



Partners for Fish and Wildlife Implementation Plan: 2022-2026

U.S. Fish and Wildlife Service

Columbia Pacific Northwest and Pacific Islands Regions

April 2022



Cover photos: 1) Oahu tree snails (USFWS), 2) Lower Baugh Creek Riparian Enhancement project, Idaho (Anabran Solutions) 3) Channeled scablands in Washington State (Sandy Rancourt), and 4) Skookum Dam Breach project, OR (FWS)

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Message from the Regional Director

I am pleased to present the U.S. Fish and Wildlife Service's (Service) 2022-2026 Implementation Plan for the Partners for Fish and Wildlife (PFW) Program in the Pacific Region (Region). The PFW Program undertakes a national planning effort every five years, and this is the fourth generation, reflecting the knowledge and experience we've gained over decades in our region and across the country. This regional plan provides a blueprint for the program and our partners that helps us to meet not only the Service's mission but also address priorities of the Department of Interior (Department) across the vast and varied geography of the Region.

The Partners for Fish and Wildlife Program is poised to make positive contributions in overcoming several of the challenges that have been identified by the Department including the following:

- Making investments to support the Administration's goal of creating millions of family-supporting and union jobs.
- Working to conserve at least 30% each of our lands and waters by the year 2030.
- Centering equity and environmental justice.

Our Region and its diverse human communities share pressing conservation concerns across all ecosystems and watersheds. Our challenge, therefore, is to ensure that we invest our limited PFW Program staff capacity and project dollars in the highest priority work and achieve lasting conservation benefits—especially considering climate change and other ongoing threats. This Plan will ensure we are focusing our conservation efforts in the highest priority places.

PFW Program staff worked with many people within and outside the Service to develop this plan. The insight and dedication of our partners highlight the importance of teamwork to advance a shared vision of science-based, landscape-scale conservation to benefit our trust species and the habitats and ecosystems they, and we, rely on. I look forward to another five years of dynamic, collaborative work to achieve the goals and objectives set forth to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.



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Introduction

The mission of the U.S. Fish and Wildlife Service's (Service) Partners for Fish and Wildlife (PFW) Program (640FW1) is "to efficiently achieve voluntary habitat restoration on private lands through financial and technical assistance for the benefit of federal trust species and their habitats for the continuing benefit of the American people. The PFW Program was established in 1987 as recognition that conservation on private lands through voluntary partnerships was necessary to achieve landscape-level benefits for migratory waterfowl populations using major flyways. Approximately 70% of the lands in the United States are in private ownership; therefore, it is essential that the Service and others work closely with private land managers and landowners to achieve meaningful and lasting conservation of federal trust resources. Since its inception, the PFW Program has grown to be a national leader in voluntary private lands restoration to achieve sustainable populations of federal trust species for the benefit of current and future generations.

The Partners for Fish and Wildlife Program is poised to make positive contributions to goals identified by the Department including the following:

- **Making investments to support the Administration's goal of creating millions of family-supporting and union jobs.**

Over the next five years, the Service will support implementation of the Infrastructure Investment and Jobs Act, commonly referred to as the Bipartisan Infrastructure Law. Program work will focus on protection of biodiversity and addressing the changing climate while providing economic opportunities in our local communities.

- **Working to conserve at least 30% each of our lands and waters by the year 2030.**

PFW Program staff will continue to be substantially involved with local, state, private, and Tribally led nature conservation and restoration efforts across the Region.

- **Centering equity and environmental justice.**

The wide network of partners and stakeholders in the Region includes private landowners; governmental agencies and public land managers; land trusts and other non-governmental organizations; the scientific community; and Native American Tribes and indigenous Hawaiian, Pacific Islander, and other local communities. Idaho, Oregon, and Washington are home to 43 federally recognized Tribes (Appendix A). Work throughout the Region reflects a commitment to the Service's Native American Policy, to consultation with Tribal governments and biologists in pursuit of common conservation goals, and collaborative work with Indigenous communities to restore and protect customary lands and natural resources of cultural significance.

This Implementation Plan (Plan) was developed to guide PFW Program activities across the Region for fiscal years 2022 - 2026. The PFW Program in the Region covers Idaho, Oregon, the Pacific Islands and Washington. PFW Program staff (i.e., state coordinators, field staff, and regional coordinator) worked closely with internal and external partners to evaluate program conservation accomplishments over the past five years and identify opportunities and priorities for this next strategic planning timeframe.

Partners for Fish and Wildlife National Priorities

Plans across the regions share a common set of priorities which were developed to advance the strategic nature of Program work and facilitate communication of a unified message about Program focus and effectiveness at the national level. The priorities have been informed by the three generations of regional strategic plans to date.

In a Memorandum to Service Regional Directors in May 2021, the Service's Chief of the National Wildlife Refuge System requested that each Region address the following national priorities in their 2022 – 2026 Regional Implementation Plans and describe how Program efforts will help to accomplish them:

Species Conservation

Implement habitat projects that help prevent decline or support conservation and recovery of species conservation concern, such as Endangered Species Act (ESA)-listed species, Birds of Conservation Concern, pollinators, and interjurisdictional fishes. This priority supports the Service's conservation mission and our role as stewards of federal trust species.

Habitat Connectivity

Integrate projects at a landscape level to secure or improve habitat connectivity and functionality. This priority recognizes that interconnected habitats and migration corridors are vital to conservation, and that the work of the PFW Program can support and leverage other conservation efforts conducted by partners within and outside the Service.

Resilient Ecosystems

Advance ecosystem integrity and resilience or adaptation to the impacts of climate change, such as sea level rise, increased in-stream temperatures, drought, and wildfire. This priority acknowledges that climate change affects all-natural systems and the species that rely on them (including humans). The PFW Program can work with diverse partners to support conservation actions that respond to climate change stressors.

Regional Overview

The Region 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 in size, it also spreads over an even larger area of marine habitat. The Hawai'i and Pacific Islands jurisdiction covers a geographic area larger than the continental United States, spanning 5 time zones and the International Date Line. This area 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. such as the Republic of Palau, the Federated States of Micronesia, and the Republic of the Marshall Islands.

The 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, 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 600 endangered and threatened species, unique and endemic plant and animal communities, and a variety of economic and land-use considerations. The partners are diverse and include agricultural and natural resource dependent communities, rural and suburban interface landowners, Native American tribal governments, indigenous island communities, watershed councils, universities, land trusts, State, Federal, and local agencies, and many others.

In the Region, the Assistant Regional Director for Ecological Services has oversight for the PFW Program. The Program's field presence is broad-based and involves coordination and involvement of many other Service

programs including Ecological Services, National Wildlife Refuges, and Fisheries field stations working together to deliver PFW Program projects with the Migratory Bird program providing valuable technical support.

Ecological Services Team

Within the Region, the PFW Program is housed within the Service’s Ecological Services (ES) team. The team’s overall purpose is to carry out the Service’s mission and the Regional ES Vision. The team’s unique purpose is to:

- Provide leadership to ensure effective, efficient, and consistent implementation of ES programs by coordinating with ES field offices, other Service Programs, other ES regional offices, headquarters (HQ), other Federal agencies, States, Tribes, and a broad array of conservation partners and stakeholders.
- Facilitate and direct the flow of funding and information between HQ, the Regional Director’s office and ES field offices to ensure the highest quality, science-driven and legally defensible decisions, and to maximize on-the-ground conservation through ES program activities.
- Support field offices by providing consistent guidance, oversight, review, and technical assistance regarding regulations, policies, budgets, and other factors that allow ES to meet the Service mission.
- Provide regional-scale expertise and leadership on multi-program and landscape-scale conservation efforts.

Regional ES Vision Statement

We are leaders in conserving habitats, preventing extinction, and achieving recovery of our trust resources. Our successes in conservation are derived directly from our talented staff, focused on conservation, in partnership with American citizens. We set the bar for collaborative conservation.

Strategic Planning

Since 2006, the PFW Program has been guided nationally by three-part strategic plans spanning five years (2006-2011, 2012-2016, and 2017-2021). The three-parts of the national strategic plan include the National Strategy, Regional Implementation Plans, and a National Evaluation/Adaptive Management Document. This Plan is part of the fourth-generation strategic plan that provides a framework for strategic habitat delivery, and it is a subcomponent of a national strategic plan for the PFW Program.

Throughout the duration of the previous Plan timeframe (2017 – 2021), the Region’s PFW Program met or exceeded annual restoration targets even with FY20 and FY21 being impacted by the global pandemic. While site visits and meeting with partners in person were limited, staff were still able to accomplish a significant amount of on-the-ground conservation as demonstrated in the below summary of targets (projections) and accomplishments (actuals). Additionally, over this five-year period, Program biologists continued to provide technical assistance to numerous partners for project planning, design, permitting, implementation, monitoring, and outreach.

PFW Program Annual Performance Targets and Accomplishments (2017-2021)

| Conservation Metrics | Targets | Accomplishments |
|---|---------|-----------------|
| # Riparian Stream/Shoreline Miles Restored/Enhanced | 62 | 62 |

| Conservation Metrics | Targets | Accomplishments |
|-----------------------------------|---------|-----------------|
| # Wetland Acres Restored/Enhanced | 5,435 | 6,355 |
| # Upland Acres Restored/Enhanced | 31,518 | 33,856 |
| # of Fish Barriers Removed | 67 | 73 |

The PFW Program is guided by the strategic habitat conservation approach for the restoration and enhancement of habitats on private lands and works with partners to guide biological planning, conservation design and delivery, and ensure appropriate monitoring to assess project outcomes. Determining the best locations to invest staff time and resources is a significant challenge with fixed budgets and the complexity of natural resource and conservation issues on the landscape. This Plan highlights focus areas for conservation work developed as a part of the strategic planning process in the Region and identifies the rationale for selection of these areas. Projects developed and funded in the next 5 years will primarily be in these focus areas. The strategic habitat conservation approach resulted in a robust set of conservation objectives and restoration strategies that will address program priorities of species conservation, habitat connectivity, and resilient ecosystems.

For this Plan, PFW staff worked with other Service programs and partners to review existing and establish priority species and habitats. Performance targets for each habitat were set based on anticipated capacity and funding levels which were assumed to be comparable to the previous 5 years.



Photo (above): Restored fish passage in the Nestucca Basin along Oregon’s coast (credit: Scott Wright, River Design Group, Inc.)

Monitoring and Adaptive Management

The Region implemented a project monitoring protocol for both the PFW and Coastal Programs in 2011. Three types of monitoring are conducted for habitat restoration projects:

Implementation Monitoring for 100% of on-the-ground projects to verify that work was completed as described in the project scope of work.

Effectiveness Monitoring for a subset of projects to determine whether the restoration action is resulting in the desired habitat response.

Validation Monitoring for a small number of projects (often with assistance from outside groups) to assess the validity of assumptions about how novel conservation techniques contribute to desired biological outcomes.

Project prioritization, continued effectiveness evaluations, and adaptive management ensure that the PFW Program work continues to meet the mission of the Service and priorities outlined by headquarters through a national message and strategy.



Drone photography (left) was used to capture post project implementation monitoring documentation on Marshall Creek in the Channeled Scablands Focus Area in Washington. (credit: Gary Beal)

Field Station Reviews

The PFW Program periodically conducts program reviews of all stations receiving PFW funding as part of the Program's accountability standards (Service Manual, Part 640 FW1, Chapter 1, Policy and Responsibilities, Partners Program and Partners for Fish and Wildlife Act of 2006 reauthorized in the WILD Act of 2019). Until the most recent FY21 reviews, program reviews had not been conducted for many years in Region due to a variety of issues including travel restrictions and budget limitations.

The intent of the reviews is to exchange information to help improve the quality and efficiency of the PFW Program's habitat improvement and technical assistance efforts at each station receiving funds which will ultimately improve the Program Region-wide. The Review is coordinated and conducted by the PFW Program Regional Coordinator, and field offices ensure the appropriate individuals are available. Program stations benefit if some experienced staff and those relatively new to the Program participate. In addition, each State Coordinator is expected to attend for the State they represent. The information discussed help them better look out for future needs and help in representing needs to the RO.

Strategic Goals and Objectives

Goal 1: Conserve Habitat

The targets for the main objective of goal 1 will be communicated as acres of upland and wetland habitat and miles of stream habitat restored or enhanced over a 5-year period through 2026.

Objective 1.1: With our private landowner and other partners, develop and implement habitat restoration projects to support species conservation, habitat connectivity, and resilient ecosystems.



Photo above left: The fence with barbed wire and wire mesh seen in this picture is an example of a fence that wildlife have a lot of difficulty getting over or under (credit: USFWS). Photo above right: An example of a wildlife friendly fence. The top and bottom wires are smooth so wildlife can pass, but the middle wire is barbed, keeping livestock on the desired side of the fence (credit: USFWS).

Conserving Habitat: Enhancing Habitat Connectivity for Big Game

In Idaho, Service employees worked with federal, state, private landowner, and other partners to improve habitat connectivity for big game. They used animal tracking data to identify important movement corridors and threats to wildlife within them. Fencing infrastructure that has been installed across the landscape since the 1870s is one of the biggest obstacles for big game who travel long distances across the landscape between summer and winter ranges. Fences not only can hinder movement but also result in mortality for animals. Projects to remove unnecessary fence and improve existing to wildlife friendly standards facilitated progress for wildlife and landowners who benefited from the upgraded infrastructure.

Goal 1 Performance Metrics (2022 – 2026)

| Metric | Goal |
|---|--------------|
| # Riparian Stream/Shoreline Miles Restored/Enhanced | 145.3 miles |
| # Wetland Acres Restored/Enhanced | 2,957 acres |
| # Upland Acres Restored/Enhanced | 45,222 acres |
| # of Fish Barriers Removed or Installed | 70 barriers |

Goal 2: Broaden and Strengthen Partnerships

Partnerships are the basis of successful conservation for the Service, and the foundation of the PFW Program is comprised of partners who are willing to participate in voluntary conservation efforts. Establishing relationships entails a significant amount of effort by staff who live and work in the communities where the Service is seeking to conserve species and their habitats. Partnership development includes collaboration with internal Service programs and a variety of external partners. Strong partnerships result in leverage of program funds and technical assistance with outside funding to accomplish specific project objectives and larger landscape-level goals.

In addition to Service funding and assistance, PFW Program staff help partners to access resources available through the Farm Bill conservation programs to implement voluntary agricultural and habitat conservation practices. In Washington and Hawai'i, Memorandums of Understanding are in place between the Service and Natural Resources Conservation Service to help improve the productivity of working lands for future generations.

Objective 2.1: Cultivate existing partnerships and develop new ones to create opportunities for future conservation opportunities.



Photo above left: Private land project site before restoration (credit: USFWS)



Photo above right: Project site after restoration (credit: USFWS)

Broadening and Strengthening Partnerships: Managing Wetlands for Wildlife

In Washington, the PFW Program worked closely with Conboy Lake NWR and three neighboring landowners to enhance habitat with the intent to stabilize the reproductive numbers of the Oregon spotted frog. Infrastructure installed on private lands had an overall benefit to management of wetlands across the landscape.

“It was a little extra work initially to get us all involved, but it was well worth it because now it is operating smoothly and people and wildlife throughout the community are benefiting.” (quote from landowner partner)

Goal 2 Performance Metrics (2022 – 2026)

| Metric | Idaho | Oregon | Pacific Islands | Washington |
|--|-------|--------|-----------------|------------|
| Partnerships (total #/yr) | 50 | 60 | 8 | 85 |
| Private Landowner Partnerships (total #/yr) | 15 | 50 | 8 | 14 |
| Partner Funding: PFW Funding Leveraged (per year) | 4:1 | 2:1 | 2:1 | 2:1 |

Goal 3: Improve Information Sharing and Communication

Long-term program success requires that the public and project partners understand the PFW Program and the value of species and habitat conservation within their communities. Likewise, successful partnerships require that PFW Program staff understand the goals and objectives of our partners through building relationships within the community. Outreach and communication can take on many forms and the audiences may include youth and adults. Outreach activities may entail:

- Participating in local events by hosting a booth that provides an opportunity to interact with a diverse number and background of people
- Promoting PFW Program partnerships and accomplishments to the public through social media
- Coordinating with other Service programs (e.g., Urban Wildlife Conservation Program) to improve community engagement and strengthen local conservation outcomes
- Supporting Congressional and Legislative Affairs staff and others who request information on PFW Program opportunities and accomplishments
- Representing the Service and PFW Program in local classrooms or job fairs
- Presenting a paper (oral, written or poster) at professional society meetings
- Involving volunteers in hands-on conservation projects



Photo left: In 2019, Malia Nanbara (Pacific Islands PFW Coordinator) and Sheldon Plentovich (Pacific Islands Coastal Program) participated in the Hawai'i Conservation Conference. Through a short video on Facebook, they shared information about two presentations given by Plentovich on Hawaiian yellow-faced bees and songbird recovery in Papahānaumokuākea Marine National Monument. Social media will continue to be an important outreach tool for conservation education and sharing successes of the PFW Program and Service.

Objective 3.1: Improve communication within the PFW Program and cross program within the Service.

Objective 3.2: Support and improve communication with partners, the public, scientific community, and Congress.

Goal 3 Performance Metrics (2022 – 2026)

| Metric | Idaho | Oregon | Pacific Islands | Washington |
|------------------------------|-------|--------|-----------------|------------|
| # Annual Outreach Activities | 10 | 10 | 10 | 14 |

Goal 4: Enhance Our Workforce

The Region’s PFW staff in the field are the program’s most important asset. Staff deliver Service funding through the financial assistance process and serve as restoration experts in their local communities. Maintaining and increasing their professional technical skills are essential to continued program success and credibility with partners and the public. This is accomplished through training courses, on-the-job training, and other development opportunities such as participation in conferences and workshops hosted by professional societies.

Objective 4.1: PFW Program staff will participate in at least 40 hours of annual training and professional development.



Photo above left: Partners for Fish and Wildlife biologist, Dirk Renner, has a MS in Fisheries from Oregon State University and has been working for the Service since 2009 designing and implementing restoration projects in central and eastern Oregon (credit: Dirk Renner); Photo above right: Renner’s project at Whychus Creek (credit: USFWS).

Enhancing Our Workforce: PFW Expertise Key in Project Design and Implementation

Partners for Fish and Wildlife biologist Dirk Renner (Bend Fish and Wildlife Office) has over 12 years of experience working on restoration projects for river, sage steppe, and wetland habitats. “Learning from the projects I've been part of has been the most valuable restoration education. In addition to learning from the projects I've been involved with, both successes and failures, our project teams are typically comprised of landowners, engineers, hydrologists, watershed council staff, state, and federal biologists it is learning from their expertise that has been invaluable in my continuing education and understanding a variety of perspectives.” Renner provides valuable expertise from initial planning stages to the implementation of projects. Technical trainings he has completed include Portland State University River Restoration Certification, Applied Fluvial Geomorphology, River Morphology and Applications, and regular participation in the River Restoration Northwest Conference.

