservation Strategy, the Western Native Trout Initiative, the Conservation Plan for the Greater Sage-Grouse in Idaho, and others.

*Bear River Focus Area, USFWS photo*

# Palouse-Clearwater Focus Area

***Palouse-ClearwaterFocus Area Target Goals for FY 2012 – 2016***

***Five-Year Habitat Targets:***

*400 acres of upland habitat*

*70 acres of wetland habitat*

*4 miles of riparian habitat.*

***Current Key Partners***

*Latah and Nez Perce Soil and Water Conservation Districts*

*Nez Perce Tribe*

*Latah County*

*Palouse Land Trust*

*Idaho Department of Fish and Game,*

*Ecotrust.*

*And other partners*

**Area Description:** The Palouse-Clearwater Focus Area is in northern Idaho and includes Palouse Prairie and Canyon Grassland ecosystems and portions of the Palouse and Clearwater Basins. Major land uses include agriculture, grazing and suburban development. There are two cities with populations over 10,000 and dozens of smaller communities. The focus area is over 2 million acres in size, with 52% (1.1 million acres) in private ownership, 35% tribal land, 7% State land, and 6% federal land.

*Palouse Prairie Remnant, USFWS photo*

**Resource Issues:** *Key Habitats and Species:* Key habitats include Palouse prairie, canyon grasslands, wetlands-especially vernal pools, instream/aquatic, and riparian zones. Key species include federally listed Spalding's silene, water howellia and a host of rare and endemic plants, giant Palouse earthworm and grassland, bull trout, Chinook salmon, steelhead, wetland and riparian dependent migratory birds.

*Conservation Issues:* Nearly all Palouse Prairie was converted to agriculture and grazing land by the turn of the last century, but now human development and growth of urban areas are increasing threats to the remaining prairie. Additional threats include: habitat degradation due to invasive plants; direct and indirect loss of populations due to herbicide application and isolation of populations.

**Restoration Potential:** Conservation priorities in this focus area are to restore, protect and reconnect intact Palouse prairie remnants, especially those that support, or could support rare and listed plants. Other priorities include restoring and protecting vernal pool wetlands that support water howellia and other wetlands that are important to migratory birds. These priorities will be met by prioritizing prairie remnant projects based on the results of grassland inventories being completed in Latah and Nez Perce Counties; and developing and implementing a restoration strategy for the Palouse floodplain for water howellia. Existing partners are noted to the left, and potential future partners include Palouse-Clearwater Environmental Institute, Palouse Prairie Foundation, Groundworks, and Lewis SWCD.

**Scientific Rationale:** The Idaho Natural Heritage Program has identified this focus area as core habitat for an exceptional diversity of State Species of Greatest Conservation Need as part of their Wildlife Action Plan. They have also identified several high priority wetlands, 3 important bird areas, and exceptional natural and rare wetland and prairie habitats. The Nature Conservancy has identified multiple biodiversity hotspots in this focus area at high risk of disturbance. Ecotrust, a non-profit working with both NOAA-Fisheries and Fish and Wildlife Service fisheries, has identified the Clearwater as a focus area for salmon habitat restoration. The Palouse Prairie is considered one of the most endangered ecosystems in the United States; only 0.1% of this grassland ecosystem remains in a natural state. Several Palouse Prairie plant associations are considered globally imperiled (G1 or G2). The focus area includes portions of two recovery zones for Spalding's silene and one for water howellia.

# Pend Oreille Focus Area

***Pend Oreille Focus Area Target Goals for FY 2012 – 2016***

***Five-Year Habitat Targets:***

*25 acres of upland habitat*

*5 acres of wetland habitat*

*4 miles of riparian habitat.*

*2 fish passage barriers*

***Key Partners***

*Idaho Department of Fish and Game,*

*Natural Resources Conservation Service,*

*Bonner Soil and Water Conservation District,*

*Kalispel Tribe,*

*Vital Ground Foundation,*

*Tri-State Water Quality Council,*

*Avista Corporation.*

*And other partners*

**Area Description:**
The Pend Oreille Focus Area is in northern Idaho and includes all of the Priest and Lake Pend Oreille sub-basins, and the portion of the Clark Fork sub-basin that is in Idaho. This is a mountainous area with many glacial lakes, rivers, and streams. Rivers and streams are rapid flowing, especially during spring runoff. Lake Pend Oreille and Priest Lake are major water bodies. Communities are mostly small and rural, but population and development have been greatly increasing in recent years. Summer residences are common on lakes and large river systems. Participation in outdoor recreation is also increasing rapidly. Forestry, livestock grazing, mining, and localized agriculture are principal land uses. The Pend Oreille Focus Area is over 1.3 million acres in size with 35% in private ownership, 38% federal land, 18% state land, and 9% open water.

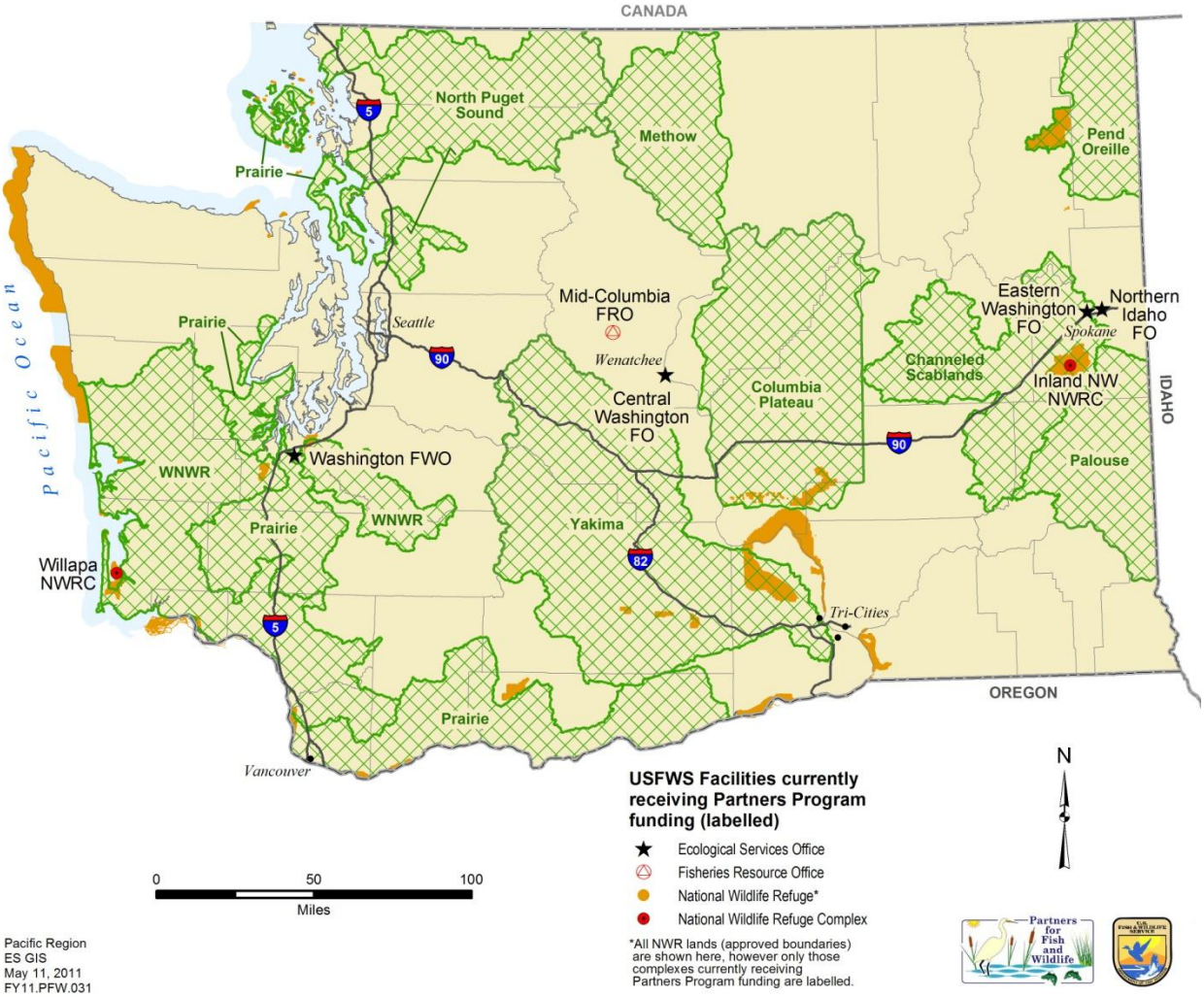
**Resource Issues:** *Key Habitats and Species:* key habitats are wetlands, streams, and riparian zones. Key species include bull trout, westslope cutthroat trout, grizzly bears and wetland and riparian dependent migratory birds.
*Conservation Issues:* Threats that can be addressed on private land include invasive alien plant and animal species, fish passage barriers, poor water quality due to increased temperature and sedimentation, loss of seasonal wetlands, loss of in-stream habitat complexity, and habitat fragmentation. Other major threats that cannot be addressed solely on private land are the large number of non-native fish throughout the sub-basin, and fish passage at Cabinet Gorge and Albeni Falls Dams.

**Restoration Potential:** The primary conservation priorities are stream, wetland and riparian projects that can be connected to other projects on private or federal land. Priorities will be accomplished by working with an interagency interdisciplinary team to fund watershed assessments, and prioritize and implement projects identified in those assessments. Current partnerships are noted to the left, and potential partners include Panhandle National Forest and Idaho Department of Lands.

*Partners Project underway, Pend Oreille Focus Area, USFWS photo*

**Scientific Rationale:** The Idaho Natural Heritage Program has identified this focus area as core habitat for bull trout, westslope cutthroat trout, bald eagles, grizzly bears and an exceptional diversity of State Species of Greatest Conservation Need as part of their Wildlife Action Plan. They have also identified more than 10 high priority wetlands, 5 important bird areas, exceptional natural and rare wetland habitats. The Bull Trout Draft Recovery Plan (chapter 3) identifies this area as core habitat. There are also two grizzly bear recovery zones in this focus area with significant private land. USGS research has shown that even with high risk climate change factors, a majority of the westslope cutthroat populations in the Clark Fork/Pend Oreille Basin will persist in the long term.

# Appendix D - Washington Focus Areas



# Columbia Plateau Focus Area

***Columbia Plateau Focus Area Target Goals for FY2012 – 2016***

*400 Upland Acres Improved*

*50 Wetland Acres Improved*

*0.5 Riparian, Instream or Shoreline Miles Improved*

***Key Partners:***

*The Nature Conservancy*

*Chelan-Douglas Land Trust*

*Arid Lands Initiative Work Group*

*Washington Department of Fish and Wildlife*

*Washington Greater Sage Grouse Working Group*

*Natural Resource Conservation Service*

*Bureau of Land Management*

*Yakima Nation*

*Washington Range Committee*

*Grant County Conservation District*

*Private Stewards and Landowners*

**Description:** The Columbia Plateau Focus Area (2,680,479 ac.) is primarily arid, low elevation desert, and contains unique habitat types. Land ownership is primarily private (77%), with a few large State and Federal areas managed for wildlife refuge and recreation (22%). Production of dry and irrigated crops and ranching are the major land uses in this Focus Area. The primary native habitats by area occupied are big sagebrush, three-tip sagebrush, and bitterbrush shrub-steppe, ponderosa pine inclusions, wetlands, springs, and their associated riparian zones. Precipitation ranges from 10 to 15 inches annually. Events and processes associated with ice-age glacial recession and subsequent flooding have created unique topographical features such as coulees, channeled scablands, boulder fields, glacial erratics, moraines, potholes, and large fertile plains. These features offer a unique and varied backdrop for an amazingly diverse group of rare mammals, birds and plants.

**Resource Issues:** The Focus Area boundaries have been re-drawn in 2011 (see map) to best represent conservation opportunities where shrub-steppe dependent species and available remnant native habitats are interspersed with private lands. Focus species include the federally endangered pygmy rabbit, several federal candidate species (greater sage grouse, Washington ground squirrel), and numerous species of concern (e.g., leopard frog and bats). The primary resource issues in this area are: habitat loss, isolation, and fragmentation due to agricultural, industrial, hydraulic, and residential development; wildfire; and invasive species. Another issue of concern is the lack of migratory corridors for terrestrial species, between and within the relatively small fragments of remaining healthy shrub-steppe habitat. These circumstances give the Service the opportunities and incentive to provide leadership in the development of broad conservation agreements, sustainable land management planning, and restoration. Climate change is expected to alter both the composition and location of Columbia Basin habitats. In general, a northerly shift in the extent of shrub-steppe ecosystems is expected. As shrub-steppe expands to the north, it is expected to decrease where it currently exists as changes in the amount, type, and timing of precipitation occur. However, some refugia habitats from climate change within shrub-steppe have been predicted in areas of the Columbia Basin, including zones within the Columbia Plateau Focus Area.

**Restoration Potential, Strategies, and Partnerships**: Restoration priorities in this Focus Area are to conserve, enhance, and restore high quality, connected shrub steppe habitat, control and prevent the spread of invasive species, promote rapid recovery from wildfire, and limit loss of seasonal wetlands. This reflects a more narrow focus on shrub-steppe dependent species in 2012-2016. A general strategy includes the following actions: fencing to protect existing and recovering habitat from livestock, wild ungulates, human trespass, and vehicle access; flagging of fences; weed control; planting native shrubs, grasses, and forbs including rare plants; and increasing native seed sources to provide an appropriate

array of native vegetation to plant in restoration areas. A broad strategy currently in place is to promote sage grouse migration across the landscape between occupied areas. More specific strategies include working with NRCS and the Washington Sage Grouse Working Group to identify specific projects providing the most value for sage grouse. Another strategy is to continue to work closely with TNC, BLM, the Arid Lands Initiative and Chelan-Douglas Land Trust to restore additional healthy shrub steppe in the Beezley Hills/McCartney Creek blocks and surrounding areas. Ongoing work with the above partners is expected to generate new opportunities with private landowners, including ranchers and farmers, to restore connectivity between currently functioning islands of shrub-steppe habitat. The NRCS Sage Grouse Initiative and related benefit programs are expected to bring the Service into contact with agricultural producers to voluntarily conserve greater sage-grouse populations on working landscapes.