Goal 4 Performance Metrics (2022 – 2026)

| Metric | Idaho | Oregon | Pacific Islands | Washington |
|-----------------------------|-------|--------|-----------------|------------|
| # Hours Annual Training/FTE | 40 | 40 | 40 | 40 |

Goal 5: Ensure Accountability

Accountability is an important responsibility for all Service programs. The Region's PFW Program will maintain accountability by ensuring consistency with regional and national policies. PFW Program staff ensure accountability through adhering to Program policy, maintaining financial assistance documentation, completing environmental compliance for projects, and monitoring project completion and effectiveness. Financial assistance application forms and reporting documentation are housed in GrantSolutions and project information is maintained in the Service's HabITS database.

Objective 5.1: The Regional Coordinator will produce an annual program accomplishment report.

Objective 5.2: The Regional Coordinator will conduct at least one management control review per year over the next 5 years.

Objective 5.3: Field staff will monitor 100% of completed on-the-ground projects for implementation and compliance as described in the Region 1 Monitoring Protocol for Coastal and PFW Programs.

Ensuring Accountability: Regional Office Program Reviews

General Program Management Discussion Topics

- Review PFW Strategic Plan and discuss how the Station is implementing actions within Focus Areas
- Identify non-financial issues that constrain ability to accomplish goals and identify recommendations
- Discuss Program vision and identify how the RO can help facilitate path into the future
- Discuss budget allocation and breakout of funds between technical assistance and habitat restoration
- Discuss outreach needs from a Regional and National perspective
- Identify challenges and opportunities for key partnerships

Staff Discussion Topics

- Review and discuss Regional Monitoring Protocol and its usefulness to the field
- Discuss and identify challenges/successes/recommendations for HabITS
- Review and discuss electronic files for financial assistance and project compliance documentation

Goal 5 Performance Metrics (2022-2026)

| Metric | ID | OR | PI | WA | RO |
|--|-----|-----|-----|-----|----|
| Annual Program Accomplishment Report | - | - | - | - | 1 |
| Regional Management Control Review | - | - | - | - | 1 |
| % Completed on-the-ground projects monitored for implementation and compliance | 100 | 100 | 100 | 100 | - |

Focus Areas

Focus Areas are geographies in which the PFW Program directs resources to conserve habitat for federal trust species. They dictate where staff will spend time working with watershed groups and other citizen, tribal and agency planning groups to help identify and prioritize restoration projects and where most of PFW Program funds will be spent to implement habitat restoration with willing landowners for the next five years. PFW Program staff coordinated with project partners, stakeholders, and other Service programs to identify geographic focus areas and develop habitat conservation priorities within these focus areas. Collectively, 28 focus areas were selected as priority locations for the Region's PFW Program in 2022 to 2026.

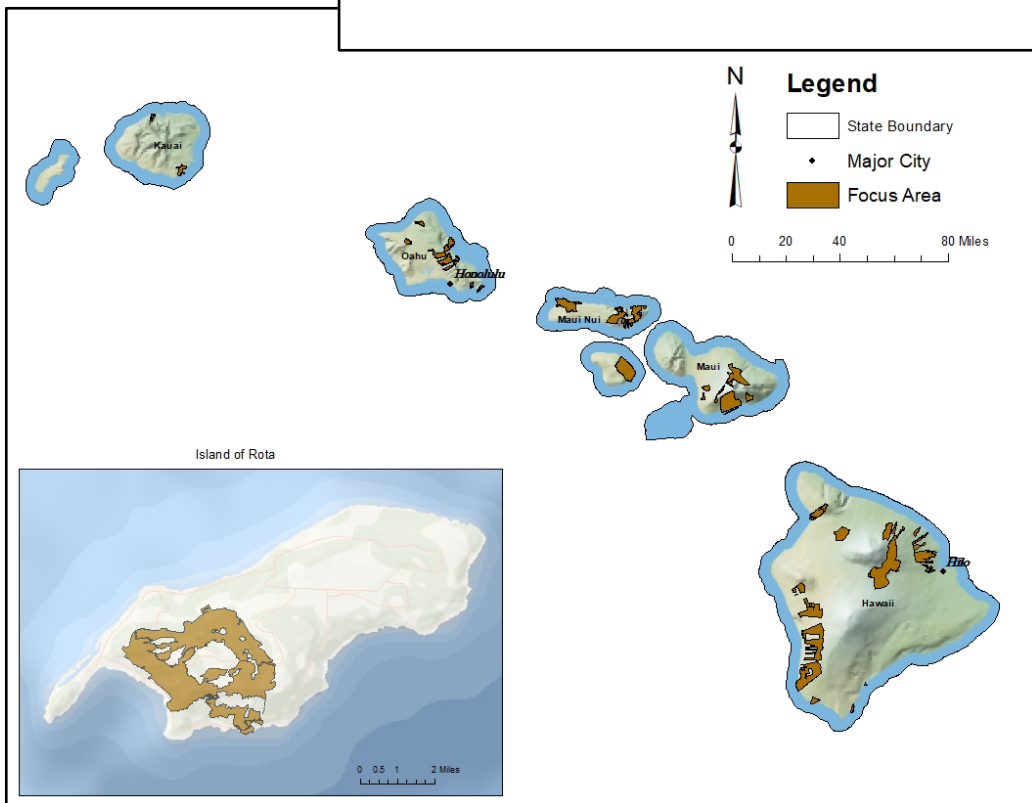
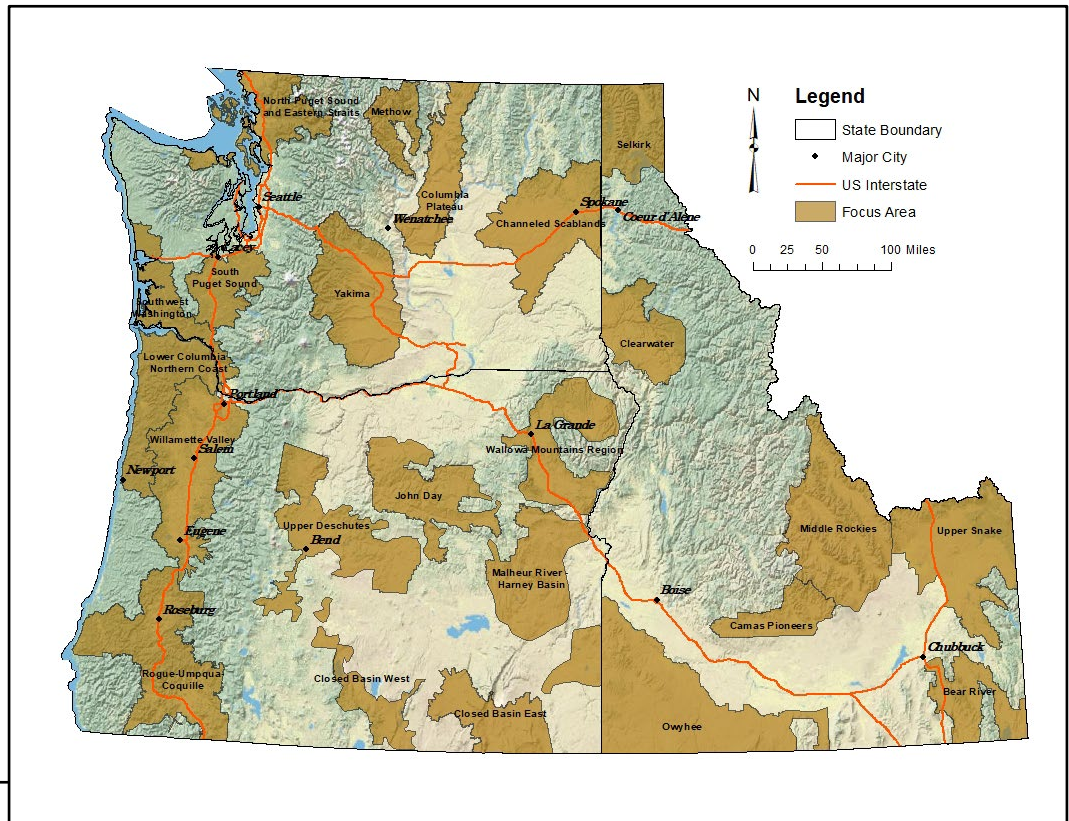


Photo left: Wetlands in Idaho's Owyhee Focus Area (credit: USFWS)

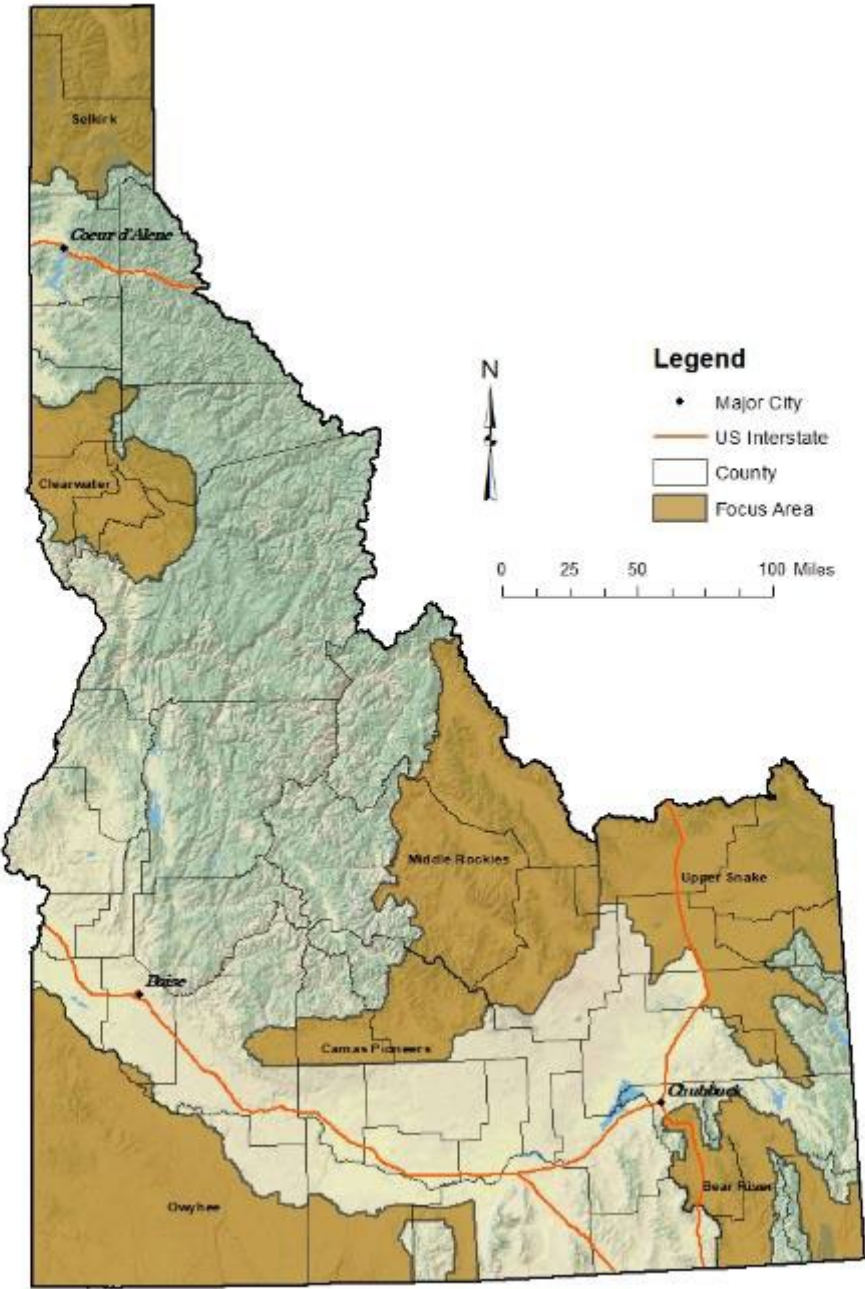
Focus Area Selection Criteria

- 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?)
- Areas that are adjacent to, encompass or connect with priorities to other programs within the Service (Refuges, Landscape Conservation Cooperatives, Endangered Species Recovery, Landscape Conservation Design efforts, important areas for migratory birds and the Migratory Bird Program, and priorities of the Fisheries Program)
- Areas that allow for recovery and restoration of multiple trust resources and habitats, "recoverability" of ecosystems (can the threats be addressed?)
- Diversity, rarity, uniqueness, and health of the species and habitats present
- State, national, and international designations (e.g. National Estuary Program, Wilderness, Biosphere Reserve, and Western Hemisphere Shorebird Reserve Network)
- Imminence of threat (e.g., due to development, invasive species)
- 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)
- Presence and proximity of Service offices and biologists, to priority natural resources and partners
- Areas that allow for people in urban areas to connect with the outdoors through the work of the PFW Program and other Service programs

Maps below: Partners for Fish and Wildlife Focus Areas Overview for Idaho, Oregon, Washington (top) and the Pacific Islands (bottom)



Idaho Focus Areas (2022-2026)



Idaho PFW Program Offices and Staff Locations: Idaho Fish and Wildlife Office (Boise), Eastern Idaho Field Office (Chubbuck), and Northern Idaho Field Office (Coeur D'Alene, ID).



Idaho: Bear River Focus Area

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 characterized by forest-covered mountains, dissected by broad valleys which are dominated by shrub-steppe, native grassland, rangeland and farmland. The mountain and arid rangeland areas are generally federal land, administered by the U.S. Forest Service or 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 state and Federal agency sensitive species; it is also an important area for migratory birds. The area is over 1.6 million acres in size with 76% (1.2 million acres) private land, 16% federal land, and 6% state land.

Habitat Types: Wetlands, wet meadows, riparian, sagebrush steppe, native grassland, and instream/aquatic.

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, hydropower, and other activities. 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 focal species and habitats.

2022-2026 Restoration Targets

6,000 acres Uplands

50 acres Wetlands

5 miles Stream/Shoreline

4 Fish Passage

Key Partners

Private landowners
 PacifiCorp Energy
 Trout Unlimited
 Ducks Unlimited
 Pheasants Forever
 Idaho Governor's Office of
 Species Conservation
 Idaho Department of Fish & Game
 Shoshone Bannock Tribe
 Sagebrush Steppe Land Trust
 Bureau of Land Management
 U.S. Forest Service
 Soil & Water Conservation
 Districts
 Natural Resources Conservation
 Service
 Idaho Soil & Water Conservation
 Commission

Conservation Strategies

- Work with PacifiCorp's Environmental Coordinating Committee to prioritize and implement projects to benefit focal species.
- Develop partnerships among stakeholders and foster collaboration among interagency personnel to address threats to focal species.
- Prioritize projects that can be connected to intact habitats or other projects to achieve landscape scale results.
- Restore migration habitat in the Bear River area working with Idaho Department of Fish & Game to identify key areas detrimental to wildlife. Habitat migration is focused on ungulate species that winter in the valleys of the Bear River area but will benefit many other species.
- Develop coordinated "All Hands, All Lands" conservation approach within forest environments to benefit priority species and the integrity and viability of the forest ecosystem.



Photo left: Trumpeter swan (credit: USFWS)

Scientific

Rationale: Conservation plans for this area include the Intermountain West Joint Venture (IWJV) Coordinated Implementation Plan for Bird Conservation in Idaho, 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, the Bonneville cutthroat trout Management Plan and others. Species present include grassland, riparian and wetland dependent migratory birds, and sensitive species such as trumpeter swan, great blue heron, greater sandhill crane, greater sage-grouse, Columbian sharp-tailed grouse, long-billed curlew, white-faced ibis, pygmy rabbit, Bonneville cutthroat trout, and bald eagle.

Focal Species Objectives and Strategies for Bear River Focus Area

| Focal Species Common name, scientific name, and status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| Greater Sage-Grouse <i>Centrocercus urophasianus</i> (NA) | IDFG State Wildlife Action Plan 2006 Conservation Plan for the Greater Sage-Grouse in Idaho ID and Southwestern MT Greater Sage-Grouse Approved RMP Amendment Idaho State Board of Land Commissioners Greater Sage-Grouse Conservation Plan | ³ Restore and maintain a resistant and resilient sagebrush landscape through active restoration by: <ul style="list-style-type: none"> ❖ Minimizing the risk of catastrophic wildlife through actions that modify fire behavior, such as fuels breaks ❖ Monitoring and controlling invasive species pre and post-wildfire ❖ Re-establishing native perennial plant species post-wildfire ❖ Restoring riparian, wetland and mesic meadow habitats to their proper functioning condition |
| Long-billed curlew | U.S. Shorebird | ^{1, 2} Work to restore habitats lost to historical changes in |

| Focal Species Common name, scientific name, and status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| <i>Numenius americanus</i> (Migratory Bird Treaty Act protected) | Conservation Plan IWJV Implementation Plan Chapter 5: Shorebirds IDFG State Wildlife Action Plan | land use by: ❖ Incentivizing flood irrigation and other farming practices and infrastructure that can improve nesting and brood rearing habitat ❖ Improving mesic meadow and wetland habitats ❖ Improving and protecting intact blocks of native grasslands |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | WAFWA Western Monarch Conservation Plan | ^{1, 2} Restore native grassland prairies by: ❖ Planting a diversity of nectar plants and milkweed ❖ Establishing partnerships to expand conservation activities |
| Bonneville cutthroat trout <i>Oncorhynchus clarkii Utah</i> (NA) | Management Plan for the Conservation of Bonneville cutthroat trout in Idaho | ^{1, 2} Work to enhance aquatic habitat by: ❖ Restoring and maintaining connectivity ❖ Decreasing sediment inputs ❖ Restoring riparian vegetation |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Idaho: Camas-Pioneers Focus Area

Area Description: The Camas-Pioneers Focus Area is in central Idaho and includes the Camas sub-basin and portions of the South Fork Boise, Big Wood, Little Wood and Fish Creek sub-basins. The area is characterized by forest-covered mountains, dissected by broad valleys dominated by sagebrush, native grasslands, and farmlands. The arid rangeland areas are administered by the U.S. Bureau of Land Management, and the more productive rangeland and farmland are generally in private ownership. Communities are mostly small and rural, but human population and development are increasing. The larger population centers revolve around tourism associated with winter resort skiing and summer outdoor recreation. The Camas-Pioneer Focus Area is 1,263,611 acres in size with 48% (605,468 acres) in private ownership, 45% federal land, and 8% state land.

Habitat Types: Wetlands, wet meadows, riverine-riparian forest, sagebrush, and native grasslands.

Conservation Issues: This focus area contains a large proportion of private lands important to migratory waterfowl and water birds, sage-grouse, western yellow-billed cuckoo, and important migration habitat for big game. These habitats are threatened by land conversion to agriculture, urban sprawl, decreased water availability, historical livestock grazing, wildfire, and nonnative annual grass invasion. Associated water use activities supported by modern farming and irrigation water conveyance technology have contributed to these impacts. The areas with greatest impact to natural resources (valley bottoms) are primarily private land. Active habitat restoration and management are needed to conserve focal species and habitats.