**Scientific Rationale:** These are the most recent and useful documents to guide future PFW activities in the Focus Area. A complete list is found in the Appendices.

Washington Wildlife Habitat Connectivity Working Group (WHCWG) 2010

Washington Climate Change Impacts Assessment, Climate Impacts Group, University of Washington (2009)

Pygmy Rabbit Recovery Plan Update and Addendum to Washington State Recovery Plan for the Pygmy Rabbit (WDFW 2003)

Greater Sage-Grouse Recovery Plan (WDFW 2004)

Management Recommendations for Washington's Priority Species – Volume I: Invertebrates; Volume IV: Birds (WDFW 2004)

Coordinated Implementation Plan for Bird Conservation in Eastern Washington (Washington Steering Committee 2005)

*Columbia Plateau Focus Area, USFWS photo*

# Methow Basin Focus Area

***Methow Basin Focus Area Target Goals for FY2012 – 2016***

*250 Upland Acres Improved*

*50 Wetland Acres Improved*

*3.0 Riparian, Instream or Shoreline Miles Improved*

*2 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Methow Restoration Council*

*Methow Salmon Recovery Foundation*

*Bureau of Reclamation*

*Methow Conservancy*

*Yakama Nation*

*Colville Nation*

*US Forest Service*

*WA Dept. of Fish and Wildlife*

*Okanogan Conservation District*

*Bonneville Power Administration*

*Natural Resource Conservation Service*

**Description:** The Methow Basin contains 1,825 square miles and is located in Okanogan County in north central Washington. The Methow watershed is a spectacular landscape that extends from the Canadian border in the north to the confluence of the Columbia River in Pateros, Washington in the south. The watershed has its origins in the glacial streams and highlands that feed the Twisp, Lost, and Chewuch Rivers as well as Early Winters Creek. This provides clean, cold water and is the lifeblood of this otherwise arid environment. This watershed is one of the most diverse and productive in the Columbia River system and has one of the highest indices of species richness in the Columbia Cascade Ecological Province. The climate is characterized by cold, snowy winters and hot, dry summers. The mountains receive over 40 feet of snow each year while the lowlands often exceed 100 degrees in summer. The lower elevation valleys of the Methow Basin are largely in private ownership and contain most of the priority habitats which are the focus of current conservation efforts. Fifteen federally listed species (3 endangered, 8 threatened, and 4 candidate) occur in the basin; 38 species are state-listed by the Washington Department of Fish and Wildlife.

**Resource Issues:** The Methow River provides excellent spawning and rearing habitat that is used by several threatened and endangered salmonids including steelhead, spring Chinook, and bull trout. The broad, unconfined reaches of the upper and middle Methow Valley also contain high-quality riparian habitats that are utilized by a variety of terrestrial wildlife, neotropical birds, and waterfowl as well as much of the plant diversity in the Basin. Upland habitats are also home to a rich array of wildlife, including the federally listed Canada lynx, wolverine, northern spotted owl, and the first documented wolf pack in Washington in 70 years. While much of the watershed is federally designated Wilderness, the ecologically critical valley-bottoms are under intense residential and agricultural development pressure. Several groups are working to permanently protect these habitats before they are developed, often in conjunction with restoration activities. Despite the abundance of winter precipitation, water availability is a considerable limitation during the dry summer months when demand is greatest. Climate change threatens to greatly reduce average winter snowpack, increase the frequency and intensity of rain-on-snow and summer storm events, and reduce summer baseflows. This will surely put ever-increasing pressure on limited water supplies and will require careful planning to balance human-uses with ecological needs.

**Restoration Potential, Strategies and Partnerships:** Conservation groups are working with many public and private partners to preserve habitats that maintain ecological connectivity and provide resiliency for climate change. The PFW Program is actively involved in all phases of project development including planning, implementation, and monitoring. We provide technical assistance to many partners and participate in the Methow Restoration Council. Efforts include projects to restore spring habitat, and expand wetlands and riparian corridors by

working with private landowners and our partners. We will bring continued participation in large-scale restoration projects currently planned for the Methow River between the towns of Winthrop and Twisp. Ongoing purchases and easements under the Section 6 of the Endangered Species Act program have secured blocks of critically important mule deer winter range and key migration routes for rare carnivores. In the uplands, PFW work will focus on improving the function and connectivity of these blocks to further benefit critical, low-elevation forest and shrub-steppe habitats for several state candidate, bird, bat, reptile and amphibian species.

**Scientific Rationale:** Watershed planning for the Upper Columbia River was completed in 2007 and finer-resolution Tributary and Reach Assessments have subsequently been completed by the Bureau of Reclamation and the Yakama Nation. These documents form the scientific basis for restoration priorities and the biological benefits which inform them. An effort to predict the effects of climate change in the Methow Basin is being undertaken by USGS and its many partners. It is a collaborative effort by many technical experts that will help inform practitioners at the local level where to best expend our limited financial resources to benefit fish and wildlife species and their priority habitats. There is also a multi-agency monitoring effort underway that will attempt to determine the effectiveness of restoration activities at multiple spatial and temporal scales. This work will compare pre- and post-treatment conditions instream, allowing designers and funders alike the unique opportunity to quantitatively evaluate how fish respond to different and cumulative restoration activities.

*Methow Basin Focus Area, USFWS photo*

***Western Washington Prairie Focus Area Target Goals for FY2012 – 2016***

*1,500 Upland Acres Improved*

*10 Wetland Acres Improved*

*1.5 Shoreline Miles Improved*

***Existing Key Partners:***
*Center for Natural Lands Management*

*Whidbey Camano Land Trust*

*Washington Departments of Natural Resources and Fish and Wildlife*

*Washington State Natural Heritage Program*

*U.S. Army/Air Force Joint Base Lewis McChord*

*Natural Resources Conservation Service*

***Potential Partners:***

*Pacific Rim Institute*

*Columbia Land Trust*

*San Juan County Land Bank*

*San Juan Preservation Trust*

*Mason County Conservation District*

# Western Washington Prairie Focus Area

**Description:** This focus area includes the native prairie ecosystem composed of upland prairies, wet prairies, oak savanna woodlands, forests, wetlands and streams throughout western Washington. These habitats occur in a variety of areas including south Puget Sound (glacial outwash prairies), north Puget Sound (coastal prairies), and southwest Washington (Willamette Valley wet and dry prairies). Oak savannas and woodlands are associated with each of these areas as well as areas further east along the Columbia River Gorge, where oak is associated with Ponderosa Pine.

The Puget Trough ecoregion runs the length of Washington, rising to about 1,000 feet elevation between the Cascade Mountains to the east and the Olympic Peninsula to the west. The larger Willamette Valley-Puget Trough-Georgia Basin ecoregion extends south into Oregon and north into British Columbia. The historic landscape was a mosaic of prairie and savanna, interspersed with woodlands and wetlands. Historically, fire was a major component of this ecosystem, which maintained the early seral composition of vegetation.