2022-2026 Restoration Targets

6,000 acres Uplands

50 acres Wetlands

10 miles Stream/Shoreline

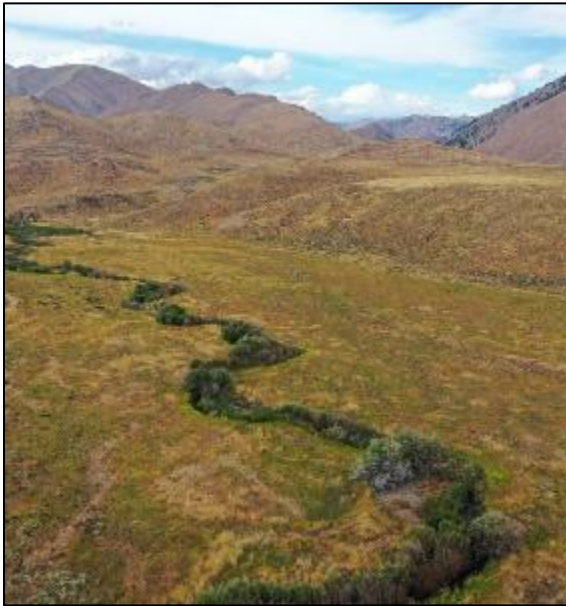
2 Fish Passage

Key Partners

Private landowners
 Idaho Department of Fish & Game
 Idaho Governor’s Office of
 Species Conservation
 Natural Resources Conservation
 Service
 The Nature Conservancy
 Wood River Land Trust
 Ducks Unlimited
 Intermountain Bird Observatory
 Idaho Fish & Wildlife Foundation

Conservation Strategies

- Participate in coordinated monitoring and assess threats to focal species to support informed land management decisions.
- Develop partnerships among stakeholders and foster collaboration among interagency personnel to address threats to focal species.
- Prioritize projects that can be connected to intact habitats or other projects to achieve landscape-scale results.
- Conserve migration habitat in the Smoky-Boise Big-Game Migration Complex working with Idaho Department of Fish and Game to identify key areas detrimental to wildlife.
- Develop coordinated “All Hands, All Lands” conservation approach within forest environments to benefit priority species and the integrity and viability of the forest ecosystem.



Scientific Rationale: The Camas-Pioneers Focus Area was selected because of several key species and habitats uniquely linked to and influenced by a large proportion of lands under private ownership. This area also has established conservation partnerships and a long history of private lands conservation. The area contains proposed Critical Habitat for western yellow-billed cuckoo, in addition to Priority and Important Habitat Management Areas for greater sage-grouse and other healthy populations of sagebrush obligate species such as pygmy rabbit, Brewer’s sparrow, and sage thrasher and is critical migration habitat for big game. A host of migratory waterbirds and waterfowl, such as the greater sandhill crane, long-billed curlew, white-faced ibis, and trumpeter swan, are seasonally linked to this area due to the availability of natural and flood irrigation dependent wetlands.

Photo above: Camas Pioneer stream (credit: USFWS)

Focal Species Objectives and Strategies for Camas-Pioneers Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| Greater sage-grouse <i>Centrocercus urophasianus</i> (NA) | IDFG State Wildlife Action Plan 2006 Conservation Plan for the Greater Sage-Grouse in Idaho Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment Idaho State Board of Land Commissioners Greater Sage-Grouse Conservation Plan | ³ Restore and maintain a resistant and resilient sagebrush landscape through active restoration by: <ul style="list-style-type: none"> ❖ Minimizing the risk of catastrophic wildlife through actions that modify fire behavior, such as fuels breaks ❖ Monitoring and controlling invasive species pre and post-wildfire ❖ Re-establishing native perennial plant species post-wildfire ❖ Restoring riparian, wetland and mesic meadow habitats to their proper functioning condition |
| Western yellow-billed cuckoo | IDFG State Wildlife Action Plan | ² Restore the health and connectivity of multi-storied cottonwood riparian forest by: <ul style="list-style-type: none"> ❖ Reconnecting riverine floodplains using stream |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| <i>Coccyzus americanus</i> (ESA Threatened) | | restoration techniques to improve periodic flooding needed for cottonwood establishment and reproduction ❖ Reintroducing cottonwood transplants in site specific locations ❖ Creating riparian buffer zones |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | WAFWA Western Monarch Conservation Plan | ^{1,2} Restore native grassland prairies by: ❖ Planting a diversity of nectar plants and milkweed ❖ Establishing partnerships to expand conservation activities |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Idaho: Clearwater Focus Area

Area Description: The Clearwater Focus Area is in northern Idaho and includes Palouse Prairie 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, with 80% (1.5 million acres) in private ownership, 8% tribal land, 8% state land, and 4% federal land.

Habitat Types: Native grasslands, wetlands, wet meadows, riparian and instream/aquatic

Conservation Issues: Nearly all Palouse and Nez Perce Prairie were converted to agriculture by the turn of the last century, and now human development and growth of urban areas are increasing threats to the remaining prairie. Additional threats to native plant communities include competition with nonnative species, habitat patch isolation, and herbicide use. The development of agricultural lands has also altered much of the wetland and riverine habitat in the focus area. Aquatic threats that can be addressed on private land include poor water quality due to increased temperature and sedimentation, loss of seasonal wetlands, loss of instream habitat complexity, and habitat fragmentation.

2022-2026 Restoration Targets

200 acres Uplands

75 acres Wetlands

5 miles Stream/Shoreline

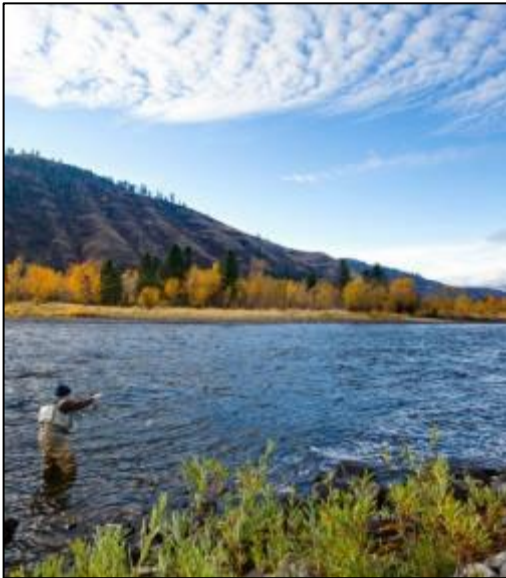
1 Fish Passage

Key Partners

Private landowners
 Idaho Department of Fish & Game
 Nez Perce Tribe
 Palouse Land Trust
 Soil & Water Conservation
 Districts
 Natural Resources Conservation
 Service
 Idaho Soil & Water Conservation
 Commission

Conservation Strategies

- Use results of landscape-scale grassland assessments to prioritize projects for Spalding’s catchfly.
- Work with watershed interagency/interdisciplinary teams to prioritize and implement projects to restore stream complexity and connectivity for focal species.
- Prioritize projects that can be connected to intact habitats or other projects to achieve landscape scale results.
- Add monarch butterfly habitat elements to native prairie projects.
- Develop coordinated “All Hands, All Lands” conservation approach within forest environments to benefit priority species and the integrity and viability of the forest ecosystem.



Scientific Rationale: The Clearwater Focus Area was selected because it provides core habitat for an exceptional diversity of Species of Greatest Conservation Need as identified in the State Wildlife Action Plan. Several important bird areas and exceptional natural and rare wetland and prairie habitats have also been identified. The Palouse Prairie is considered one of the most endangered ecosystems in the United States, supporting several globally imperiled plant associations, a key conservation area for Spalding’s catchfly, grassland-dependent migratory birds, and important pollinators like western bumble bee and monarch butterfly. Relict camas meadows remain near Weippe and Grangeville, and rivers and streams in the Clearwater Basin are important to bull trout and other anadromous fish including Pacific lamprey, steelhead, and Chinook salmon.

Photo above: Fishing the Clearwater River (credit: IDFG)

Focal Species Objectives and Strategies for Clearwater Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| Snake River Basin steelhead <i>Oncorhynchus clarki lewisi</i> (ESA Threatened) | NMFS Recovery Plan for Snake River Spring/Summer Chinook Salmon & Snake River Basin Steelhead | ^{1,2} Restore complexity and quality of occupied steelhead habitat by: <ul style="list-style-type: none"> ❖ Installing large woody debris ❖ Reconnecting floodplain and off-channel areas ❖ Reforesting riparian zones ^{1,2} Restore connectivity to high-quality habitats by: <ul style="list-style-type: none"> ❖ Removing fish habitat barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment |
| Bull trout <i>Salvelinus confluentus</i> (ESA Threatened) | USFWS Bull Trout Recovery Plan, Columbia Headwaters Recovery Unit | ¹ Improve water quality in South Fork Clearwater River through tributary habitat restoration including: <ul style="list-style-type: none"> ❖ Livestock fencing ❖ Riparian reforestation ❖ Floodplain reconnection ❖ Wetland restoration |
| Monarch butterfly <i>Danaus plexippus</i> | WAFWA Western Monarch Conservation | ^{1,2} Restore native grassland prairies by: <ul style="list-style-type: none"> ❖ Planting a diversity of nectar plants and milkweed |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| (ESA Candidate) | Plan | ❖ Establishing partnerships to expand conservation activities |
| Spalding's catchfly <i>Silene spaldingii</i> (ESA Threatened) | USFWS Spalding's Catchfly Recovery Plan | ¹ Restore native grassland prairies in priority locations by: <ul style="list-style-type: none"> ❖ Controlling weeds ❖ Planting native grasses and forbs ❖ Planting Spalding's catchfly in secure habitat ❖ Converting CRP sites to native prairie |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Idaho: Middle Rockies Focus Area

Area Description: This area includes most of the upper Salmon River in Southeastern Idaho. The area is generally characterized by forest-covered mountains, dissected by broad valleys which are dominated by sagebrush 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 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 4 million acres in size with 84% (3.4 million acres) federal land, 13% private land (548,201 acres), and 2% State land (99,064 acres).

2022-2026 Restoration Targets

5,480 acres Uplands
 75 acres Wetlands
 10 miles Stream/Shoreline
 5 Fish Passage

Key Partners

Private landowners
 Upper Salmon Basin Watershed Project
 Trout Unlimited
 Ducks Unlimited
 Pheasants Forever
 The Nature Conservancy
 Idaho Governor’s Office of Species Conservation
 Idaho Department of Fish & Game
 Shoshone Bannock Tribe
 Lemhi Regional Land Trust
 Bureau of Land Management
 U.S. Forest Service
 Idaho Rangeland Conservation Partnership
 Lemhi Soil & Water Conservation District
 Custer Soil & Water Conservation District
 Natural Resources Conservation Service
 Idaho Soil & Water Conservation Commission

Habitat Types: Wet meadows, riparian, sagebrush steppe, native grassland, and instream/aquatic

Conservation Issues: Native habitats in the area have been impacted by agriculture and water use activities such as livestock grazing, crop production, water withdrawal for irrigation, transportation, and other activities. The areas of greatest impact to natural resources (valley bottoms) are primarily private land. Habitat restoration, establishment and protection are needed on these private lands to conserve focal species and habitats.

Conservation Strategies

- Work with watershed interagency/interdisciplinary teams to prioritize and implement projects to benefit focal species.
- Develop partnerships among stakeholders and foster collaboration among interagency personnel to address threats to focal species.
- Prioritize projects that can be connected to intact habitats or other projects to achieve landscape-scale results.
- Restore migration habitat in the Lemhi area working with Idaho Department of Fish and Game to identify key areas detrimental to wildlife movements. Habitat migration is focused on ungulate species that winter in the valleys of the Lemhi area and will also benefit many other species.
- Develop coordinated “All Hands, All Lands” conservation approach within forest environments to benefit priority species and the integrity and viability of the forest ecosystem.



Scientific Rationale: Conservation plans with relevance to this area include the Coordinated Implementation Plan (IWJV), Intermountain West Regional Shorebird Plan, Idaho Comprehensive Wildlife Conservation Strategy, Western Native Trout Initiative, Conservation Plan for the Greater Sage-Grouse in Idaho, and others. The focus area overlaps with the Middle Rockies Priority Landscape identified by the Idaho Fish and Wildlife Office (FWO) in their “Strategic Habitat Conservation in Idaho- Landscape Conservation Strategy.” It also overlaps with the Lemhi Priority Area identified in the Idaho State Action Plan for Secretarial Order 3362. Species present include grassland-, riparian- and wetland-dependent migratory birds, and sensitive species such as bull trout, salmon, steelhead, Pacific lamprey, greater sage-grouse, long-billed curlew, great blue heron, trumpeter swan, greater sandhill crane, Columbian sharp-tailed grouse, western monarch, and pygmy rabbit.

Photo above: Wildlife friendly fencing (credit: USFWS)

Focal Species Objectives and Strategies in the Middle Rockies Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| Bull trout <i>Salvelinus confluentus</i> (ESA Threatened) | USFWS Bull Trout Recovery Plan, Columbia Headwaters Recovery Unit | ¹ Restore complexity of occupied bull trout habitat by: <ul style="list-style-type: none"> ❖ Installing large woody debris ² Restore connectivity between occupied and unoccupied bull trout streams by: <ul style="list-style-type: none"> ❖ Removing fish passage barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | WAFWA Western Monarch Conservation Plan | ¹ Restore native grassland prairies by: <ul style="list-style-type: none"> ❖ Planting a diversity of nectar plants and milkweed ❖ Establishing partnerships to expand conservation activities |
| Greater sage-grouse <i>Centrocercus urophasianus</i> | IDFG State Wildlife Action Plan 2006 Conservation Plan for the Greater Sage- | ³ Restore and maintain a resistant and resilient sagebrush landscape through active restoration by: <ul style="list-style-type: none"> ❖ Minimizing the risk of catastrophic wildlife through actions that modify fire behavior, such as fuel breaks |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| (NA) | Grouse in Idaho Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment Idaho State Board of Land Commissioners Greater Sage-Grouse Conservation Plan | <ul style="list-style-type: none"> ❖ Monitoring and controlling invasive species pre and post-wildfire ❖ Re-establishing native perennial plant species post-wildfire ❖ Restoring riparian, wetland and mesic meadow habitats to their proper functioning condition |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Idaho: Owyhee Focus Area

Area Description: The Owyhee Focus Area is in the southwestern corner of Idaho, bordering Oregon and Nevada. The area includes the Idaho Portions of the Middle Snake – Succor, Bruneau, Salmon Falls, Goose, Upper Owyhee, South Fork Owyhee, East Little Owyhee, and Middle Owyhee sub-basins. The area is generally characterized by juniper woodland-covered mountains and contiguous sagebrush steppe expanses, dissected by the Owyhee and Bruneau River Canyons. Much of this rural landscape is utilized by the livestock industry, with farming occurring on irrigable lands near larger river systems. This area is mostly federal land administered by the Bureau of Land Management. The Owyhee Focus Area is over 5.4 million acres in size with 16% (840,888 acres) in private ownership, 75% federal land, 6% state land, and 3% Tribal land.

2022-2026 Restoration Targets

8,400 acres Uplands
 150 acres Wetlands
 20 miles Stream/Shoreline
 0 Fish Passage

Key Partners

Private landowners
 Owyhee Watershed Council
 Trout Unlimited
 Ducks Unlimited
 Pheasants Forever
 Owyhee Sage-Grouse Local Working Group
 Idaho Governor’s Office of Species Conservation
 Idaho Department of Fish & Game
 Idaho Power Company
 Bureau of Land Management
 Idaho Rangeland Conservation Partnership
 Idaho Rangeland Resource Commission
 Owyhee Cattlemen’s Association
 Natural Resources Conservation Service
 Bruneau Soil and Water Conservation District

Habitat Types: Sagebrush steppe, juniper woodlands, aspen, wetlands, wet meadows, riverine-riparian shrublands, and deep canyonlands

Conservation Issues: This focus area contains some of the most important sagebrush steppe habitat in the State, occupied by the highest density of greater sage-grouse leks. This habitat type is threatened by the accelerated invasion of nonnative annual grasses, wildfire, and conifer encroachment. The threat of invasive annual grasses, coupled with the effects of intensified drought and climate change, create conditions that lead to increased wildfire frequency and severity. Wetland, wet meadow, and riparian habitats are also critical for multiple wildlife species across this water-scarce landscape, as they are naturally limiting and have experienced historical impacts by anthropogenic disturbances.

Conservation Strategies

- Participate in coordinated “All Hands, All Lands” conservation approach given the primary composition of Federal lands: State, Tribal, and private land interest must be considered to maintain the integrity and viability of the landscape.
- Prioritize projects that are part of a broader landscape-scale conservation strategy.
- Prioritize projects that reduce and/or ameliorate primary and secondary threats to the sagebrush steppe ecosystem.
- Develop partnerships among stakeholders and foster collaboration among interagency personnel, private landowners, and non-governmental organizations to benefit focal species and protect open and working landscapes.



Scientific Rationale: The Owyhee Focus Area contains portions of the sagebrush ecosystem regarded as important to the conservation of the greater sage-grouse in the west and other sagebrush-obligate species. Private lands are in juxtaposition to the largest sagebrush habitat conservation efforts occurring in the State. In collaboration with State and Federal partners, these efforts are being promoted across all lands. This focus area largely overlaps the Owyhee Uplands Priority Landscape which was selected as a high priority in the document titled “Strategic Habitat Conservation in Idaho- Landscape Conservation Strategy” developed by the Idaho FWO.

Photo above: Owyhee landscape (credit: USFWS)

Focal Species Objectives and Strategies for the Owyhee Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| Greater sage-grouse <i>Centrocercus urophasianus</i> (NA) | IDFG State Wildlife Action Plan 2006 Conservation Plan for the Greater Sage-Grouse in Idaho Idaho and Southwestern Montana Greater Sage-Grouse Approved Resource Management Plan Amendment Idaho State Board of Land Commissioners Greater Sage-Grouse Conservation Plan | ³ Restore and maintain a resistant and resilient sagebrush landscape through active restoration by: <ul style="list-style-type: none"> ❖ Minimizing the risk of catastrophic wildlife through actions that modify fire behavior, such as fuels breaks ❖ Monitoring and controlling invasive species pre and post-wildfire ❖ Re-establishing native perennial plant species post-wildfire ❖ Prioritizing control of Phase I and Phase II juniper encroachment in proximity to breeding habitat ❖ Restoring riparian, wetland and mesic meadow habitats to their proper functioning condition |
| Columbia spotted frog <i>Rana luteiventris</i> (NA) | IDFG State Wildlife Action Plan | ^{1, 2} Improve the health and connectivity of occupied and potential habitats by: <ul style="list-style-type: none"> ❖ Restoring riparian, wetland and mesic meadow habitats to their proper functioning condition |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| | | ❖ Using beaver dam analogues to encourage beaver dam building to restore floodplain connectivity |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | WAFWA Western Monarch Conservation Plan | ¹ Restore native grassland prairies by: <ul style="list-style-type: none"> ❖ Planting a diversity of nectar plants and milkweed ❖ Establishing partnerships to expand conservation activities |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Idaho: Upper Snake Focus Area

Area Description: This area includes most of the upper Snake River in Eastern Idaho. The area is generally characterized by forest-covered mountains, dissected by broad valleys which are dominated by sagebrush 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 Bureau of Land Management. The area supports a variety of sensitive species and is also an important area for migratory birds. Located along the upper Snake River plain, it is home to rich soils that support agriculture and crop production. The focus area is almost 4 million acres in size with 41% (1,597,135 acres) federal land, 48% private land (1,867,827 acres), and 9% State land (331,844 acres).