**Resource Issues:** South Puget Sound prairies historically extended from just south of Tacoma and west down the Chehalis River drainage. Similar habitat is found in the north Puget Sound on coastal prairies, which formed on soils created by the retreating Vashon glaciers. In the south Puget Sound area, only about 10% of the original prairie remains, with only 3% dominated by native species. Overall decline of the prairie ecosystem in western Washington is significantly greater than these figures suggest, as this habitat is more degraded in other areas of the region.

The majority of habitat in western Washington has been lost to development and the remaining habitat is highly fragmented. Remaining habitat is threatened primarily by habitat conversion, fire exclusion, and invasive species.

A number of species are dependent upon this habitat, including the federally threatened golden paintbrush (*Castilleja levisecta*). Other candidates and species of concern find optimum habitats on prairies in the Puget Sound region, including several subspecies of Mazama pocket gopher (*Thomomys mazama*), streaked horned lark (*Eremophila alpestris strigata*), butterflies including Mardon skipper (*Polites mardon*), Taylor's checkerspot (*Euphydryas editha taylori*), valley silverspot (*Speyeria zerene bremeri*), and Island marble (*Euchloe ausonides insulanus*); and the Oregon vesper sparrow (*Pooecetes gramineus affinis*), white-topped aster (*Sericocarpus rigidus*), and western gray squirrel (*Sciurus griseus griseus*).

Some prairies of southwest Washington in Cowlitz and Lewis counties are included within the Puget Trough physiographic province and others in Clark County are included within the Willamette Valley province. Prairies and savannas in these areas have similar threats as prairies to the north and in some

cases provide habitat for the same species (western gray squirrel, golden paintbrush (historic, now extirpated). These southwest Washington prairies also provide habitat for the following federally listed species: Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*), Nelson's checkermallow (*Sidalcea nelsoniana*) and Bradshaw's lomatium (*Lomatium bradshawii*). This is the northernmost extent of these species range and as such provides an important link in maintaining these species in light of climate change. Oak habitats here and further east along the Columbia River Gorge have the potential to provide habitat for western gray squirrel, white breasted nuthatch and other trust species dependent upon these habitats. Garry oak habitats are also at the northern extent of their range in western Washington and southern British Columbia. With climate change impacts, these areas will be important stepping stones to allow for northward migration of species.

**Restoration Potential, Strategies and Partnerships:** The Service is working in the larger Willamette Valley-Puget Trough-Georgia Basin ecosystem to restore habitats for candidate and listed species, species of concern, and other trust species that depend upon prairies and oak habitats. The Service is working with a variety of partners to implement the Recovery Plan for *Castilleja levisecta*, and the Recovery Plan for the Prairie Species of Western Oregon and Southwest Washington. Efforts include assistance with development of a region-wide prescribed fire program, native seed sources of local genetic origin, and restoration methodologies to restore severely degraded grassland habitats. The control and eradication of invasive plants is an important resource issue for restoration and maintenance of prairies and oak habitats. Collaborative efforts between landowners, NGO's, and Federal, state and local agencies are on-going.

**Scientific Rationale:** The Washington State Wildlife Action Plan and the Washington State Natural Heritage Plan recommend actions to restore and conserve wildlife in the Puget Trough region, including protection and restoration of grasslands and oak habitats and their associated rare species. The Nature Conservancy's Conservation Action Planning Report for South Puget Sound Prairies identifies south Puget Sound prairies as one of the most significant conservation areas within the region. The Pacific Coast Joint Venture has identified grassland and oak as priority habitats for landbirds in the Puget Lowlands ecoregion.

*Native prairie plant test plot, USFWS photo*

The Service is an active member of the North and South Puget Sound Prairie and Oak Woodland Working Group(s) which offer an eco-regional approach to restoring this rare and declining ecosystem. The Service's Prairie Reserve Planning Group is in the process of identifying priority areas within the south Puget Sound landscape for the conservation of prairie candidate species.

# Palouse Prairie Focus Area

***Palouse Prairie Focus Area Target Goals for FY2012 – 2016***

*78 Upland Acres Improved*

*0 Wetland Acres Improved*

*0 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Palouse Conservation District*

*Washington Department of Fish and Wildlife*

*Palouse Prairie Foundation*

*Washington Natural Heritage Program*

*Whitman County*

*Natural Resources Conservation Service*

*Intermountain West Joint Venture*

**Description:** The Palouse Prairie is considered one of the most endangered ecosystems in the United States. It is estimated that only 0.1 percent of this grassland ecosystem remains in a natural state. The loss of this native grassland habitat has led to several Palouse Prairie plant associations being considered globally imperiled. The Palouse Prairie supports many at-risk species including one federally listed and five species of concern. Recovery of these species is significantly important to the Palouse. Most of the remaining Palouse Prairie is in privately owned patches of less than 10 acres. These native prairie remnants are isolated and continue to suffer degradation, potentially leading to the further loss of rare and endemic species. One hundred fifty years ago, the typical vegetation throughout the Palouse consisted of perennial bunchgrasses, which grew in tufts or clumps, accompanied by many different kinds of "wildflowers." On Palouse sites that had distinctive conditions because their soils were unusually moist or dry or shallow, different plant communities occurred. In places that were relatively dry (such as south-facing hillsides), the bunchgrasses were not accompanied by many wildflowers. On more moist sites (such as north-facing hillsides), thickets of black or Douglas' hawthorn or forests of ponderosa pine and perhaps Douglas-fir occurred. Low-lying swales that were wet in spring supported dense stands of camas that provided important resources to native people, including large quantities of a nutritious food.

**Resource Issues:** Nearly all Palouse Prairie was converted to agriculture and grazing land by the turn of the last century, but now human development and the growth of urban areas are increasing threats to the remaining prairie. Additional threats include: loss of Palouse/grassland habitats and species associated with these habitats; habitat degradation due to competition from invasive plants; direct and indirect loss of plant populations due to herbicide application; and isolation of plant populations. These threats have also lead to significant decline of grassland breeding bird populations in recent decades. Loss of grasslands on breeding grounds and habitat fragmentation are considered among the causes most responsible for these declines.

The recovery of the Federally listed plant, Spalding's catchfly (*Silene spaldingii*) is a major goal in this focus area, with additional efforts with Whitman County and Conservation Districts to identify and restore prairie remnants that support rare plants, leading to the recovery of the five species of concern. Efforts to improve habitat to benefit the recently discovered Giant Palouse Earthworm are also emphasized in this focus area. Native plant communities in the Palouse are susceptible to invasion by nonnative plants; domination of deep-soil sites by Kentucky bluegrass is common, and in shallow soils cheatgrass and yellow star-thistle weeds compete with native grasslands. Invasive weed control in the Palouse is difficult; therefore, this is another major effort in this focus area.

The varied ecological impacts of climate change will affect wildlife and plants in diverse and sometimes unexpected ways. It is difficult to predict how or if future changes in growth or distribution of vegetation resulting from climate change will affect local conditions for weeds, native vegetation, and grassland birds.

*Palouse Prairie Focus Area, USFWS photo*

**Restoration Potential, Strategies and Partnerships:**

The intent of this focus area is to thoroughly encompass the Palouse, as well as include more of the deep soils to the north and west that generally include soils with 14 inches or greater of rainfall in the average year. Efforts to restore degraded grassland habitats through the National Resource Conservation Service (NRCS) Conservation Reserve Program (CRP) and re-establish previously converted grasslands by working to get the Grassland Reserve Program (GRP) on the Palouse have been shown to benefit grassland birds and may have the potential to help stem population declines. In addition, restoration of Palouse prairie remnants in this focus area has high potential to restore and recover *Silene spaldingii.* The Service is working with the Conservation Districts and the State Acres for Wildlife Enhancement program to help restore these native prairie remnants. The Washington Natural Heritage Program and local botanists aid in this effort as well. In addition, the Service continues to work with Washington Department of Fish and Wildlife to take advantage of the Farm Bill for restoration activities.

Long-term benefits of restoration include protection of habitat and populations; enhanced diversity; increased connectivity among populations; maintenance of genetic variability; increased numbers and improved sustainability of populations of rare plants and associated pollinators; and precluding listing of at-risk plants and the recovery of a listed plant.

**Scientific Rationale:** Numerous guidance documents and assessments have been developed that include conservation strategies to help meet restoration goals in this focus area.

- Final Recovery Plan for *Silene spaldingii* (Spalding's catchfly) (2007)

- Washington Department of Fish and Wildlife State Acres for Wildlife Enhancement (SAFE)

- Washington State Natural Heritage Program – 2008

- Identification of Conservation Priorities for and Threats to Palouse Grassland and Canyon Grassland Remnants in Idaho, Washington, and Oregon (Weddell 1998)

# North Puget Sound Salmonid Focus Area

***North Puget Sound Salmonid Focus Area Target Goals for FY2012 – 2016***

*0 Upland Acres Improved*

*0 Wetland Acres Improved*

*1 Riparian, Instream or Shoreline Miles Improved*

*0 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Washington Department of Fish and Wildlife*

*Washington Department of Ecology*

*Nooksack Indian Tribe*

*Lummi Indian Nation*

*Skagit River System Cooperative*

*Tulalip Tribe*

*Stillaguamish Tribe*

*Nooksack Salmon Enhancement Association*

*Salmon Recovery Funding Board*

*Skagit Fisheries Enhancement Group*

*Snohomish County*

**Description:** The North Puget Sound Salmonid Focus Area has been identified as a high priority for recovery and restoration of Pacific salmon and bull trout. It includes populations of listed threatened Puget Sound Chinook salmon identified as essential for recovery of the species and supports the most robust population of bull trout in Puget Sound. This Focus Area concentrates on the estuaries, uplands, and, riparian areas associated with three river basins (Nooksack, Skagit, and Snohomish) located in North Puget Sound, Washington. The Focus Area lies between the crest of the Cascade Mountains and Puget Sound in northwest Washington. The area consists of U-shaped valleys and cirques carved by glaciers. Rivers begin as high-elevation, steep gradient-streams and end in wide, low-elevation valleys before meeting Puget Sound. Elevation ranges from 0 to greater than 7,000 feet above sea level. The weather is very diverse due to the wide range in elevation and proximity to Puget Sound.

Diverse fish and wildlife habitats within this Focus Area include coniferous and mixed forests, rivers and associated riparian areas, wetlands, and estuaries. The vegetation at low elevations consists of western hemlock, Douglas-fir, and western red cedar forests; Pacific silver fir and western hemlock forests at middle elevations; and mountain hemlock and silver fir forests at high elevations. Riparian areas are dominated by broadleaf trees such as red alder, black cottonwood, and bigleaf maple. Major land uses are cropland, forestland, and urban development. Private land encompasses 1,008 square miles of the Focus Area.

**Resource Issues:** Focus habitats include forests, streams, rivers, estuaries, wetlands, and riparian areas. Focus species include the federally threatened Coastal-Puget Sound bull trout, Puget Sound Chinook salmon, Puget Sound steelhead, and federal species of concern Puget Sound coho salmon. Additional salmonid species present in the Focus Area are Puget Sound chum salmon, pink salmon, sockeye salmon, and coastal cutthroat trout. Additional species that may also benefit from restoration actions in this Focus Area are the federally threatened marbled murrelet and federal species of concern bald eagle, Pacific lamprey, and river lamprey.

Fish and wildlife populations and habitat in this Focus Area have been negatively impacted by human population growth and urban development; forestry practices; agricultural impacts; impacts from invasive species such as knotweed; and water quality degradation. Major threats include stream bank erosion, impaired water quality, instream artificial barriers, channel instability, invasive plants, and urban encroachment. Additional threats include increases in fine sediment and impervious surfaces, and decreases in riparian vegetation and large wood.

Climate change is the “big unknown” variable in the restoration of this Focus Area. Potential impacts are increased water temperature, reduced snowpack and

shrinking glaciers, reduced base flows and increased peak flows, increased erosion, and sedimentation.

**Restoration Potential, Strategies and Partnerships:** Conservation priorities include the following: fish habitat structure, fish access, water quantity and quality, and refugia for fish. The Partners for Fish and Wildlife Program (Program) has been providing technical assistance and partnering with private landowners, tribes, and conservation organizations to address issues of habitat loss and degradation. The Program has addressed these needs through on-the-ground activities, public education, and promotion of watershed assessment and planning efforts. Key project types expected to occur in the North Puget Sound Salmonid Focus Area include estuary protection and restoration, fish passage barrier removals, in-stream habitat improvement, riparian planting, controlling livestock access, and invasive species control. Strong partnerships exist and continue to be developed with tribes, conservation organizations, and Federal, State, and local units of government.

**Scientific Rationale:** The Focus Area includes the largest watershed in Puget Sound and has been identified as a high priority for recovery and restoration of Pacific salmon and bull trout through the "Puget Sound Salmon Recovery Plan," the "Draft Recovery Plan for the Coastal-Puget Sound Distinct Population Segment of Bull Trout: Volume I (of II) – Puget Sound Management Unit," and the "Conservation Priorities: An Assessment of Freshwater Habitat for Puget Sound Salmon." The two recovery plans identify specific recovery actions to be implemented in each recovery area. Watershed based recovery plans with potential restoration projects have been completed for all three rivers.

The Focus Area contains two genetically distinct populations of listed threatened Puget Sound Chinook salmon identified as essential for recovery of the species. The population status of both populations is considered critical. Populations of Chinook salmon in the Nooksack, Skagit, and Snohomish rivers are considered the first priority for conservation in the "Comprehensive Management Plan for Puget Sound Chinook." The Focus Area supports all life forms (resident, fluvial, adfluvial, and anadromous) of bull trout. It is also supports the largest population of migratory bull trout in Washington State, which is located at Lower Skagit River. The upper Skagit watershed supports the most robust population of bull trout in Puget Sound. All three basins are part of designated critical habitat for bull trout.