Habitat Types: Wetland, wet meadow, riparian, sagebrush steppe, native grassland, and instream/aquatic habitats

Conservation Issues: Native habitats in the area have been impacted by agriculture and water-use activities such as livestock grazing, crop production, water withdrawal for irrigation, transportation, and other activities. Valley bottoms contain valuable natural resources and are primarily private land. Habitat restoration, establishment and protection of these lands contribute to conservation of key species and habitats.

2022-2026 Restoration Targets

9,000 acres Uplands
 60 acres Wetlands
 8 miles Stream/Shoreline
 2 Fish Passage

Key Partners

Private landowners
 Henry's Fork Foundation
 Friends of the Teton River
 Trout Unlimited
 Ducks Unlimited
 Pheasants Forever
 The Nature Conservancy
 Idaho Governor's Office of
 Species Conservation
 Idaho Department of Fish & Game
 Shoshone Bannock Tribe
 Teton Regional Land Trust
 Bureau of Land Management
 U.S. Forest Service,
 Soil and Water Conservation
 Districts
 Natural Resources Conservation
 Service
 Idaho Soil and Water
 Conservation Commission

Conservation Strategies

- Work with watershed interagency/interdisciplinary teams to prioritize and implement projects to benefit focal species.
- Develop partnerships with stakeholders and foster collaboration among interagency personnel to address threats to focal species.
- Prioritize projects that can be connected to intact habitats or other projects to achieve landscape scale results.
- Restore migration habitat in the Big Desert area working with Idaho Department of Fish and Game to identify key areas detrimental to wildlife movements. Habitat migration is focused on ungulate species that winter in the valleys of the Big Desert area but will benefit many other species.
- Develop coordinated "All Hands, All Lands" conservation approach within forest environments to benefit priority species and the integrity and viability of the forest ecosystem.

Scientific Rationale: Conservation plans for this area include the Coordinated Implementation Plan for Bird Conservation in Idaho (IWJV), Intermountain West Regional Shorebird Plan, Idaho Comprehensive Wildlife Conservation Strategy, Western Native Trout Initiative, and Conservation Plan for the Greater Sage-Grouse in Idaho. The focus area overlaps with the Middle Rockies Priority Landscape identified by the Idaho FWO in their



“Strategic Habitat Conservation in Idaho- Landscape Conservation Strategy.” It also overlaps with the Big Desert Priority Area identified in the Idaho State Action Plan for Secretarial Order 3362. Species present include grassland-, riparian- and wetland-dependent migratory birds, and sensitive species such as Yellowstone and Bonneville cutthroat trout, greater sage-grouse, long-billed curlew, great blue heron, trumpeter swan, greater sandhill crane, Columbian sharp-tailed grouse, western monarch, and pygmy rabbit.

Photo left: Pronghorn antelope (credit: USFWS)

Focal Species Objectives and Strategies for the Upper Snake Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| Western yellow-billed cuckoo <i>Coccyzus americanus</i> (ESA Threatened) | IDFG State Wildlife Action Plan | ¹ Restore the health and connectivity of multi-storied cottonwood riparian forest by: <ul style="list-style-type: none"> ❖ Reconnecting riverine floodplains using stream restoration techniques to improve periodic flooding needed for cottonwood establishment and reproduction ❖ Reintroducing cottonwood transplants ❖ Creating riparian buffer zones |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | WAFWA Western Monarch Conservation Plan | ¹ Restore native grassland prairies by: <ul style="list-style-type: none"> ❖ Planting a diversity of nectar plants and milkweed ❖ Establishing partnerships to expand conservation activities |
| Greater sage-grouse <i>Centrocercus urophasianus</i> (NA) | IDFG State Wildlife Action Plan 2006 Conservation Plan for the Greater Sage-Grouse in Idaho Idaho and Southwestern | ^{2,3} Restore and maintain a resistant and resilient sagebrush landscape through active restoration by: <ul style="list-style-type: none"> ❖ Minimizing the risk of catastrophic wildlife through actions that modify fire behavior, such as fuel breaks ❖ Monitoring and controlling invasive species pre- and post-wildfire |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|---|
| | Montana Greater sage-grouse Approved Resource Management Plan Amendment Idaho State Board of Land Commissioners Greater Sage-Grouse Conservation Plan | <ul style="list-style-type: none"> ❖ Re-establishing native perennial plant species post-wildfire ❖ Restoring riparian, wetland and mesic meadow habitats to their proper functioning condition |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Idaho: Selkirk Focus Area

Area Description: The Selkirk Focus Area is in northern Idaho and includes all of the Pend Oreille and Kootenai sub-basins in Idaho. This is a mountainous area with diverse forests and many glacial lakes, rivers, and streams. Rivers and streams are rapid, especially during spring runoff. Lake Pend Oreille and Priest Lake are major water bodies. Communities are mostly small and rural, but human 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 Selkirk Focus Area is over 1.8 million acres in size with 32% in private ownership (612,766 acres), 47% federal land, 14% state land, 6% open water and about 100 acres Tribal land.

Habitat Types: Coniferous forests, wetlands, wet meadows, riparian, and instream/aquatic

Conservation Issues: Threats that can be addressed on private land include unhealthy forests, nonnative species, poor water quality due to increased temperature and sediment, loss of seasonal wetlands, loss of in-stream and riparian habitat complexity, and habitat fragmentation.

2022-2026 Restoration Targets

100 acres Uplands
 100 acres Wetlands
 10 miles Stream/Shoreline
 1 Fish Passage

Key Partners

Private landowners
 Idaho Department of Fish & Game
 Kalispel and Kootenai Tribes
 Soil & Water Conservation
 Districts
 Natural Resources Conservation
 Service
 Vital Ground Foundation
 Priest Community Forest
 Connections
 The Nature Conservancy
 Panhandle Forest Collaborative
 Kootenai Valley Resource
 Initiative
 Avista
 Bonneville Power Administration

Conservation Strategies

- Leverage ability to provide technical assistance and streamline ESA compliance on upland restoration projects to improve forest conditions that have been degraded due to decades of fire suppression on private lands.
- Work with watershed interagency/interdisciplinary teams to prioritize and implement projects to restore stream complexity and connectivity for focal species.
- Prioritize projects that can be connected to intact habitats or other projects to achieve landscape-scale results.
- Encourage acceptance and tolerance of beavers through education and outreach.
- Develop coordinated “All Hands, All Lands” conservation approach within forest environments to benefit priority species and the integrity and viability of the forest ecosystem.



Scientific Rationale: The Selkirk Focus Area was selected because it provides habitat for 6 federally listed as threatened or endangered species, including core habitat for bull trout and two grizzly bear recovery zones with substantial private land. This focus area also provides an exceptional diversity of Species of Greatest Conservation Need and hosts a high concentration of rare wetland habitats and important bird areas as identified in the State Wildlife Action Plan. Research predicts that even with high-risk climate change factors influencing frequency of forest fires and stream flow changes, a majority of the westslope cutthroat and bull trout populations in the Pend Oreille Basin will persist in the long term. The focus area overlaps with the Selkirk Cabinet-Yaak Priority Landscape as identified in the Idaho FWO’s “Strategic Habitat Conservation in Idaho Landscape Conservation Strategy.”

Photo above: Kootenai white sturgeon (credit: AP)

Focal Species Objectives and Strategies for the Selkirk Focus Area

| Focal Species Common, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|---|
| Bull trout <i>Salvelinus confluentus</i> (ESA Threatened) | USFWS Bull Trout Recovery Plan (2015), Columbia Headwaters Recovery Unit | ^{1,2} Restore complexity and quality of occupied bull trout habitat by: <ul style="list-style-type: none"> ❖ Installing large woody debris ❖ Reconnecting floodplain and off-channel areas ❖ Reforesting riparian zones ² Restore connectivity to high-quality habitats by: <ul style="list-style-type: none"> ❖ Removing fish habitat barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment |
| Westslope cutthroat trout <i>Oncorhynchus clarki lewisi</i> (NA) | IDFG Management Plan for the Conservation of Westslope Cutthroat Trout in Idaho | ^{1,2} Restore complexity and quality of occupied cutthroat habitat by: <ul style="list-style-type: none"> ❖ Installing large woody debris ❖ Reconnecting floodplain and off-channel areas ❖ Reforesting riparian zones ² Restore connectivity to high-quality habitats by: <ul style="list-style-type: none"> ❖ Removing fish habitat barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment |
| Kootenai white sturgeon | USFWS Revised | ^{1,2} Restore quality of occupied sturgeon habitat by: |

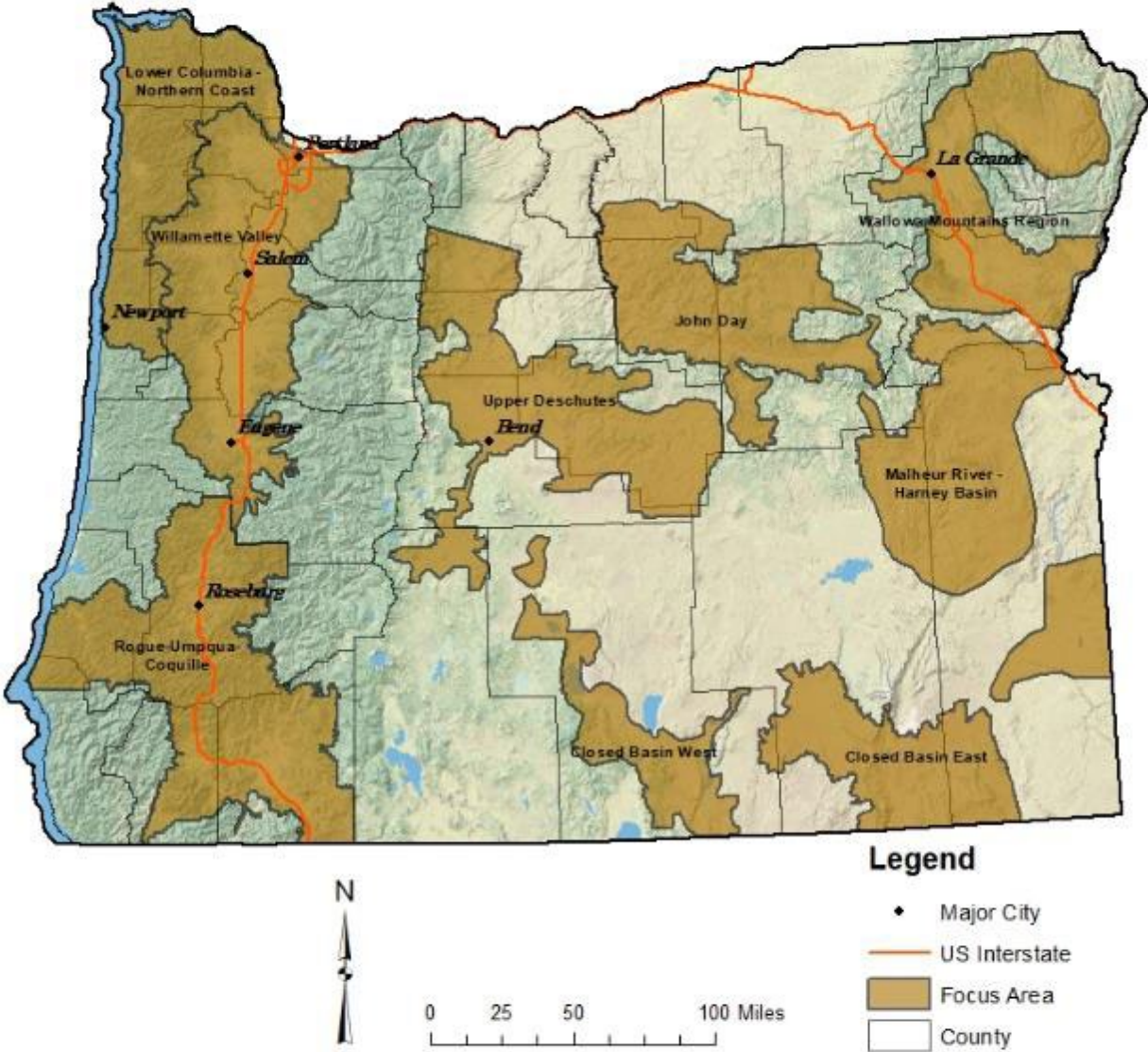
| Focal Species Common, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| <i>Acipenser transmontanus</i> (ESA Endangered) | Recovery Plan for the Kootenai River DPS of White Sturgeon | <ul style="list-style-type: none"> ❖ Improving instream habitat ❖ Reconnecting and reestablishing floodplain habitat |
| American beaver <i>Castor canadensis</i> (NA) | IDFG State Wildlife Action Plan | ³ Use beaver as a tool to restore stream and riparian habitats for a host of species by: <ul style="list-style-type: none"> ❖ Mimicking beavers ❖ Reforesting riparian zones |

National priority(s) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.

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Oregon Focus Areas (2022-2026)



PFW Program Offices and Staff Locations

Oregon Fish and Wildlife Office (Portland): Bend Field Office, La Grande Field Office, Roseburg Field Office, Columbia River Fisheries Program Office (Vancouver, WA), and Bandon National Wildlife Refuge

Willamette Valley National Wildlife Refuge Complex: Baskett Slough National Wildlife Refuge (near Dallas) and Finley National Wildlife Refuge (Corvallis)



Oregon: Rogue-Umpqua-Coquille Focus Area

Area Description: The Rogue and Umpqua basins are part of the Klamath Mountains ecoregion. Both support some of the highest diversity of species in Oregon, particularly plants, many of which are endemic to the region. The Coquille portion of this focus area is within the conifer-dominated Coast Range, which contains the highest density of streams in the state. Predominant land uses in this focus area include logging,

grazing, farming, and mining. This focus area is over 4.2 million acres in size with 70% in private ownership and 30% in public (federal/state owned) land.

Habitat Types: Rogue-Umpqua: vernal pools, wet meadows, oak woodlands/savannas, old-growth Douglas-fir, Coquille: wetlands and aquatic

2022-2026 Restoration Targets

2,500 acres Uplands

200 acres Wetlands

10 miles Stream/Shoreline

3 Fish Passage

Key Partners

Private landowners

Lomakatsi Restoration Project

Natural Resources Conservation Service

Klamath Bird Observatory

Coquille Watershed Association

Partnership for the Umpqua Rivers

Watershed Councils (Illinois

Valley, Rogue River and Siuslaw)

Soil and Water Conservation

Districts (Douglas, Illinois Valley, and Jackson County)

The Nature Conservancy

Southern Oregon Monarch

Advocates

Conservation Issues: Areas within the focus area have the second largest human population growth rate in the state and development pressure on private lands threatens unique habitats that support many endemic and federally listed species. Development, agricultural land conversion, and fire suppression have led to the loss of oak habitats and seasonal wetlands. Fire suppression has also altered disturbance regimes leading to the loss of early successional and fire-dependent habitats, particularly in oak savanna and wet meadows. Years of timber harvest in late-successional Douglas-fir habitat has led to precipitous declines in the federally listed old growth dependent species. Stream cleaning, splash damming, and removal of streamside vegetation during past logging operations have impacted aquatic habitat.

Conservation Strategies

- Interagency collaboration to evaluate, prioritize, and implement the highest-habitat-value oak habitat restoration projects identified (i.e., Klamath-Siskiyou Oak Network and Umpqua Oak Partnership Working Groups; NRCS Regional Conservation Planning Program).
- Work with existing collaborators to prioritize stream, wetland and riparian restoration projects that can be connected to other projects on private or federal land to achieve landscape-scale results (i.e., Coquille Watershed Analysis; Rogue Basin Partnership, Rogue Forest Partnership).
- Continue to promote pollinator habitat creation through collaborative working groups (i.e., Southwest Oregon Pollinator Collaborative; Rogue and Umpqua Native Plant Partnerships) and others to increase adult nectar and larval host plant availability for monarch butterflies and other at-risk pollinators.



Scientific Rationale: The Klamath Mountains ecoregion boasts some of the highest rates of species diversity within the state, including many species found only locally (Oregon Conservation Strategy 2016). Additionally, the Klamath-Siskiyou region was included in the World Wildlife Fund’s assessment of the 200 locations most important for species diversity world-wide. The oak habitats rate as some of the most ecologically diverse oak habitats in the Pacific Northwest. They support a variety of oak-obligate resident birds, such as the acorn woodpecker, along with neotropical migratory birds, like the ash-throated flycatcher. This focus area has some of the highest concentrations of native host plant milkweeds (*Asclepias* spp), and other plants that provide nectaring resources during the migration route for monarch butterflies as they pass through the state northward in the spring and southward in the fall.

Photo above: Monarch butterfly (credit: A. Manwaring)

Focal Species Objectives and Strategies for the Rogue-Umpqua-Coquille Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| Coho salmon <i>Oncorhynchus kisutch</i> Oregon Coast and Southern Oregon / Northern California Evolutionarily Significant Units (ESU) (ESA Threatened) | Oregon Coast Coho Salmon Recovery Plan & Final Recovery Plan for the S. Oregon/N. California Coast ESU of Coho Salmon Oregon Coast Coho Conservation Plan for the State of Oregon & The Oregon Plan for Salmon and Watersheds, Oregon Coastal Salmon Restoration Initiative Coquille Watershed Association’s Action Plan & Rogue Restoration Action Plan ODFW Oregon Conservation Strategy | ^{1, 2} Restore connectivity of coho salmon streams by: <ul style="list-style-type: none"> ❖ Removing partial or complete artificial barriers ❖ Restoring floodplains and off-channel habitats ^{1, 3} Increase miles of high-quality habitat (Capable of producing >2800 smolts/mile) by: <ul style="list-style-type: none"> ❖ Improving stream channel complexity by placement of large wood ❖ Increasing floodplain connectivity and function. ❖ Increasing off-channel rearing opportunities for juveniles ❖ Improving riparian condition and bank stabilization ❖ Increasing sediment routing (fine and coarse sediment and sand) |
| Monarch butterfly | Monarch Joint Venture | ¹ Create, restore, enhance, and maintain habitat on private |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| <i>Danaus plexippus</i> (ESA Candidate) | Conservation Implementation Plan WAFWA Western Monarch Conservation Plan | lands: ❖ Augment existing populations of, or plant new populations of, native and geographically-appropriate <i>Asclepias</i> spp. milkweeds ¹ Increase nectaring plant availability for adults: ❖ Incorporate early-, mid-, and late-season nectar plants into new and existing habitat restoration actions |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: John Day Focus Area

Area Description: The John Day River is the second longest free-flowing stream in the United States, running nearly 300 hundred miles. The basin is primarily populated by small rural communities that have strong working connections with the surrounding landscape, with ranching, farming and timber being the primary economic drivers in the basin. 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 anadromous fish runs of steelhead and is famous for Columbia River Chinook salmon that have reached over 100 pounds. 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 key species in the John Day Focus Area. This focus area is over 2.6 million acres in size with 78% in private ownership and 22% in public (federal/state owned) land.

Habitat Types: Wetlands, streams, rivers, riparian zones, and upland forests

2022-2026 Restoration Targets

0 acres Uplands
 3 acres Wetlands
 5 miles Stream/Shoreline
 4 Fish Passage

Key Partners

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

Conservation Issues: The primary conservation issues in the John Day focus area are related to the success of migration, spawning and rearing of salmonids. The species that is found throughout the basin is Middle Columbia River steelhead, and the limiting factors that face this species often are limiting factors for other species. The most critical issue is access to habitat; this includes access to spawning habitat as well as access to rearing habitat. Therefore, the PFW Program will continue to address fish passage issues. Additionally, the paucity of rearing habitat for juvenile salmonids is an issue throughout the basin. To enhance and restore juvenile habitat, the PFW Program will look for opportunities to increase habitat complexity, including side channel habitat, floodplain connectivity, and instream habitat diversity.

Conservation Strategies

- Seek collaborative opportunities to manage water for multiple uses in the face of changing climates
- Prioritize stream, wetland and riparian restoration projects that can be connected to other projects on private or federal land to achieve landscape-scale results
- Restore aquatic habitat resilience, complexity and connectivity for Focal Species



Scientific Rationale: This focus area is important to the conservation of several salmonid species including Middle Columbia River steelhead, Chinook salmon, and bull trout. Additionally, Pacific lamprey is an important ecological and cultural species in the John Day River Basin. Actions that benefit salmonids can often have associated benefits to lamprey, redband trout, and even Columbia spotted frogs. Restoring passage using natural channel simulations benefits passage of all aquatic species regardless of jumping abilities. Riparian restoration, floodplain connectivity, and side channel activation benefits salmonids, amphibians and lamprey. As a result, restoration actions that are undertaken for one species commonly benefit multiple species. Upland forest conditions are also important factors influencing stream conditions and conservation actions that improve watershed hydrology will be prioritized.

Photo above: Improved fish passage project (credit: USFWS)

Focal Species Objectives and Strategies for the John Day Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| Middle Columbia River steelhead <i>Oncorhynchus mykiss</i> (ESA Threatened) | Conservation and Recovery Plan for Oregon Steelhead Populations in the Middle Columbia River Steelhead Distinct Population Segment Middle Columbia River Steelhead DPS ESA Recovery Plan John Day Basin Partnership Strategic Action Plan | ^{1, 2} Restore complexity and quality of occupied steelhead habitat by: <ul style="list-style-type: none"> ❖ Creating/enhancing/or restoring juvenile rearing habitat ❖ Enhancing habitat complexity (e.g., placement of large wood) ❖ Restoring healthy and functional riparian areas ^{2, 3} Increase miles of high-quality habitat by: <ul style="list-style-type: none"> ❖ Improving passage at irrigation diversions ❖ Improving passage at road crossings ❖ Reconnecting streams and river floodplains where practicable |
| Columbia spotted frog <i>Rana luteiventris</i> (NA) | ODFW Oregon Conservation Strategy USFWS 2015 12-Month Finding on Petition to List | ^{1, 2} Restore wetland and riparian habitats by: <ul style="list-style-type: none"> ❖ Improving floodplain connectivity ❖ Reactivating and creating side channels ³ Restore and increase resiliency of stream and riparian habitats for a host of species by: <ul style="list-style-type: none"> ❖ Promoting beaver and restoring their habitat (e.g., reforesting riparian zones) |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|------------------|---|
| | | ¹ Address invasive flora and fauna |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: Malheur/Harney High Desert Focus Area

Area Description: This eastern Oregon focus area spans parts of Malheur and northern Harney counties. It is a sparsely populated, arid region dominated by sagebrush steppe habitat interspersed with river valleys that support irrigated pasturelands. Cattle ranching is the primary land use in the area. The Middle and North Forks of the Malheur River are sizeable rivers that flow out of the Strawberry Mountains through the area

and provide much of the region’s water supply. These ribbons of perennial water and lush vegetation provide vital habitat for wildlife and humans alike in the high desert. This focus area is over 3.5 million acres in size with 37% in private ownership and 63% in public (federal/state owned) land.

Habitat Types: This focus area targets some of the highest-quality greater sage-grouse habitat in Oregon that is also largely on private land. It encompasses six Priority Areas for Conservation (PACs) as designated in the 2015 Oregon Sage-Grouse Action Plan. The Middle and North Forks of the Malheur River support ESA-listed bull trout, redband trout, and riparian-dependent migratory birds.

Conservation Issues: A multipronged effort is currently underway to conserve the greater sage-grouse. The State-led Sage Grouse Conservation Partnership (SageCon), the Natural Resources Conservation Service (NRCS)-led Sage Grouse Initiative (SGI), and County-led Candidate Conservation Agreements with Assurances (CCAAs) all provide strategies for habitat improvement. Staff are working with landowners on juniper removal, enhancement of wet meadows to improve brood-rearing habitat for greater sage-grouse, controlling the spread of invasive annual grasses such as medusahead, and installing reflective markers on fences in areas where collision risk by greater sage-grouse is high.

2022-2026 Restoration Targets

1,000 acres Uplands
 60 acres Wetlands
 2 miles Stream/Shoreline
 2 Fish Passage

Key Partners

Soil and Water Conservation Districts (Harney and Malheur)
 Malheur Watershed Council
 Oregon Department of Fish & Wildlife
 Burns Paiute Tribe
 Ducks Unlimited
 Natural Resources Conservation Service

Conservation Strategies

- Collaborate with the NRCS-led Sage Grouse Initiative and other private land-focused funding sources to expedite delivery of high-priority projects for greater sage-grouse conservation.
- Assist landowners enrolled in sage-grouse CCAAs to implement the conservation measures identified in site-specific plans.
- Prioritize Malheur River restoration projects that improve fish passage and connect to other projects on private or public lands to achieve landscape-scale results.



Photo above: Harney County landscape (credit: ODOT)

Scientific Rationale: The Oregon Sage-Grouse Action Plan (SageCon 2015) identifies Sage Grouse PACs. This plan also contains a thorough review of the state of the science regarding sage grouse habitat conservation and provides extensive guidance on assessing and addressing threats to greater sage-grouse. Materials developed through the NRCS SGI effort also provide useful information on identifying and implementing habitat improvement projects to benefit greater sage-grouse.

Guidance on needed recovery actions is contained in the Bull Trout Recovery Plan (USFWS 2015). Sections of the Middle and North Forks of the Malheur River are included in designated critical habitat for this species (USFWS 2010).

Focal Species Objectives and Strategies in the Malheur/Harney High Desert Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|--|
| Greater sage-grouse <i>Centrocercus urophasianus</i> (NA) | Site Specific Plans for Greater sage-grouse CCAAs Oregon Sage-Grouse Action Plan NRCS Sage Grouse Initiative | 1, 2, & 3 Use referenced plans to prioritize conservation actions within Sage Grouse PACs, including: <ul style="list-style-type: none"> ❖ Control juniper encroachment ❖ Wet meadow enhancement ❖ Control invasive annual grasses and restore native perennial grasses, forbs, and shrubs ❖ Reduce fence collision risk |
| Bull trout <i>Salvelinus confluentus</i> | Conterminous U.S. Population Bull Trout | 1, 2 Reduce mortality and restore connectivity between occupied and unoccupied bull trout streams by: |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| (ESA Threatened) | Recovery Plan Bull Trout Critical Habitat Final Rule | <ul style="list-style-type: none"> ❖ Removing fish passage barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment <p>¹Restore occupied bull trout habitat by:</p> <ul style="list-style-type: none"> ❖ Brook trout removal ❖ Instream habitat restoration |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: Willamette Valley Focus Area

Area Description: The Willamette Valley Focus Area is approximately 3.3 million acres and home to more than 70% of Oregon’s residents. More than 90% of this large, diverse landscape is in private ownership. This rich landscape still supports globally imperiled oak savanna, wetlands, prairies, and floodplain habitats which in turn provide habitat for several dozen at-risk species, including 14 federally listed as threatened or

endangered. These declining habitat types support this unique and significant natural heritage, yet over 93% of potential and existing habitats are in private ownership in a matrix of both ecologically and economically valuable lands and waters.

Habitat Types: Focal habitats within this landscape are upland prairie, oak savanna, oak woodland, wet prairie, hardwood riparian forest, wetland, and riverine and low elevation non-industrial mixed forest. These habitats support federal trust species including ESA-listed species and migratory birds.

Conservation Issues: Population growth and accelerating development pressure continue 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 viticulture and Christmas tree industries, and altered forest successional patterns due to loss of historical 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 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.

2022-2026 Restoration Targets

- 1,500 acres Uplands
- 1,500 acres Wetlands
- 5 miles Stream/Shoreline
- 5 Fish Passage

Key Partners

- Private landowners
- Natural Resources Conservation Service
- Oregon Department of Fish & Wildlife
- The Nature Conservancy
- Land trusts
- Soil and Water Conservation Districts
- Watershed Councils
- Three Confederated Tribes
- Institute for Applied Ecology

Conservation Strategies

- Collaborate with private landowners, nongovernmental organizations, and other agencies to develop, fund, and implement proactive conservation practices within the Willamette Valley Focus Area.
- Continue to access and utilize the best available science to inform and guide conservation delivery and implementation.
- Work at the landscape scale consistent with the principles of landscape conservation design and the myriad conservation plans that identify the Willamette Valley as ecologically significant for numerous Service trust resources.
- Work to maximize climate resiliency across latitudinal, elevation, and aspect parameters throughout the focus area.



Photo above: Kincaid’s lupine (credit: B.N. Newhouse, OregonFlora)

Scientific Rationale: Over the past five years, several important landscape-scale conservation planning efforts have been completed which provide sound scientific basis for PFW Program priorities. The Willamette Valley Conservation Study, completed by the National Wildlife Refuge System, identified the area as one with the highest known concentrations of Service trust resources. Additionally, a key document for this focus area, the Oregon Conservation Strategy by ODFW was updated with input from nearly 200 technical experts from various agencies, non-governmental organizations, and tribal representatives. The PFW Program in the Willamette Valley is part of a landscape-scale restoration initiative that has broad-based public support. Staff are involved with a broad array of stakeholder groups and conservation partners and the focus will remain on providing technical, biological and financial assistance to those partners.

Focal Species Objectives and Strategies for Willamette Valley Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|---|
| Fender’s blue butterfly <i>Icaricia icarioides fenderi</i> (NA) | Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington | ¹ Preserve, restore, and manage populations and habitat for Fender’s blue butterfly by: <ul style="list-style-type: none"> ❖ Setting back succession and reducing competition from nonnative plants ❖ Prescribed fire ❖ Mowing ❖ Restoring native prairie species, with an emphasis on larval host plants and adult nectar sources |
| Slender-billed (white-breasted) nuthatch <i>Sitta carolinensis aculeata</i> (NA) | Willamette Valley Conservation Study | ^{2, 3} Protect and manage oak woodland habitat by: <ul style="list-style-type: none"> ❖ Setting back succession (e.g. conifer encroachment) to restore more open-structured oak woodlands ❖ Thinning/brush management ❖ Mowing ❖ Managed grazing |
| Western meadowlark | ODFW Oregon | ^{2, 3} Maintain grasslands/oak savannahs by: |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|-----------------------|--|
| <i>Sturnella neglecta</i> (NA) | Conservation Strategy | <ul style="list-style-type: none"> ❖ Prescribed burning ❖ Mowing ❖ Weed/invasive species control ❖ Forb augmentation |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: Lower Columbia-North Oregon Coast Focus Area

Area Description: The Lower Columbia River estuary and northern coast of Oregon is a biologically rich and diverse area critical for the conservation and recovery of numerous Pacific Salmon and Service species of concern that include coastal cutthroat trout, Pacific lamprey, western brook lamprey, migratory birds, amphibians, reptiles, and threatened Columbian white-tailed deer. The land base in this complex and ecologically resilient ecosystem is primarily in private ownership, providing strong opportunity and need for the PFW 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. This focus Area is over 2.26 million acres in size with 65% in private ownership and 35% in public (federal/state owned) land.

Habitat Types: Tidal wetland, estuary, riverine, riparian, floodplain, forests, and oak woodland

Conservation Issues: Climate change is resulting in higher summer stream temperatures and movement corridor fragmentation. Floodplain disconnection and fish passage barriers impede multiple species that rely on fringing wetland, shade, and foraging and cover for species movement. Increased peak flows and increased frequency and intensity of flooding impact aquatic migratory corridors and disrupt habitat connectivity and habitat forming processes, including movement of bedload material, large wood, and nutrients throughout the ecosystem as well as for movement of fish and a variety of other riparian and wetland dependent species. Barriers also impact tidal and floodplain connectivity. Invasive species are an issue for key upland habitats.

2022-2026 Restoration Targets

20 acres Uplands
 100 acres Wetlands
 10 miles Stream/Shoreline
 25 Fish Passage

Key Partners

Bureau of Land Management
 Columbia River Estuary Study Taskforce
 Ducks Unlimited
 Lower Columbia Estuary Partnership
 Natural Resources Conservation Service
 NOAA Restoration Center
 Oregon Department of Fish and Wildlife
 Oregon Watershed and Enhancement Board
 The Nature Conservancy
 Tillamook Estuaries Partnership
 Tribes
 Trout Unlimited
 Oregon Department of Forestry
 U.S. Forest Service
 County governments
 Land trusts
 Local municipalities
 Watershed Councils
 School districts
 Soil and Water Conservation Districts
 Private landowners
 Private industrial timber owners

Conservation Strategies

- Restoration actions include a mix of strategies involving the recovery of riparian canopies, addressing constrictions that limit species movement and stream processes, securing and connecting headwater wood and substrate recruitment corridors, instream wood placement, and road assessment/removal.
- Collaborate and work closely with key partners to develop cooperative planning and implementation strategies.
- Improve conservation and help address local needs that provide direct benefits to local economies, improve infrastructure resilience and flood reduction, and job creation.
- Work across Service programs 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 voluntary conservation partners. Limiting factor analyses are performed at the sub-watershed level. Multiple analyses documents are used as a ‘road map’ to prioritize key life-history bottlenecks, target project locations, and identify best restoration actions. Watershed planning documents are nested within state-wide and regional conservation strategies and biodiversity analyses. These 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.

Photo above: Surveying for native fish (credit: USFWS)

Focal Species Objectives and Strategies for the Lower Columbia-North Oregon Coast Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| Coho salmon <i>Oncorhynchus kisutch</i> (ESA Threatened) | Species Recovery Plans / Basin Specific Watershed and Barrier Assessments | ² Restore aquatic connectivity and hydrologic and sediment transport processes by: <ul style="list-style-type: none"> ❖ Breach dikes/levees to restore tidal process ❖ Address fish passage barriers ❖ Replace road crossings with streambed simulation structures > 1.5X bankfull width ❖ Remove floodplain infrastructure (roads, fill, etc) |
| Steelhead <i>Oncorhynchus mykiss ssp</i> (ESA Threatened) | Oregon Coast Coho Conservation Plan ODFW Oregon Conservation Strategy | |
| Chinook salmon <i>Oncorhynchus tshawytscha</i> (ESA Threatened) | Coast Range Subbasin Fish Management Plan | ¹ Restore complexity of instream habitat via: <ul style="list-style-type: none"> ❖ Placement of large wood |
| Chum salmon <i>Oncorhynchus keta</i> (ESA Threatened) | Pacific NW Coast Landscape Conservation Design (Draft) Lower Columbia Restoration Prioritization Framework Regional Framework for Climate Adaptation: | ^{1, 3} Work with local communities on riparian and wetland restoration, increasing buffers, and water management <ul style="list-style-type: none"> ❖ Increase riparian canopy cover density ❖ Increase diversity of native riparian corridors to include native conifer and hardwood overstory and native shrub sub-canopy ❖ Improve water quality |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| Coastal cutthroat trout <i>Oncorhynchus clarki clarki</i> Pacific lamprey <i>Lampetra tridentat</i> Western brook lamprey <i>Lampetra richardsonii</i> Mussels Migratory birds Columbian white- tailed deer <i>Odocoileus virginianus leucurus</i> (ESA Threatened) | Clatsop & Tillamook Counties Coastal and Estuarine Land Conservation Plan Withdrawal of Proposed Rule To List the Southwestern Washington/Columbia River DPS of the Coastal Cutthroat Trout as Threatened Nehalem Conservation Action Plan Salmon SuperHwy Strategic Action Plan: 2021-2026 Lower Columbia Chum Strategic Action Plan Joint Venture Implementation Plans: Lower Columbia & North OR Coast North Pacific Coast Regional Shorebird Management Plan Columbian white-tailed deer Species Status Assessment | ❖ Assess / address sources of fine sediment input |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: Closed Basin Focus Areas (East/West)

Area Description: This split 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. It abuts Sheldon National Wildlife Refuge on both its eastern and western sides. The topography is rocky and rugged with steep canyon headwaters and streams flowing 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 sagebrush communities, including a significant portion of the greater sage-grouse range in Oregon. This focus area is over 3.2 million acres in size with 31% in private ownership and 69% in public (federal/state owned) land.

Habitat Types: Focus habitats include streams and rivers, terminal lakes, sage steppe, wetlands, and mesic meadows

Conservation Issues: Loss and fragmentation of sage steppe habitat are a primary reason for the decline of greater sage-grouse and other species. Successful sage steppe restoration efforts in the Closed Basin will address degraded wet meadows, invasive annual grasses that increase wildfire risk, conifer encroachment. Projects will include working with ranchers to improve or employ compatible livestock management practices. This focus area also encompasses the entire range of the Warner sucker. The Warner sucker was listed as threatened due to loss and fragmentation of habitat. Successful recovery of the Warner sucker rests with improving stream passage and screening at diversions. Additionally, Lahontan cutthroat trout, a threatened species recently added to this focus area, occurs in the Steens Mountains Area and the Willow Whitehorse drainages along the Nevada border.

2022-2026 Restoration Targets

- 300 acres Uplands
- 4 acres Wetlands
- 1 mile Stream/Shoreline
- 3 Fish Passage

Key Partners

Lake County Watershed Council
 Lakeview Soil and Water
 Conservation District
 Oregon Department of Fish and
 Wildlife
 Sheldon and Hart National
 Wildlife Refuges
 Natural Resources Conservation
 Service
 Bureau of Land Management

Conservation Strategies

- Seek opportunities for multiple species benefits, by restoring riparian and meadow habitats for both aquatic and avian species.
- Work with multiple agencies and partners to develop restoration projects that are holistic, restoring multiple ecosystem components, while balancing diverse land management issues.
- Continue to seek out opportunities for landowners to be involved with projects so that their stewardship helps to maintain the project in the long term.



Scientific Rationale: This focus area includes a major portion of Preliminary Priority and General Habitat for greater sage-grouse identified in the Greater sage-grouse Conservation Assessment and Strategy for Oregon. Within these landscapes, landowners have enrolled in CCAAs, and the PFW Program will continue to play an important role in assisting with these voluntary conservation efforts. The Closed Basin is part of the Southern Oregon Northeastern California area of the Pacific Flyway. Many of the lake basins in this area are important migratory habitat for shorebirds and waterfowl.