*Bull trout, USFWS photo*

***Pend Oreille Focus Area Target Goals for FY2012 – 2016***

*0 Upland Acres Improved*

*0 Wetland Acres Improved*

*2 Riparian, Instream or Shoreline Miles Improved*

*1 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Washington Dept. of Fish and Wildlife*

*U.S. Forest Service Colville National Forest*

*Kalispel Tribe of Indians*

*Washington Salmon Recovery Funding Board*

*Washington Department of Natural Resources*

*Pend Oreille County*

*Intermountain West Joint Venture*

# Pend Oreille Focus Area

**Description:** This focus area includes all of the Pend Oreille River sub-basins and the Little Pend Oreille National Wildlife Refuge boundary in northeastern Washington. This is a mountainous area with many glacial-origin lakes, rivers, and streams. The Pend Oreille River is the major waterbody and is located in the northeastern part of the state and borders Idaho and British Columbia. Most of the water in the Pend Oreille River originates upstream in the Rocky Mountains and enters Washington from Idaho and flows northward, joining the Columbia River in Canada. Most of the precipitation falls in the winter and spring months in the form of rain or snowmelt. Communities are mostly small and rural and summer residences are common on this large river system with outdoor recreation increasing rapidly. Forestry, livestock grazing, mining, and localized agriculture are the principal land uses; with land ownership consisting of private ownership, National Forest, U.S. Fish and Wildlife Service, Bureau of Land Management, State of Washington, Kalispel Indian Reservation, and open water.

**Resource Issues:** Following the installation of the Grand Coulee Dams in 1941, anadromous Pacific salmon and steelhead were extirpated from the Pend Oreille River Watershed. Since these species no longer exist in the Pend Oreille, there is now an extensive focus on the recovery and protection of remaining native salmonids such as bull trout and westslope cutthroat trout. These two fish species were historically abundant throughout northeast Washington, but now due to severe habitat degradation and loss, as well as non-native fish introductions, both have precipitously declined. In 1998, bull trout were listed as a “threatened” species under the Endangered Species Act (ESA) and westslope cutthroat are now considered to be a state and federal species of concern.

Historically, bull trout were thought to be abundant in the Pend Oreille River existing primarily in an adfluvial life history. With this adfluvial migration pattern, bull trout would migrate out of the Pend Oreille and Priest Lakes into the Pend Oreille River and ultimately spawn in the rivers’ tributary streams. This life history was disrupted following the installation of Albeni Falls Dam below Lake Pend Oreille in 1952, which was constructed without fish passage. Two additional dams on the Pend Oreille River, Box Canyon and Boundary, were also constructed without fish passage facilities. As with bull trout, westslope cutthroat trout were also historically abundant throughout Pend Oreille River drainage. Although distribution and abundance of westslope cutthroat trout is not completely understood, the extent has been reduced from historic levels. Many of the watersheds located within the Pend Oreille River drainage have been impacted through decades of disturbance associated with population expansion, poor forest management practices, hydroelectric facilities, and the extensive introduction and management of non-native fish species. These factors are on the forefront of significant corrective actions needed to recover native salmonid populations in the Pend Oreille Watershed. To address these resource issues, projects will primarily

focus on reducing invasive alien plant and fish species, eliminating fish passage barriers, improving water quality by reducing temperature and sedimentation, addressing the loss of seasonal wetlands, improving in-stream habitat complexity, reducing habitat fragmentation, and improving forest health. With these already degraded habitats, impacts of climate change would alter hydrology and resilience of these habitats, therefore, restoration will become increasingly important to conserve habitat for all life stages of the species that depend on these for their life cycles.

**Restoration Potential, Strategies and Partnerships:** At the watershed level, the Service is working with private landowners and other partners in the Pend Oreille River basin to improve habitat for the federally listed bull trout and westslope cutthroat trout. The main focus of these efforts is through implementation of recovery actions listed in the bull trout recovery plan. The three dams on this river have hindered recovery efforts by eliminating passage; however, fish passage has been addressed by the U.S. Army Corps of Engineers and the Service, and is being implemented in the near future at all three dams. The Washington Salmon Recovery Funding Board provided funding for a watershed assessment to evaluate fish barriers in this area and work is ongoing to remove these barriers and provide fish passage where needed. Additionally, partnerships with the Kalispel Tribe of Indians, Pend Oreille County, and others, have focused on improvements to wetland, riparian, and tributary habitat along the river in Washington.

**Scientific Rationale:** Numerous documents have been developed that emphasize the importance of restoring habitat for native salmonids, restoring fish passage in this drainage, and employing conservation strategies that can be implemented to meet focus area goals.

Key Guidance Documents:

-Draft Bull Trout Recovery Plan (2002)

-Draft Strategy for Protection and Improvement of Native Salmonid Habitat in the Pend Oreille Watershed, Washington (2003)

-Washington State Department of Fish and Wildlife 2011 – 2017 Strategic Plan (2010)

*Bull trout, USFWS photo*

# Yakima Focus Area

***Yakima Focus Area Target Goals for FY2012 – FY2016***

*200 Upland Acres Improved*

*150 Wetland Acres Improved*

*6.5 Riparian, Instream or Shoreline Miles Improved*

*5 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*Yakima Fish & Wildlife Board*

*SCWA Shrub-Steppe & Rangeland Partnership*

*Yakima Tributary Access & Habitat Program*

*Yakama Nation*

*Mid-Columbia Regional Fisheries Enhancement Group*

*Kittitas Conservation Trust*

*Cowiche Canyon Conservancy*

*Conservation Districts*

*WA Cattleman's Association*

**Description:** The Yakima River and its tributaries drain a 6,150 $mi^2$ watershed that runs from the crest of the Cascade Mountains (elevation +8,000 ft.) to the Columbia River (elevation 390 ft.). Precipitation in the basin ranges from over 120 inches in the mountains to approximately 7 inches in the lower Yakima Valley. Due to the diversity of elevation and precipitation, the watershed contains diverse habitat types including: lodgepole pine, aspen, mixed conifer forest, ponderosa pine/oak forest, and shrub-steppe and lower elevation herbaceous and riparian wetland habitats. Each of these habitats, except mixed conifer forest, is a State Priority Habitat of Conservation Concern (WDFW 2005).

The basin includes large parts of Kittitas, Yakima, and Benton counties and most of the Yakama Nation Reservation, (population of about 300,000). Private ownership is about 31%, Yakama Nation 22%, State lands 9% and Federal lands about 33% (FS, DOD, DOE and BLM). Land use includes irrigated agriculture (16%), forest and rangelands (over 80%), and commercial and residential development. Agriculture is the primary economic activity and irrigated agriculture is supported by several storage reservoirs. Reservoir and diversion dams prevent fish passage into headwaters and flow management has significantly altered the Basin's hydrograph, impacting instream and floodplain habitats. Land use activities have disconnected shrub-steppe and floodplain habitats.

**Resource Issues:**
Federally listed species are the threatened Columbia River bull trout, and Mid-Columbia steelhead trout. Candidate species are greater sage-grouse and Washington ground squirrel. Species of Concern include the Northern leopard frog, Western grey squirrel, burrowing owl, and westslope cutthroat trout. State priority species are the sage thrasher; sage sparrow, Lewis' woodpecker, and the recently delisted bald eagle. Focus habitats include rivers and streams and associated floodplains and riparian, wetlands, and shrub-steppe habitats.