Photo above: Warner sucker (credit: Wahoo Films)

Focal Species Objectives and Strategies for the Closed Basin Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| Greater Sage-Grouse <i>Centrocercus urophasianus</i> (NA) | Site Specific Plans for Sage Grouse CCAAs Oregon Sage-Grouse Action Plan NRCS Sage Grouse Initiative | ^{1, 3} Use referenced plans to prioritize conservation actions within Sage Grouse PACs, including: <ul style="list-style-type: none"> ❖ Control juniper encroachment ❖ Wet meadow enhancement ❖ Control invasive annual grasses and restore native perennial grasses, forbs, and shrubs ❖ Reduce fence collision risk |
| Warner sucker <i>Catostomus warnerensis</i> (ESA Threatened) | Recovery Plan for the Native Fishes of the Warner Basin and Alkali Subbasin: Warner Sucker, Hutton Tui Chub, Fosskett Speckled Dace Warner Basin Strategic Action Plan | ² Improve habitat connectivity ¹ Improve water quality ^{2, 3} Improve watershed function ³ Improve habitat resiliency |
| Redband rainbow trout <i>Oncorhynchus mykiss newberrii</i> (NA) | Rangeland Conservation Agreement for the Conservation and Management of Interior Redband Trout The Potential Influence of Changing Climate on the Persistence of Salmonids of the Inland | <ul style="list-style-type: none"> ❖ Restore floodplain connectivity ¹ Improve water temperature ¹ Collaborate to improve water delivery for landowners while providing for aquatic needs |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| | West | |
| Lahontan cutthroat trout <i>Oncorhynchus clarkii henshawi</i> (ESA Threatened) | Updated Goals and Objectives for the Conservation of Lahontan Cutthroat Trout (<i>Oncorhynchus clarkii henshawi</i>) | ¹ Remove threats associated with nonnative trout species ³ Ensure all habitats function ecologically ^{1, 2} Maintain metapopulation dynamics in the Whitehorse Creek recovery population ¹ Maintain isolated populations (including those out of historical range) in the Steens Mountains |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | Monarch Joint Venture Conservation Implementation Plan WAFWA Western Monarch Conservation Plan | ¹ Create, restore, enhance, and maintain habitat on private lands: ❖ Augment existing populations of, or plant new populations of, native geographically appropriate <i>Asclepias</i> spp. milkweeds for monarch egg laying and larval development ¹ Increase nectar plant availability for adult monarchs: ❖ Incorporate early-, mid-, and late-season nectar plants into new and existing habitat restoration actions |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: Deschutes Focus Area

Area Description: This area includes the upper Deschutes and lower Crooked River subbasins. A majority of the land is in federal ownership and is comprised of a diverse landscape with deep canyons, high mountain meadows and arid deserts. Wetland habitats along rivers provide important functions for water quality, aquatic habitat and provide migratory bird habitat, as well as supporting critical populations of

federally listed threatened Oregon spotted frog. Uplands in this focus area are widely varying, from forests of conifers at the upper elevations and by expansive sage steppe communities at the lower elevations. The sage steppe communities in eastern Crook and southeastern Deschutes have important greater sage-grouse habitat. This focus area is over 3.4 million acres in size with 65% in private ownership and 35% in public (federal/state owned) land.

2022-2026 Restoration Targets

50 acres Uplands
 10 acres Wetlands
 8 miles Stream/Shoreline
 1 Fish Passage

Key Partners

Natural Resources Conservation Service
 Bureau of Land Management
 Deschutes Land Trust
 Oregon Department of Fish and Wildlife
 Crooked River & Upper Deschutes Watershed Councils
 Crook & Deschutes County Soil and Water Conservation Districts
 The Nature Conservancy
 Oregon Natural Desert Association
 Monarch Advocates of Central Oregon

Habitat Types: Wetlands, streams, rivers, riparian, and sage steppe

Conservation Issues: Fish passage barriers are a threat for salmonids and efforts have been initiated over the past decade to reintroduce steelhead and chinook into the basin upstream of the Pelton Round Butte Dam complex. Partners, agencies, and private landowners need to pool resources to restore fish passage in the rivers and tributaries, as well as to improve habitat conditions to support wild reproduction by these reintroduced fish. Degraded floodplains and wetlands and habitat connectivity impede Oregon spotted frog recovery. Major portions of greater sage-grouse habitat have been altered by encroaching western juniper, invasion of nonnative weeds, and loss or degradation of wet meadow (brood-rearing) habitats. Monarch butterflies can benefit by increasing important feeding and rearing habitat for this migratory species from late spring to early fall.

Conservation Strategies

- Seek opportunities for multiple species' benefit, for example, riparian and meadow restoration can benefit both aquatic and avian species.
- Work with multiple agencies and partners to provide restoration that is holistic, restoring multiple ecosystem components, while addressing stakeholder concerns.
- Continue to seek opportunities for landowners to be involved with projects so that their ownership helps to maintain the project over the long term.
- Engage students and local community where possible in projects to build local knowledge base and support for restoration.



Photo above: Oregon spotted frog (credit: USFWS)

Scientific Rationale: Multiple conservation strategies have identified the importance of this area for several salmonid species including Middle Columbia River steelhead, Chinook salmon, and bull trout. Voluntary restoration of greater sage-grouse habitats on private lands was recognized as necessary to obviate its listing in 2015. Finally, the focus area includes critical habitat for Oregon spotted frog and is recognized as an important brood rearing area for monarch butterflies.

Focal Species Objectives and Strategies for the Deschutes Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| Oregon spotted frog <i>Rana pretiosa</i> (ESA Threatened) | Designation of Critical Habitat for the Oregon Spotted Frog Conservation Assessment for the Oregon Spotted Frog (<i>Rana pretiosa</i>) | ¹ Restore wetland and riparian habitats ² Improve floodplain connectivity ^{1, 2} Re-activate and create side channel habitats ³ Restore beaver habitat |
| Greater sage-grouse <i>Centrocercus urophasianus</i> (NA) | USGS Restoration Handbook for Sagebrush Steppe Ecosystems with Emphasis on Greater Sage- Grouse Habitat Oregon Sage Grouse Action Plan Greater Sage-Grouse Programmatic CCAA for Private Rangelands in Crook and Deschutes Counties | ^{1, 3} Restore, protect and enhance habitat on private lands by: <ul style="list-style-type: none"> ❖ Removing invasive plants and restore native assemblages ❖ Restoring mesic meadows and wetlands ❖ Improving livestock management |
| Middle Columbia River steelhead <i>Oncorhynchus mykiss</i> (T) | Conservation and Recovery Plan for Oregon Steelhead Populations in the Middle Columbia River Steelhead DPS Middle Columbia River | ² Improve passage at irrigation diversions ² Improve passage at road crossings ¹ Create/enhance/or restore juvenile rearing habitat ¹ Enhance habitat complexity ^{2, 3} Reconnect streams and river floodplains where practicable |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| | Steelhead DPS ESA Recovery Plan 2010 ODFW Conservation & Recovery Plan for Oregon Steelhead Populations in the Middle Columbia River | ³ Restore healthy and functional riparian areas |
| Monarch butterfly <i>Danaus plexippus</i> (ESA Candidate) | Monarch Joint Venture Conservation Implementation Plan WAFWA Western Monarch Conservation Plan | ¹ Create, restore, enhance, and maintain habitat by: ❖ Augmenting existing populations of, or plant new populations of, native geographically appropriate <i>Asclepias</i> spp. milkweeds for monarch egg laying and larval development Increase nectar plant availability for adult monarchs: ❖ Incorporating early, mid, and late season nectar plants into new and existing habitat restoration actions. |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Oregon: Wallowa Mountains Region Focus Area

Area Description: Surrounding the granite peaks and conifer 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 major 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. Ranching, farming, forestry, and outdoor recreation (primarily hunting and fishing) are the backbone of the economy in this area. This focus area is over 2.6 million acres in size with 77% in private ownership and 23% in public (federal/state owned) land.

Habitat Types: Wetlands, streams, rivers, riparian, sage steppe, and Palouse prairie

2022-2026 Restoration Targets

- 300 acres Uplands
- 10 acres Wetlands
- 2 miles Stream/Shoreline
- 1 Fish Passage

Key Partners

- Baker Soil and Water Conservation District
- Eagle Valley Soil and Water Conservation District
- Keating Soil and Water Conservation District
- Union Soil and Water Conservation District
- Wallowa Soil and Water Conservation Districts
- Grande Ronde Model Watershed
- Powder Basin Watershed Council
- Oregon Dept. of Fish & Wildlife
- Umatilla & Nez Perce Tribes
- Wallowa Resources
- Wallowa Land Trust
- The Nature Conservancy

Conservation Issues: The Grande Ronde River and two of its large tributaries, Catherine Creek and the Wallowa River, are the focus of extensive restoration efforts for Chinook salmon recovery. These rivers have historically been straightened and heavily diverted for agriculture and threats can be ameliorated by: (1) restoring pool-riffle complexes, side channels, and large wood to reaches that have the greatest potential to provide lower river refugia for migrating and overwinter salmonids; (2) reducing summer water temperatures by augmenting stream flows through more efficient use of irrigation water, restoring riparian forests, and other means; and (3) improving fish passage conditions by removing man-made barriers and modifying irrigation diversions to make them more fish friendly. Issues facing sage steppe and greater sage-grouse include invasive juniper, wet meadow degradation, invasive annual grasses, and high fence collision risk for sage-grouse. Conversion of wetlands has been an issue in the Grande Ronde and Powder River valleys. In the Powder River Valley, recovery actions for the threatened Howell’s thelypody are a priority. On Zumwalt Prairie, activities address restoring native bunchgrasses and hardwood stands.

Conservation Strategies

- Collaborate with our key partners and other private land-focused funding sources to expedite delivery of high-priority projects.
- Assist landowners enrolled in sage-grouse CCAAs to implement the conservation measures identified in site specific plans.
- Prioritize river restoration projects in priority areas for bull trout that connect to other projects on private or public lands to achieve landscape-scale results.



Scientific Rationale: The Wallowa Mountains are higher in elevation than other mountain ranges in the region and the cold-water streams that originate in them are predicted to be more resilient to the rising temperature trajectory associated with climate change. BPA- and BOR-funded assessments and monitoring programs have identified priority areas for river restoration for salmonids in the Grande Ronde River and Catherine Creek. Idaho Power is currently conducting assessments in Pine Creek to determine restoration priorities for bull trout in that system. These efforts have greatly improved opportunities to target restoration work in areas where the greatest benefits are more likely to occur. For greater sage-grouse, the state-led Sage Grouse Conservation Partnership (SageCon), the NRCS-led Sage Grouse Initiative (SGI), and County-led CCAAs all provide strategies for habitat improvement projects working with landowners.

Photo above: Howell’s spectacular thelypody (credit: G.D. Carr, OregonFlora)

Focal Species Objectives and Strategies for the Wallowa Mountains Region Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|--|
| Greater sage-grouse <i>Centrocercus urophasianus</i> (NA) | Site Specific Plans for Sage Grouse CCAAs Oregon Sage-Grouse Action Plan NRCS Sage Grouse Initiative | ^{1,3} Use referenced plans to prioritize conservation actions within greater sage grouse PACs, including: <ul style="list-style-type: none"> ❖ Controlling juniper encroachment ❖ Enhancing wet meadows ❖ Controlling invasive annual grasses and restoring native perennial grasses, forbs, and shrubs ❖ Reducing fence collision risk |
| Bull trout | Bull Trout Recovery Plan, | ^{1,2} Reduce mortality and restore connectivity between |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| <i>Salvelinus confluentus</i> (ESA Threatened) | Mid-Columbia Recovery Unit Bull Trout Critical Habitat Final Rule | occupied and unoccupied bull trout streams by: ❖ Removing fish passage barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment 1,3 Improve occupied bull trout habitat by: ❖ Restoring instream habitat |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.

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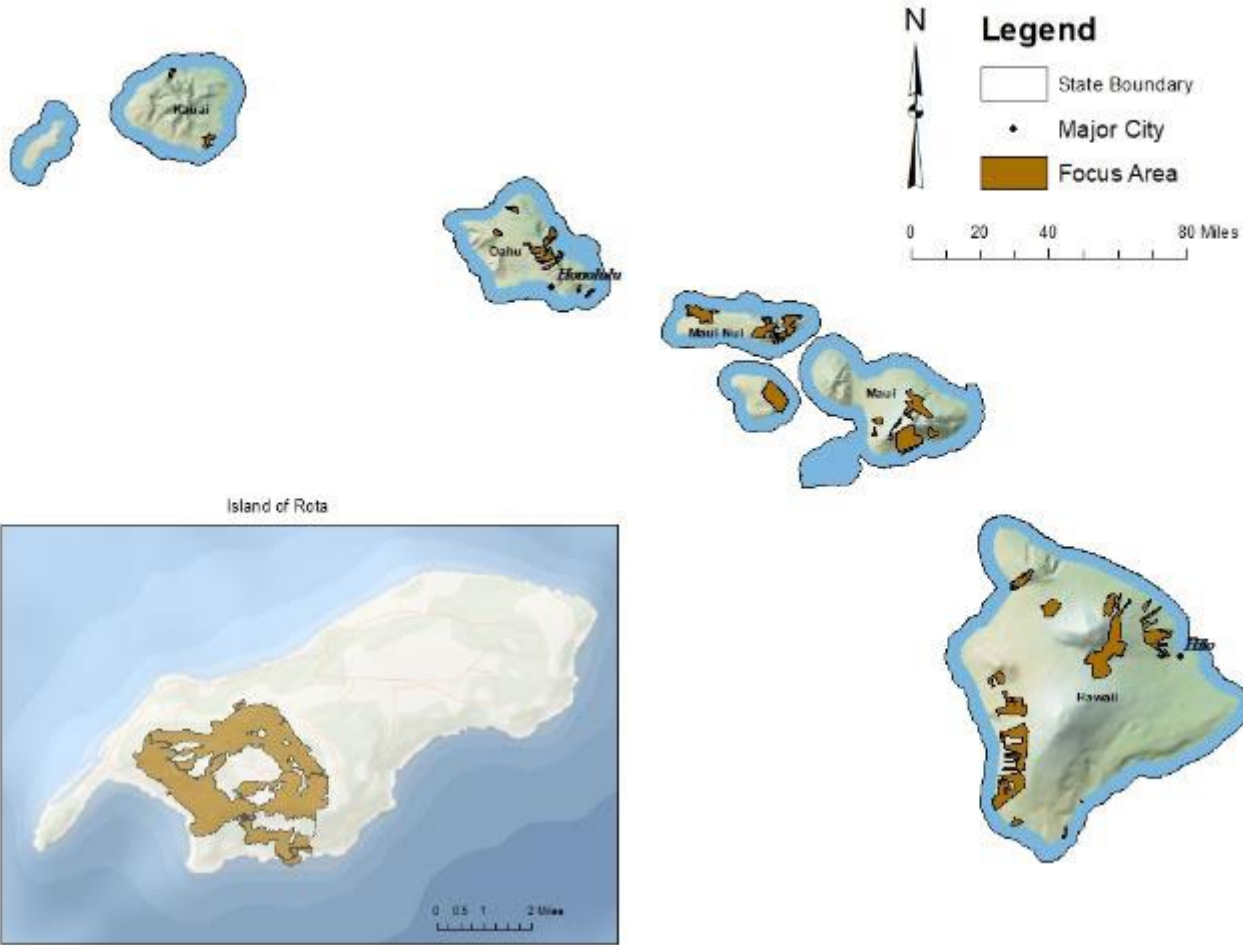
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Pacific Islands Focus Areas (2022-2026)



PFW Program Offices and Staff Locations
Pacific Islands Fish and Wildlife Office (Honolulu)



Pacific Islands: Hawai'i Focus Area

Area Description: The island of Hawai'i is the largest, highest, and youngest in the Hawaiian Archipelago. It has two mountains over 4,000 meters (13,000 ft.), three active volcanoes, and twice the area of all the other islands combined. This has led to a significant diversity in habitat types. Focus areas were selected for habitat connectivity, priority species, and good partnership opportunities.

Habitat Types: Major habitat types on the island include wet montane forest, mesic montane forest, subalpine mesic forest and shrubland. Additional habitats include dry montane and dry lowland forests, wet lowland forest, coastal forest and coastal shrub and grasslands.

Conservation Issues: Threats to habitats include invasive alien grass and shrubs in former forested and coastal areas, and uncontrolled populations of feral sheep-mouflon hybrids at high elevations on Mauna Loa and on Hualālai. Fencing and invasive weed control are essential to protect listed species and improve habitat in these areas. Another major threat that cannot be addressed solely on private land is the Ceratocystic wilt of 'ōhi'a lehua trees (aka "Rapid 'Ōhi'a Death") that has killed large numbers of mature trees in Puna and Hilo districts. As much of the upland areas of Hawai'i are already in Federal and State protection, PFW Program projects have a rare opportunity to connect mauka to makai (mountain to ocean) habitats.

Scientific Rationale: Threatened and endangered species conservation guided by species recovery plans and Hawai'i's State Wildlife Action Plan.

2022-2026 Restoration Targets

1,000 acres Uplands
0 acres Wetlands
3 miles Stream/Shoreline
0 Fish Passage

Key Partners

Queen Emma Land Company
The Nature Conservancy
Natural Resources Conservation
Service
Department of Hawaiian
Home Lands



Photo above: A live stranded hawksbill sea turtle entangled in fishing line. (credit: NPS)



Photos above clockwise left to right: *Achyranthes mutica* (credit: USFWS), Hawaiian petrel (credit: Andre Raine), and 'Alalā, Hawaiian crow (credit: USFWS)

Focal Species Objectives and Strategies for the Hawai'i Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| 'Alalā, Hawaiian crow <i>Corvus hawaiiensis</i> (ESA Endangered) | Revised Recovery Plan for the 'Alalā (<i>Corvus hawaiiensis</i>) Hawai'i's State Wildlife Action Plan | <ul style="list-style-type: none"> ¹ Restore native forest species including food sources ¹ Increase fencing, ungulate and small mammal control |
| Honu 'ea, Hawksbill turtle <i>Eretmochelys imbricata</i> (ESA Endangered) | Recovery Plan for the U.S. Populations of the Hawksbill Sea Turtle Hawai'i's State | <ul style="list-style-type: none"> ¹ Decrease artificial lighting in sandy beach areas ^{1, 3} Reduce marine debris in coastal areas and restore with native plants ¹ Prevent dogs, cats, and pigs from entering nesting sites |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| | Wildlife Action Plan | |
| <i>Achyranthes mutica</i> (ESA Endangered) | Recovery Plan for the Multi-Island Plants (1999) | ¹ Establish ex-situ stocks ¹ Increase ungulate-proof fencing |
| 'Ua'u, Hawaiian petrel <i>Pterodroma sandwichensis</i> (ESA Endangered) | Amendment to the Hawaiian Dark-rumped Petrel and Newell's Manx Shearwater Recovery Plan: Hawaiian Petrel Recovery Criteria Hawai'i's State Wildlife Action Plan | ¹ Expand predator-proof fencing ^{1, 3} Reestablish native forest species |
| | | |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems



Pacific Islands: Maui Focus Area

Area Description: Maui is the second largest island in the State of Hawai'i. Thirty percent of the island is dominated by native vegetation with most of this habitat on eastern Maui. Three notable areas contain continuous native vegetation spanning a range of habitats, forming a landscape with a high diversity of total species: summit and leeward west Maui, windward east Maui, and leeward east Maui.

Habitat Types: The Maui Focus Area includes lowland wet montane forests, dry shrublands, subalpine shrublands, riparian streams, coastal beaches, and wetlands that support rare species such as: *Flueggea neowawraea*, *Bonamia menziesii*, the dark rumped petrel (*Pterodroma sandwicensis*), Maui parrotbill (*Pseudonestor xanthophrys*), and Blackburn's sphinx moth (*Manduca blackburni*).

Conservation Issues: Threats that can be addressed on private land include invasive alien plant and animal species (i.e. axis deer, goats, etc.), loss of seasonal wetlands, loss of instream habitat complexity, habitat fragmentation and permitted take of endangered species from wind energy projects. Maui also has a long history with livestock ranching and many of these landowners are beginning to explore native habitat restoration on marginal ranch land. Fencing projects and removal of invasive plant and animal species can allow these habitats to re-establish.

2022-2026 Restoration Targets

500 acres Uplands
0 acres Wetlands
2 miles Stream/Shoreline
0 Fish Passage

Key Partners

Haleakalā Ranch
Maui County Board of Water
Supply
The Nature Conservancy
Leeward Haleakalā Watershed
Restoration Partnership



Photo above: Kiwikiu (credit: MBCC)



Photo above: Hawai'i PFW State Coordinator, Malia Nanbara, next to a native Koa tree (credit: *Acacia koa*).

Scientific Rationale: Threatened and endangered species conservation guided by species recovery plans and Hawai'i's State Wildlife Action Plan.

Focal Species Objectives and Strategies for Maui Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| Kiwikiu, Maui parrotbill <i>Pseudonestor xanthophrys</i> (ESA Endangered) | Revised Recovery Plan for Hawaiian Forest Birds (2006) Recovery Plan for the Maui Plant Cluster Hawai'i's State | ¹ Restore complexity of occupied habitat by: <ul style="list-style-type: none"> ❖ Forest restoration through fencing and feral ungulate removal of core management areas ² Restore forest connectivity between mauka (mountain) and Makai (seaward) |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| | Wildlife Action Plan | |
| Blackburn's sphinx moth <i>Manduca blackburni</i> (ESA Endangered) | Recovery Plan for Blackburn's Sphinx Moth Hawai'i's State Wildlife Action Plan | ¹ Fencing and feral ungulate removal in priority habitats identified by the Leeward Haleakalā Watershed Restoration Partnership ^{1, 3} Invasive plant removal and restoration of native habitat |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.

Pacific Islands: Maui Nui (Moloka'i and Lāna'i) Focus Areas



Area Description: The Maui Nui Focus Area combines the island of Moloka'i and Lāna'i. Moloka'i is the fifth largest of the Main Hawaiian Islands, supporting a wide range of native habitats and a diversity of native wildlife. The mountains of eastern Moloka'i are cut into deep valleys by perennial streams, and due largely to their inaccessibility, these valleys contain high-quality native habitat for stream fauna, forest birds, montane-nesting seabirds, and native snails and insects. The coastal

strand along the island's northwest coast contains one of the state's last intact dune systems and is important to nesting seabirds and marine animals.

Lāna'i is the third smallest of the Main Hawaiian Islands. Because of the history of overgrazing by cattle, goats, and axis deer, much of the island has suffered from extensive soil erosion and few native-dominated natural communities remain. The island has remained privately owned and was purchased by business entrepreneur, Larry Ellison of Oracle Inc. in 2012.

Habitat Types: Habitat types on Moloka'i include montane wet forests, shrublands, coastal systems (including dunes and grasslands), and dry shrublands. On Lāna'i, lowland dry communities (lama/olopua forest) and native lowland mesic forests.

Conservation Issues: Threats that can be addressed on private land include invasive alien plant and animal species, loss of seasonal wetlands, and habitat fragmentation. Other major threats that cannot be addressed solely on private land are the effects of ungulates entering from public hunting areas and the potential for new invasive species being introduced through various sources, including tourism.

2022-2026 Restoration Targets

500 acres Uplands
5 acres Wetlands
4 miles Stream/Shoreline
0 Fish Passage

Key Partners

The Nature Conservancy
Moloka'i Land Trust
Pūlama Lāna'i

Conservation Strategies

- Fencing ungulates out of native habitat is essential for recovery and reducing sedimentation. Much of the existing fencing also requires retrofitting due to harsh conditions.
- Re-establishing coastal wetlands to provide habitat for wetland birds such as Hawaiian common gallinule (*Gallinula chloropus sandvicensis*), Hawaiian coot (*Fulica alai*), and Hawaiian stilt (*Himantopus mexicanus knudseni*).
- Mitigating erosion of uplands that is common on these islands.



Photo above: Hāhā (*Cyanea lobata*) (credit: USFWS)

Scientific Rationale: Threatened and endangered species conservation guided by species recovery plans and Hawai'i's State Wildlife Action Plan.

Focal Species Objectives and Strategies for the Maui Nui Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| 'Alae 'ula, Hawaiian common gallinule <i>Gallinula galeata sandvicensis</i> (ESA Endangered) 'Alae ke'oke'o, Hawaiian Coot <i>Fulica americana alai</i> | Pacific Coast Joint Venture Hawai'i Strategic Plan for Wetland Conservation in Hawai'i Recovery Plan for Hawaiian Waterbirds, 2nd ed. | 1 Increase food availability for endangered waterbirds by removing invasive species such as <i>Casuarina</i> spp., and <i>Pluchea</i> spp. 1 Construct predator-proof fencing 1 Establish native shrub barriers on beach side of coastal wetland |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| (ESA Endangered) | | |
| 'Ua'u, Hawaiian Petrel <i>Pterodroma sandwichensis</i> (ESA Endangered) | Hawai'i's State Wildlife Action Plan MOU between Lanai Resorts LLC and USFWS | ¹ Expand predator-proof fencing ^{1, 3} Reestablish native forest species |
| Hāhā <i>Cyanea lobata</i> (ESA Endangered) | Recovery Plan for the Maui Plant Cluster | ¹ Forest restoration through fencing and feral ungulate removal ¹ Establish ex-situ stocks |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Pacific Islands: O'ahu Island Focus Area

Area Description: O'ahu is home to two mountain ranges (the Ko'olau and Wai'anae) that include wet forests, streams, remote summits, and dry forests as well as wetlands and coastal dunes, each with its own suite of endangered species, some of which are found nowhere else on Earth. As the most populous of the islands, many of the coastlines and valleys are developed.

Habitat Types: The focus area stretches from the coastal areas between Kohelepelepe (Koko Head) to Hanauma Bay, to the upper areas of the Ko'olau mountains, home to the O'ahu 'elepaio bird (*Chasiempis ibidis*), and the wetlands found downslope on the windward side, and lastly the peaks above Waimea Valley. They also include the dry forest on the slopes of the Wai'anae Mountains, the oldest mountain range on O'ahu.

Conservation Issues: Threats include invasive alien plant and animal species, loss of seasonal wetlands, and habitat fragmentation. Other major threats that cannot be addressed solely on private land are the large number of nonnative ungulates such as goats and pigs roaming the Ko'olau mountain range and fire threats in the Wai'anae Mountains, as well as the potential for new invasive species being introduced through tourism and military activities.

2022-2026 Restoration Targets

500 acres Uplands
0 acres Wetlands
2 miles Stream/Shoreline
0 Fish Passage

Key Partners

Hawai'i Division of Forestry and
Wildlife
Ko'olau Mountains Watershed
Partnership
Wai'anae Mountains Watershed
Partnership
City and County of Honolulu
Waimea Valley

Conservation Strategies

- Partnering with the Watershed Partnerships to install ungulate fencing as well as incipient weed removal are essential for recovery.
- Prioritizing invasive species (plant and animal) species removal that can be connected to other projects on private or federal land to achieve landscape-scale results, as well as restoring coastal habitat connectivity for endangered coastal plants, seabirds, and native *Hylaeus* bees will also support recovery in the focus areas.



Photo above: Ko'olau Mountains (credit: Joel Abroad)

Scientific Rationale: Threatened and endangered species conservation guided by species recovery plans and Hawai'i's State Wildlife Action Plan.

Focal Species Objectives and Strategies for O'ahu Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| O'ahu 'elepaio <i>Chasiempis ibidis</i> (ESA Endangered) | USFWS Revised Hawaiian Forest Birds Recovery Plan Hawai'i's State Wildlife Action Plan | 1 Expanding control of mammalian predators (e.g., feral cats, rats) |
| Kāhuli, O'ahu tree snails <i>Achatinella spp.</i> (ESA Endangered) | Amendment to the Recovery Plan for the Oahu Tree Snails of the Genus <i>Achatinella</i> Hawai'i's State Wildlife Action Plan | 1 Evaluate costs, maintenance requirements, and efficacy of "predator-proof fencing" in relation to other predator control tools |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|---|
| <p>Hāhā <i>Cyanea truncata</i>, <i>Cyanea crispera</i> (ESA Endangered)</p> <p><i>Schiedea kaalae</i> (ESA Endangered)</p> <p>Ha'iwale <i>Cyrtandra kaulantha</i> (ESA Endangered)</p> | <p>Recovery Plan for O'ahu Plants</p> | <p>¹Establish ex-situ stocks</p> <p>¹Increase ungulate-proof fencing</p> <p>^{1, 3} Remove invasive species and increase fencing around existing population</p> |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Pacific Islands: Kaua'i Focus Area

Area Description: The Kaua'i Focus Area is located on the northernmost and oldest of the eight Main Hawaiian Islands and is characterized by deep eroded canyons, valleys, and steep cliffs. There is a wide diversity of unique ecosystems, from montane bogs, montane wet forest, lowland mesic forest, lava tube caves, long stretches of sandy beach, and many stream and rivers. Because of the age of the island and its relative isolation, levels of endemism are higher on Kaua'i than elsewhere in the state.

Habitat Types: Key habitats are montane lowland wet forest, lowland mesic forest, coastal zones and caves which support the endangered plants and wetland-dependent migratory birds.

Conservation Issues: Threats that can be addressed on private land include invasive alien plant and animal species, loss of seasonal wetlands, loss of instream habitat complexity, and habitat fragmentation. Other major threats that cannot be addressed solely on private land are the influx of ungulates from adjacent public hunting areas, fire, and the potential for new invasive species being introduced through tourism and military activities.

2022-2026 Restoration Targets

100 acres Uplands

5 acres Wetlands

0 miles Stream/Shoreline

0 Fish Passage

Key Partners

Grove Farm

Kaua'i Watershed Alliance

National Tropical Botanical
Gardens

The Nature Conservancy

Hawai'i State Division of Forestry
and Wildlife

Conservation Strategies

- Fencing areas with existing listed species
- Reestablishing wetlands
- Invasive species control



Photo above: Koki'o ke'oke'o, *Hibiscus waimeae* ssp. *hannerae* (credit: USFWS)



Scientific Rationale: Threatened and endangered species conservation guided by species recovery plans and Hawai'i's Wildlife Action Plan.

"Effective conservation in Hawai'i will combine multiple strategies across multiple sites to fulfill archipelago-wide conservation goals"
 - Pacific Coast Joint Venture

Photo above: Alae ke'oke'o, Hawaiian Coot (credit: USFWS)

Focal Species Objectives and Strategies for Kaua'i Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|---|
| Koki'o ke'oke'o <i>Hibiscus waimeae ssp. hannerae</i> (ESA Endangered) | Kaua'i Islandwide Recovery Plan | ¹ Establish ex-situ stocks ^{1, 3} Increase ungulate-proof fencing and restoration of lowland forests |
| 'Akoko <i>Euphorbia remyi var. remyi</i> (ESA Endangered) | | |
| Bonamia menziesii | | |
| Kamapua'a <i>Kadua fluviatilis</i> (ESA Endangered) | Recovery Outline for Hawaiian Multi-Island Species | ¹ Establish ex-situ stocks ¹ Increase ungulate-proof fencing |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|---|
| Koloa, Hawaiian duck <i>Anas wyvilliana</i> (ESA Endangered) ‘Alae ‘ula, Hawaiian common gallinule <i>Gallinula galeata sandvicensis</i> (ESA Endangered) ‘Alae ke‘oke‘o, Hawaiian coot <i>Fulica americana alai</i> (ESA Endangered) | Pacific Coast Joint Venture Hawai‘i Strategic Plan for Wetland Conservation in Hawai‘i Recovery Plan for Hawaiian Waterbirds, 2nd ed. | ^{1, 3} Increase food availability for endangered waterbirds by removing invasive species such as <i>Casuarina</i> spp. ¹ Construct predator-proof fencing ¹ Establish native shrub barriers on beach side of coastal wetland |
| ‘Ua‘u, Hawaiian petrel <i>Pterodroma sandwichensis</i> (ESA Endangered) | Hawai‘i’s State Wildlife Action Plan | ¹ Expand predator-proof fencing ³ Reestablish native forest species |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Pacific Islands: Mariana Islands Focus Area

Area Description: Native forests are biologically important in the Mariana Islands as they support many of the enduring endemic species and provide the conditions needed for their survival. The majority (90%) of remaining native forests are found on the southern islands (including Rota and Guam) and are critical for biodiversity conservation in the Mariana archipelago. Cut bench platforms, common features along rocky shorelines here, are relatively narrow erosional platforms cut into limestone or

volcanic rocks. These two islands also support the highest concentration of the human population, presenting a greater risk of forest degradation and destruction.

Habitat Types: Vegetation on Rota includes primary and secondary limestone forest, atoll forest, agricultural forest, coconut plantations, Formosan koa (*Acacia confusa*) forest, secondary vegetation, open fields, grassland and urban vegetation.

Conservation Issues: Pressures on limestone forests include land conversion, development, and fragmentation, and alteration and degradation of forest structure by invasive plants, insects, and animals, including ungulates. Coastal strand comprises approximately 2% of the land area in the Mariana Islands yet is subject to a disproportionate amount of threats; in addition to habitat fragmentation and encroachment by nonnative species, coastal strand habitat stressors include pollution, sedimentation, and erosion from upland areas.

2022-2026 Restoration Targets

- 25 acres Uplands
- 0 acres Wetlands
- 0 miles Stream/Shoreline
- 0 Fish Passage

Key Partners

- Commonwealth of the Northern Mariana Islands
- Department of Lands and Natural Resources
- Natural Resources Conservation Service
- Guam Plant Extinction Prevention Program
- University of Guam

Conservation Strategy

- Establish populations of priority species in habitats protected from the threats of invasive animals and plants, and human activities that degrade habitat quality.



Photo Left: The Service is working with partners to collect and grow seeds for rare native trees to outplant onto two private properties on Rota. (credit: USFWS)



Photo above: Aga, Mariana Crow, *Corvus kubaryi* (credit: USFWS)

Scientific Rationale: Threatened and endangered species conservation guided by species recovery plans and the Commonwealth of the Northern Mariana Islands Wildlife Action Plan.

Focal Species Objectives and Strategies for the Mariana Islands Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| Aga, Mariana crow <i>Corvus kubaryi</i> (ESA Endangered) | Wildlife Action Plan for the Commonwealth of the Northern Mariana Islands, 2015-2025 | ¹ Control feral cats near crow nesting sites ¹ Control feral ungulates within the Sabana forest ³ Protect existing native limestone forests |
| Pulattat, Mariana common moorhen <i>Gallinula chloropus guami</i> (ESA Endangered) | Amendment to the Recovery Plan for the Mariana Common Moorhen (<i>Gallinula chloropus guami</i>) | ^{1, 3} Protect existing and establish new wetlands ³ Removal of invasive species |
| <i>Serianthes nelsonii</i> | Recovery Plan for <i>Serianthes nelsonii</i> | ¹ Control feral ungulates ¹ Expand populations of <i>Serianthes nelsonii</i> within forest |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|------------------|------------------------------|
| | | habitats through outplanting |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.

Pacific Islands References

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Washington Focus Areas



PFW Program Offices and Staff Locations

Washington Fish and Wildlife Office (Lacey, Mount Vernon, and Wenatchee), Willapa National Wildlife Refuge Complex (Long Beach), Turnbull National Wildlife Refuge (Cheney), Mid-Columbia Fish and Wildlife Conservation Office (Leavenworth)



Washington: Channel Scablands Focus Area

Area Description: The Channeled Scablands Focus Area includes two large-scale geologic features created by glacial floods in the Pleistocene: The Channeled Scablands of Eastern Washington and the Spokane River basin. Much of the Spokane River basin is covered by deep gravel deposits laid down over successive flood events roughly 10,000 years ago. The Channeled Scablands to the west of the Spokane River basin

were also created by these cataclysmic flood events. In this area, the flood waters deeply eroded the Columbia River Basalt Group plateau, leaving giant gravel bars, alluvial aprons, and ephemeral lake deposits across the landscape. Within this area, the wetland basin densities rival those of the upper Midwest’s Prairie Potholes. This landscape has been identified as a high priority for recovery and habitat restoration of waterfowl, migratory songbirds, and Spalding’s catchfly populations. The focus area covers nearly 3 million acres within Pend Oreille, Stevens, Lincoln, Spokane, Adams, Whitman, and Franklin counties and is made up of approximately 80% privately owned property. Land ownership is a mixture of private land, the reservations and trust lands of the Colville; Kalispel; Coeur d’ Alene; and Spokane tribes, the Inland Northwest National Wildlife Refuge Complex, Bureau of Land Management, State and county owned conservation properties, and private, non-profit conservation lands. Outside of the Spokane metropolitan area, communities in this region are mostly small and rural with strong agricultural ties.

2022-2026 Restoration Targets

- 300 acres Uplands
- 150 acres Wetlands
- 1 miles Stream/Shoreline
- 0 Fish Passage

Key Partners

- Private landowners
- Intermountain West Joint Venture
- Ducks Unlimited
- The Lands Council
- Inland Northwest Lands Conservancy, Eastern Washington University
- Gonzaga University
- The Nature Conservancy
- Spokane and Kalispel Tribes
- Natural Resources Conservation Service
- Inland Northwest National Wildlife Refuge Complex
- Conservation Districts

Habitat Types: Key habitat types include wetland, riparian zones, steppe-grasslands, sagebrush steppe, and ponderosa pine woodlands

Conservation Issues: A history of ditching efforts has resulted in many wetland basins that are dry by late spring or early summer. Damage to these areas over the past 100 years have resulted in drained wetland basins and unvegetated riparian corridors. Faster drying of these wetlands have resulted in abandoned and unsuccessful waterfowl nests and loss of brood rearing habitat in many of these areas.