Aquatic species issues include fish passage barriers; inadequate or absent fish screening; reduced instream flows and altered hydrographs; poor water quality (e.g. increased temperature, sediment, etc.); loss of floodplains and seasonal wetlands; loss of off-channel and instream habitat complexity; riparian forest habitat alteration: and invasive species. Terrestrial species issues include decreased habitat quality, quantity, and reduced connectivity due to past and continuing land conversions impacting shrub-steppe and floodplain habitats.

Climate change will alter air temperature, precipitation (snow and rain timing), runoff patterns and stream flows, stream temperature, and vegetation patterns. Climate change may also change habitats by altering patterns in wildfire and insect infestations. These changes will significantly impact the Yakima Focus Area, placing additional stress on focus species and habitats, and present challenges in planning for species movement and conservation of genetic diversity across the

landscape.

**Restoration Potential, Strategies and Partnerships:**

- Instream work to remove fish passage barriers, properly screen irrigation diversion, place and/or install large wood and other instream habitat;
- restore water quality and quantity by restricting livestock and vehicle access to streams, improve, relocate or decommission roads that deliver sediments, remove other pollution sources, and assist partners to reduce water diversions to improve instream flow;
- restore floodplains and wetlands by removing river control structures (e.g. rip rap, dikes, etc.); protect functional and restored habitats with fencing;
- restore native vegetation/habitat by planting native trees, shrubs, grasses, and forbs and controlling invasive non-native weeds; and
- look for and create opportunities to work at the watershed level to obtain synergistic benefits.

We will assist private landowners in the recovery of listed species and species of concern by developing partnerships and leveraging USFWS resources, and providing technical support and financial resources, to plan, identify, implement, and monitor priority actions.

Our most important partnerships are with individual landowners. We will continue to strive to develop these vital partnerships through outreach and working with partners to show the importance and benefits of habitat restoration. A key landowner and partner of special note is the Yakama Nation who we usually partner with on several projects per year.

*Cowiche Creek, Yakima Focus Area, USFWS photo*

**Scientific Rationale:** USFWS listed bull trout as threatened in 1998 and the WA State DPS for the greater sage-grouse is currently a candidate for listing. NOAA listed Mid-Columbia River steelhead trout as threatened in 1999. Recovery plans for these species, watershed plans, and fish and wildlife subbasin planning have been completed, and identify restoration actions and priorities. Climate change studies and evaluations have been conducted and show that the Yakima Focus Area will be heavily impacted by changes in precipitation, stream flows & temperature, and vegetation patterns. Projects that buffer these impacts (e.g. floodplain enhancement) have been identified and will be vital to the maintenance and recovery of the focus species and habitats.

# Channeled Scablands Focus Area

***Channeled Scablands Focus Area Target Goals for FY2012 – FY2016***

*1,000 Upland Acres Improved*

*500 Wetland Acres Improved*

***Key Partners:***

*Intermountain West Joint Venture*

*Ducks Unlimited*

*Bureau of Land Management*

*Washington Department of Fish and Wildlife*

*The Nature Conservancy*

*Inland Northwest Land Trust*

*The Lands Council*

*Spokane and Kalispel Tribes*

*Natural Resource Conservation Service*

*Eastern Washington University*

*Conservation Districts*

**Description:** The focus area is characterized by the Channeled Scablands of Eastern Washington, the result of glacial floods during the Pleistocene that deeply eroded the basalt plateau, leaving giant gravel bars, alluvial aprons, and ephemeral lake deposits. The Scablands wetland basin densities rival those of the upper Midwest's Prairie Pothole region and in some areas waterfowl production exceeds that of the Potholes.

The juxtaposition of upland forests, grassland and shrub steppe, wetland and riparian habitats unique to the Channeled Scablands creates exceptional wildlife and plant diversity. Wet areas with prolific vegetation provide dense nesting cover for waterfowl and rails, blackbirds, and marsh wrens. During the hot dry summers, shrinking water surfaces expose mud and alkali flats, which provide forage for breeding and migratory shorebirds.

**Resource Issues:** Agriculture and grazing activity in the late 1800's resulted in major wetland drainage efforts throughout the Channeled Scablands. An analysis for the Turnbull National Wildlife Refuge Comprehensive Conservation Plan revealed that nearly 70% of wetland habitats surrounding the refuge are compromised by drainage infrastructure (ditches, dikes, etc.). Similar topography, geology, hydrology, and land use history suggest a similar percentage of lost or degraded wetland habitats throughout the focus area. Draining and ditching these wetlands has altered hydrologic regimes across the focus area. Water levels peak in early spring, during the height of the waterfowl and waterbird nesting season, but quickly recede following snowmelt and spring rains. This rapid water level reduction often leaves nests exposed to predators and reduces or eliminates potential brooding habitat. Additionally, this rapid draining leaves the wetlands susceptible to longer dry periods exacerbated by climate change and drought. Re-establishing historical hydrology and water levels would increase the resilience of these wetlands and their associated wildlife species to the effects of climate change and drought periods.

The focus area includes more than 22,000 wetland basins covering nearly 76,000 acres; over 80% of these wetland basins are in private ownership. Few wetlands outside of state or federal ownership have been restored to increase water storage capacity and habitat availability to levels approximating the landscape prior to the ditching efforts. The Palouse-steppe vegetation community, which occurs in the Channeled Scablands, is recognized at the state and national level as a critically endangered ecosystem. Agricultural conversion of Palouse-steppe has resulted in only a few intact islands of this once abundant ecosystem. Restoration of the remnant Palouse-steppe ecosystem is considered a high priority and will be targeted in this focus area as well as the Palouse Prairie focus area to the east.

Historical agriculture and overgrazing activity were the primary causes for 2 plants being federally listed as threatened: Spalding's silene (*Silene spaldingii*) and Water howellia (*Howellia aquatilis*). Overgrazing and agriculture are threats

to state or federal listed species, including ferruginous hawk, pygmy rabbit, burrowing owl, sharp-tailed grouse and greater sage grouse, once present throughout the focus area. To address these resource issues, projects will be focused in the Channeled Scabland wetlands in the upper Cheney-Palouse flood tract and the Upper Crab Creek flood tract. Focusing restoration work in and around these wetlands will provide much needed habitat for the widest range of animal species. Also, plugging ditches to restore wetlands will minimize land disturbance. However, permitting and water-rights issues could slow the implementation of restoration projects.

**Restoration Potential, Strategies and Partnerships:** A downward trend in agriculture and grazing around population centers of the region has increased the potential for wetland restoration with willing landowners –the primary partnership focus in this area. Where large grazing and agriculture tracts are still viable, the Partners for Fish and Wildlife Program will work with Natural Resource Conservation Service, Washington Department of Fish and Wildlife (WDFW), other partners and landowners to develop Wetland Reserve Program (WRP) proposals and eventually work toward implementation of Enhanced WRP. Currently, only 2,200 acres within the focus area are enrolled in the WRP.

*Working with landowners to control invasive plants at Heron Pond, Channeled Scablands Focus Area, B. Walker, USFWS photo*

Partnerships with Ducks Unlimited, WDFW, Spokane County Conservation Futures Program, Bureau of Land Management, The Nature Conservancy, and other NGOs resulted in two successful North American Wetland Conservation Act grant proposals with a third recently being submitted. These grants have resulted in the protection, restoration, and enhancement of 2,659 acres of wetlands and the protection of 9,006 acres of associated uplands. The current proposal would affect over 2,400 acres. Over the next 5 years, cooperative weed management areas are likely to become a significant source of partnering opportunities. These groups have been well received in the area and help landowners control invasive species before they become a major problem. Combining a weed management program with an overall restoration project has the potential to enhance wildlife habitat and help landowners manage their limited resources.

**Scientific Rationale:** Several ecoregional assessments and planning documents have been developed that highlight the importance of the Channeled Scablands, identify priority habitats and species within the focus area, and outline conservation strategies to meet specific goals. Key Guidance Documents include: the State of Washington: Comprehensive Wildlife Conservation Strategy (2005), Intermountain West Joint Venture: Coordinated Implementation Plan for Bird Conservation in Eastern Washington (Washington Steering Committee, 2005). The Nature Conservancy: The Columbia Plateau: A pilot effort in ecoregional conservation (2003), and the U.S. Fish and Wildlife Service: Final Comprehensive Conservation Plan, Turnbull National Wildlife Refuge (2007).

***Western Washington Refuge Focus Area Target Goals for FY2012 – 2016***

*200 Upland Acres Improved*

*100 Wetland Acres Improved*

*3 Riparian, Instream or Shoreline Miles Improved*

*2 Fish Passage Barriers Removed, Installed or Modified*

***Key Partners:***

*The Nature Conservancy*

*Columbia Land Trust*

*Forterra*

*Nisqually River Council*

*Nisqually Land Trust*

*Willapa Bay Regional Fisheries Enhancement Group*

*Washington Departments of Fish and Wildlife, Transportation, Agriculture,Natural Resources, and Ecology*

*Natural Resources Conservation Service*

*U.S. Army Corps of Engineers*

*Shoalwater Bay Indian Tribe*

*Nisqually Indian Tribe*

*Quinault Indian Nation*

*Chehalis Tribe*

*Chehalis Basin Land Trust*

*Grays Harbor, Pacific, Pierce, and Thurston County Noxious Weed Control Boards*

*Pierce Conservation District*

*Wahkiakum County*

*University of Washington*

*Washington State University*

# Western Washington Refuge Focus Area

**Description:** The Western Washington Refuge Focus Area includes watersheds and private lands neighboring the Willapa, Nisqually, and Ridgefield National Wildlife Refuge (NWR) Complexes. The Western Washington Refuge Focus Area is comprised of a diverse network of coastal habitats that encompasses the Willapa Hills, Willapa Bay, Grays Harbor, the Lower Chehalis River, and the Lower Columbia River natural regions as well as the Nisqually River Watershed, and the Black River in South Puget Sound. These watersheds are made up of a network of rivers and streams with large to small river deltas that open to the Pacific Ocean, estuarine bays, or the Columbia River. The surrounding Coast Range supports dense conifer forests while the lowlands are comprised of a mosaic of mixed forests marshes, tidal mudflats, and riparian areas. Barrier beaches, including coastal dunes, characterize the low-lying coastline. Native prairie ecosystems composed of upland prairies, wet prairies, and oak savanna and woodlands are also found in these watersheds. This Focus Area contains a wide diversity of wetland types as well.

The majority of landownership is private, interspersed with Federal, State, Tribal, and local government lands. Land uses of the focus area include commercial timber, commercial fishing, mariculture, agriculture, and recreation. These diverse fish and wildlife habitats support 18 listed species, 5 candidate species, and several species of concern.

*Large wood placement, Bear River, Western Washington Refuge Focus Area, USFWS photo*

**Resource Issues:** The diversity of habitats in this focus area are essential to an array of threatened and endangered fish and wildlife species including marbled murrelet, northern spotted owl, Oregon silverspot butterfly, western snowy

plover, Columbian white-tailed deer, salmonid species, candidate streaked horned lark; and many species of concern

Threats to the sensitive habitats that make up this Focus Area include commercial timber harvest, agriculture, land development, drainage and alteration, invasive species, and recreation. As a result of these past and ongoing activities less than 1% of old-growth/late successional forest habitat still exists, forests are extensively fragmented by a vast network of logging roads, native grasslands have been lost by conversion and development, and coastal barrier dunes are fragmented and lost from development and invasion of nonnative species. The conservation and restoration of these habitats are important to buffer these systems from the expected effects of climate change, including sea-level rise and altered patterns of precipitation.

**Restoration Potential, Strategies and Partnerships:** The Service has an extraordinary opportunity to partner with private landowners; non-governmental entities; and federal, state, and local governments to protect, restore, enhance, and conserve the unique habitats of this Focus Area on a landscape level. The Willapa NWR Complex, and the Washington Fish and Wildlife Office will work together in this Focus Area. In the Willapa Bay and Lower Columbia watersheds, the Willapa NWR Complex will provide technical assistance; create and implement restoration designs; and provide Refuge staff and equipment to complete habitat projects with our partners The highest conservation priorities identified for these watersheds include coastal barrier dune restoration to provide nesting and rearing habitat for western snowy plover, streaked horned lark, and pink sand verbena; grassland restoration to provide essential host and nectar plants for Oregon silverspot butterfly; and coastal upland forest habitat restoration to provide old growth/late successional forest habitat essential for nesting marbled murrelets and northern spotted owls. In the Grays Harbor and Nisqually watersheds, the Washington Fish and Wildlife Office will prioritize work with refuge staff and partners to improve habitats within the mapped watersheds that complement National Wildlife Refuges, or would restore or conserve habitats for listed species, candidate species, and species of concern. The Washington Fish and Wildlife Office will continue working with groups such as the Chehalis Basin Partnership and the Chehalis Basin Education Consortium.

**Scientific Rationale:** The guiding documents and plans include: Lewis and Clark National Wildlife Refuge and Julia Butler Hansen Refuge for the Columbian White-tailed Deer Comprehensive Conservation Plan; Nisqually National Wildlife Refuge Comprehensive Conservation Plan; Willapa National Wildlife Refuge Comprehensive Conservation Plan; Pacific Coast Joint Venture Strategic Plan; The Nature Conservancy's Ecoregional Assessments; South Willapa Bay Conservation Area: Forest Landscape Restoration Plan; Nisqually Watershed Stewardship Plan; Washington Department of Fish and Wildlife's Comprehensive Wildlife Conservation Strategy; Oregon Silverspot Butterfly Recovery Plan; Columbian White-tailed Deer Recovery Plan; Western Snowy Plover Recovery Plan; Marbled Murrelet Recovery Plan; Draft Salmon Recovery Plan; Puget Sound Chinook Salmon Recovery Plan; Nisqually Watershed Chinook Salmon Recovery Plan; Bull Trout Draft Recovery Plan for Puget Sound DPS; and the Oregon Spotted Frog Species Assessment and Listing Priority.

*Western snowy plover, USFWS photo*