Conservation Strategies

- Continue working with NRCS under the existing and future Inter-Agency Agreements to strategically implement the Agricultural Conservation Easement Program.
- Restore wetland and riparian areas to increase waterfowl and migratory songbird habitats.
- Reestablish diverse native plant communities and control invasive species in wetland, riparian, and upland habitats.

Scientific Rationale: The focus area covers areas that have been the subject of multiple ecoregional assessments and planning efforts. that identified priority habitat and species and outline conservation strategies to meet specific goals. This focus area was developed using HUC 12 watershed boundaries and includes the entire Spokane River system, and parts of the Palouse River and Upper Crab Creek systems. This Strategic Plan includes the addition of the entire Spokane River watershed into the old Channeled Scablands Focus Area. Recent legal decisions have required state and local agencies to address significant nutrient, sediment, temperature, and PCB inputs to the Spokane River through the TMDL process. The sources for much of these contaminants are coming directly from private lands along the Spokane River, Hangman Creek, the Little Spokane River, and other tributaries.

Focal Species Objectives and Strategies for Channel Scablands Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|---|
| Spaldings’s catchfly <i>Silene spaldingii</i> (ESA Threatened State Sensitive) | Recovery Plan for <i>Silene spaldingii</i> | ¹ Conserve, identify, and expand <i>Silene spaldingii</i> populations and habitat within the Channeled Scablands by: <ul style="list-style-type: none"> ❖ Conducting further surveys to identify, or work to create at least one new population and key conservation area ❖ Conserve and protect smaller populations ❖ Control and manage invasive, nonnative plant species |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| <p>*(MBTA protected status)</p> <p>Wetland</p> <p>*Northern pintail <i>Anas acuta</i></p> <p>*Redhead <i>Aythya americana</i></p> <p>Riparian</p> <p>*Willow flycatcher <i>Empidonax traillii</i></p> <p>*Yellow warbler <i>Setophaga petechia</i></p> <p>Grasslands</p> <p>*Grasshopper sparrow <i>Ammodramus savannarum</i></p> <p>*Sharp-tailed grouse <i>Tympanuchus phasianellus</i></p> <p>(State Endangered)</p> <p>Sagebrush steppe</p> <p>*Brewer's sparrow <i>Spizella breweri</i></p> <p>Greater sage-grouse <i>Centrocercus urophasianus</i></p> <p>(State Endangered)</p> | <p>Turnbull National Wildlife Refuge Comprehensive Conservation Plan</p> <p>Spatial Conservation Priorities in the Columbia Plateau Ecoregion</p> <p>Coordinated Implementation Plan for Bird Conservation in Eastern Washington</p> <p>Washington's State Wildlife Action Plan</p> <p>Conservation Strategy for Landbirds in the Columbia Plateau of eastern Oregon and Washington</p> <p>Turnbull National Wildlife Refuge Comprehensive Conservation Plan</p> | <p>^{1, 2} Restore wetland and riparian areas to increase waterfowl and migratory songbird habitats by:</p> <ul style="list-style-type: none"> ❖ Installing ditch plugs and providing shallow excavations to restore hydrology on drained or ditched wetlands ❖ Filtering upland contaminants before entering waterways ❖ Providing shade to cool streams and wetlands by replanting diverse riparian vegetation ❖ Allow for local groundwater recharge ❖ Installing beaver dam analogs (BDAs) or post line wicker weave (PLWWs) structures to aggrade stream beds to raise the ordinary high-water levels and bank-full widths <p>^{1, 3} Work with private landowners to:</p> <ul style="list-style-type: none"> ❖ Identify incentives, technical and financial assistance programs ❖ Assist with restoration design, permits and project implementation ❖ Provide personnel and equipment for restoration activities ❖ Develop proposals for landscape assessments and conservation delivery on private lands (RCP, NAWCA, and IWJV Grants) ❖ Implement strategies for adapting to climate change impacts |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|------------------|---------------------------|
| Ponderosa pine woodlands *Pygmy nuthatch <i>Sitta pygmaea</i> *Western bluebird <i>Sialia mexicana</i> | | |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Washington: Methow Basin Focus Area

Area Description: 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, WA in the south and encompasses over 1.1 million acres in Okanogan County. The watershed has its origins in the high-alpine streams of the Pasayten Wilderness and the North Cascades, with the major tributaries being the Methow River, Lost River, Early Winters Creek, Twisp River, and the Chewuch River. They provide clean, cold water which is the lifeblood of this otherwise arid environment. 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. Many of the high-value habitats are under conservation easements. Most of the remaining land is owned and managed by the Okanogan-Wenatchee National Forest, North Cascades National Park, and State agencies.

Habitat Types: Priority habitats are wetlands, streams, and riparian areas that support ESA-listed bull trout, upper Columbia River steelhead, and spring Chinook

Conservation Issues: Climate change is beginning to reduce average winter snowpack, change the timing of stream runoff, increase the frequency and intensity of storm events, and reduce summer baseflows. Wildfires have burned a considerable portion of the Basin in the last decade and pose an ongoing challenge to ESA-Listed species recovery. Dramatic, non-linear changes in the climate will place considerable stressors on species, ecosystems, and humans alike.

2022-2026 Restoration Targets

- 22 acres Uplands
- 5 acres Wetlands
- 6 miles Stream/Shoreline
- 6 Fish Passage

Key Partners

- Private landowners
- Bonneville Power Administration
- Bureau of Reclamation
- Cascade Fisheries
- Colville Nation
- Methow Conservancy
- Methow Natives
- Methow Restoration Council
- Methow Salmon Recovery Foundation
- Okanogan Conservation District
- U.S. Forest Service
- Washington Department of Fish and Wildlife
- Washington Department of Natural Resources
- Mid-Columbia Fish and Wildlife Conservation Office

Conservation Strategies

- Work with local partners through the Methow Restoration Council to work on large, reach-scale projects which have the greatest biological returns.
- Restore and enhance priority cold-water habitats to buffer the worsening effects of climate change.
- Utilize PFW Program technical assistance resources to work across the public-private landscape to achieve conservation success for priority species.



Scientific Rationale: Watershed planning in the Upper Columbia River was completed in 2007 and finer-resolution Tributary and Stream Reach Assessments were then completed to analyze impacts and restoration opportunities throughout most of the Methow Basin. These documents form the scientific basis for choosing restoration activity types, and subsequent watershed-scale prioritization was completed in 2021 by the Regional Technical Team. Collectively, these documents provide a well-supported scientific rationale for choosing activity areas, project types and sequencing. Funding for most projects is accomplished collaboratively by a variety of partners since many large-scale efforts are expensive and beyond the fiscal capacity of most single organizations. The PFW Program is well-suited to tackle both standalone, less expensive projects, while also partnering with others on larger projects to accomplish shared biological objectives.

Photo above: Coldwater stream fish habitat
(credit: USFWS)

Focal Species Objectives and Strategies for Methow Basin Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| Upper Columbia River steelhead <i>Oncorhynchus mykiss</i> (ESA Threatened State Candidate) Upper Columbia spring chinook <i>Oncorhynchus tshawytscha</i> (ESA Endangered State Candidate) | Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan Methow Sub-basin Plan | ^{1, 2} Restore complexity of occupied habitat by: <ul style="list-style-type: none"> ❖ Large woody debris installation, channel reconstruction, levee removal, beaver reintroduction, beaver dam analogue installation, riparian planting and protection ³ Buffer the effects of climate change by: <ul style="list-style-type: none"> ❖ Dispersing habitat restoration projects throughout the Basin to provide opportunities for spawning, rearing, refugia, dispersal, and offer structural diversity |
| Bull trout <i>Salvelinus confluentus</i> (ESA Threatened) | Recovery Plan for the Coterminous United States Population of Bull Trout (<i>Salvelinus</i>) | ¹ Restore complexity of occupied Bull Trout habitat by: <ul style="list-style-type: none"> ❖ instream restoration of large woody debris, beaver reintroduction, beaver dam analogue installation |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| State Candidate) | <i>confluentus</i>) Upper Columbia Spring Chinook Salmon and Steelhead Recovery Plan Methow Sub-basin Plan | ² Restore connectivity between occupied and unoccupied Bull Trout streams by: <ul style="list-style-type: none"> ❖ removing fish passage barriers ❖ installing fishways to safely pass fish away from irrigation diversions ³ Buffer the effects of climate change by: <ul style="list-style-type: none"> ❖ Dispersing habitat restoration projects throughout the Basin to provide opportunities for spawning, rearing, refugia, dispersal, and offer structural diversity |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Washington: Southwest Washington Focus Area

Area Description: The Southwest Washington (SW) Focus Area (1,428,066 ac.) includes land within Grays Harbor, Pacific, Wahkiakum, Cowlitz, and Clark counties. The majority of landownership is private (83%), interspersed with the reservation and trust lands of the Shoalwater, Chinook, and Cowlitz tribes, multiple National Wildlife Refuges, state owned conservation properties (WDFW and WDNR), local governmental, and private, non-profit conservation lands. Land uses include commercial timber production, commercial fishing and mariculture, agriculture, tourism, and recreation.

Habitat Types: Rivers, streams, estuarine bays, barrier beaches, coastal sand dunes, coniferous forests, mixed forest marshes, riparian areas and tidal mudflats

Conservation Issues: Due to extensive commercial forest harvest in the region, less than 1% of old growth/late successional forest habitat still exists. Existing forest habitat is extensively fragmented by networks of logging roads, and these younger managed forests do not support species dependent on complex older forests, such as the federally listed marbled murrelet.

Coastal dunes along the Pacific Coast were stabilized through planting of invasive beachgrasses resulting in the loss of dune processes and native species. Conversion of grassland meadows also resulted in the extirpation of species, such as the Oregon silverspot butterfly.

Construction of flood control levees along the Columbia River facilitated land conversion for agricultural use and areas once open to tidal inundation were lost. A result of these practices was a drastic decline of palustrine wetland and forest habitats that support species such as the Columbian white-tailed deer.

2022-2026 Restoration Targets

- 300 acres Uplands
- 20 acres Wetlands
- 0.3 miles Stream/Shoreline
- 1 Fish Passage

Key Partners

- Private landowners
- Columbia Land Trust
- Columbia River Estuary Study Taskforce (CREST)
- County Noxious Weed Boards, Forterra
- The Nature Conservancy
- Natural Resources Conservation Service
- Shoalwater, Chinook, and Cowlitz Tribal Nations
- Washington Departments of Fish & Wildlife, Natural Resources, Ecology, and Transportation Conservation Districts
- Willapa National Wildlife Refuge Complex
- Ridgefield National Wildlife Refuge Complex
- Grays Harbor National Wildlife Refuge

Conservation Strategies

- Utilize PFW Program technical assistance resources to work across the public-private landscape to achieve conservation success for priority species.
- Reestablish connections with historical partners and build new partnerships within the local communities.
- Leverage resources/expertise with NRCS to implement priority conservation practices for trust species on working lands.

Scientific Rationale: The SW Washington focus area encompasses habitat for several threatened species including the western snowy plover, streaked horned lark, marbled murrelet, and Columbian white-tailed deer. With increased restoration efforts, opportunities also have been identified for pollinators, including the creation of sufficient habitat that could support a future reintroduction of threatened Oregon silverspot butterfly to the Long Beach peninsula. The numerous rivers and streams which feed the Columbia River and estuaries of Willapa Bay and Grays Harbor have tremendous recovery potential for numerous fish species, including chum and coho salmon.

Focal Species Objectives and Strategies for Southwest Washington Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|--|--|
| Coho salmon <i>Oncorhynchus kisutch</i> O. <i>keta</i> (NA) | Lower Columbia River Salmon Recovery Plan for Salmon & Steelhead | ¹ Restore, protect, and enhance riparian habitat function and large wood to stream systems ² Restore connectivity and ecosystem function in aquatic systems by removing fish passage barriers |
| Chum salmon <i>Oncorhynchus keta</i> (NA) | Willapa National Wildlife Refuge Comprehensive Conservation Plan | ¹ Install fish screens on irrigation ditches to eliminate entrainment. |
| Western snowy plover <i>Charadrius alexandrinus nivosus</i> (ESA Threatened State Endangered) | Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (USFWS 2007) Periodic Status Review for the Snowy Plover | ^{2, 3} Restore coastal dunes to provide breeding, nesting, and foraging habitat by: ❖ Remove invasive nonnative plants ❖ Creating native habitat corridors to connect existing habitat |
| Streaked horned lark <i>Eremophila alpestris strigata</i> (ESA Threatened State Endangered) | Draft Recovery Plan for the Streaked Horned Lark Species Status Assessment for the Streaked Horned Lark Washington State Periodic Status Review for the Streaked Horned Lark | ^{1, 3} Restore coastal dunes and/or sandy beaches and islands along the Columbia River to provide breeding, nesting, and foraging habitat by: ❖ Removing invasive nonnative plants |
| Columbian white-tailed deer | Reclassifying the Columbia River | ^{1, 3} Restore floodplain and tidal spruce habitat with densely forested swamps covered with tall shrubs and |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|--|--|
| <i>Odocoileus virginianus leucurus</i> (ESA Threatened State Endangered) | Distinct Population Segment of the CWTD as Threatened Lewis and Clark NWR/Julia Butler Hansen Refuge for the Columbian White-tailed Deer CCP Ridgefield NWR CCP Plan Amendment | scattered spruce, alder, cottonwood, and willows ³ Control invasive plant species ^{1, 2} Establish and expand suitable habitat patches for the species across the range and improve connectivity with willing landowners |
| Oregon silverspot butterfly <i>Speyeria zerene hippolyta</i> (ESA Threatened State Endangered) | Revised Recovery Plan for the Oregon Silverspot Butterfly | ¹ Establish early successional grassland meadow habitat ^{1, 3} Enhance habitat in the Long Beach Peninsula conservation area by: <ul style="list-style-type: none"> ❖ Identifying willing private landowners important to the future Long Beach peninsula population ❖ Controlling trees, brush, and exotic grasses and forbs that commonly invade meadows and crowd out desired vegetation ❖ Creating adequate juxtaposition and abundance of early blue violet, blooming nectar sources, and wind protection |
| Marbled murrelet <i>Brachyramphus marmoratus</i> (ESA Threatened State Endangered) | Recovery Plan for the Threatened Marbled Murrelet South Willapa Bay Conservation Area: Forest Landscape Restoration Plan | ¹ Create trajectory to late successional forest habitat for the benefit of marbled murrelets and other forest dependent species ² Restore connectivity in forest ecosystems by: <ul style="list-style-type: none"> ❖ Decommissioning logging roads and restoring natural hillslope ❖ Thinning forest stands to promote diversity and create trajectory to late-successional forest habitat |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Photo above: Columbian white-tailed deer (credit: Jon Heale)

Resilient Ecosystems for Wildlife

Climate change-induced sea-level rise will result in a reduction of tidally influenced island and lowland habitats for Columbian white-tailed deer and other species. The PFW program works with willing landowners to maintain resilient habitats for wildlife by restoring floodplain and tidal spruce habitat with densely forested swamps covered with tall shrubs and scattered spruce, alder, cottonwood, and willows and by controlling invasive plant species.



Washington: Columbia Plateau Focus Area

Area Description: The Columbia Plateau Focus Area is primarily arid, low-elevation desert, that contains unique habitat types in portions of Okanogan, Douglas, Grant, Chelan, Kittitas, Yakima, Benton, Franklin, and Adams counties. The focus area has been identified as a high priority for the recovery of the shrub-steppe ecosystem and the trust species that depend on it. Precipitation in this focus area ranges from 10 to 15 inches annually. This semi-arid climate of the Columbia Plateau supports native shrub-steppe vegetation, as well as other drought-tolerant plant communities. 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. Made up of 1.9 million acres, the primary land ownership is private (86%). Since this area has little state or federally owned lands, conservation on private property is of high importance for the continued benefit of focal species.

Habitat Types: Key habitats are big sagebrush, three-tip sagebrush, bitterbrush shrub-steppe, ponderosa pine inclusions, wetlands, springs, and associated riparian zones. The high-priority watersheds within this focus area include Foster Creek, Rock Island Creek, and Beaver Creek.

Conservation Issues: The impact of human activity is high here: more than half of the shrub-steppe has been converted to agriculture while other areas have been altered by development and infrastructure. The remaining native habitat is often fragmented and on shallow soils less amenable to agriculture; therefore, improving, or restoring, properties that will provide connectivity between our existing areas of quality shrub-steppe is essential. Drought, fire and invasive annual grasses are also issues for the area that the PFW Program will address.

2022-2026 Restoration Targets

500 acres Uplands
 40 acres Wetlands
 10 miles Stream/Shoreline
 0 Fish Passage

Key Partners

Private landowners
 Arid Lands Initiative
 Audubon Society
 Chelan Douglas Land Trust
 Conservation Northwest
 Foster Creek Conservation District
 Natural Resources Conservation Service
 Pheasants Forever
 The Nature Conservancy
 Trout Unlimited
 USFWS Mid-Columbia Fish and Wildlife Conservation Office
 USFWS Columbia National Wildlife Refuge
 Xerces Society
 Washington Department of Fish and Wildlife

Conservation Strategies

- Work with key partners to identify areas that will aid in the establishment of functional migratory corridors at the landscape scale
- Foster the development of landowner-led and collaborative conservation efforts to provide relief to communities impacted by recent drought and wildfire.
- Prioritize projects that restore high-quality shrub-steppe habitat, control and prevent the spread of invasive species, promote rapid recovery from wildfire, remove movement barriers, and limit loss of seasonal wetlands.

Scientific Rationale: This focus area was selected using a strategic 10-step approach. This process was used to identify geographic areas that include focal species, analyze species population/range within Washington, analyze biological models, identify overlap in other conservation plans, assess landscape intactness, identify existing community-based conservation groups, and evaluate potential threats. Restoration efforts within this focus area identified opportunities to create sufficient habitat for pygmy rabbit, greater sage-grouse, and other shrub-steppe obligate species. The numerous rivers and streams which feed the Columbia River have tremendous recovery potential for critical wet meadow habitat and groundwater retention.

Focal Species Objectives and Strategies for Columbia Plateau Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| Pygmy rabbit <i>Brachylagus idahoensis</i> (ESA Endangered State Endangered) | Recovery Plan for the Columbia Basin Distinct Population of the Pygmy Rabbit | ³ Promote resistance and resilience of shrub-steppe habitat to rangeland fires by reducing invasive annual grasses ^{1, 2} Reduce fragmentation of habitat by establishing strategic patches of native vegetation within the agricultural landscape |
| Greater sage-grouse <i>Centrocercus urophasianus</i> (State Endangered) | Greater Sage-Grouse Recovery Plan Greater Sage-Grouse Comprehensive Conservation Strategy | ^{1, 3} Restore degraded shrub-steppe habitat by: ❖ Restoring former agricultural fields to native vegetation ❖ Enhancing native bunchgrass and forb communities to improve nesting and brood rearing habitat ❖ Improve livestock distribution (e.g., water developments) ❖ Controlling invasive weed populations ² Restore connectivity of habitat patches by removing movement barriers (fencing) to establish patches and corridors of native vegetation within agricultural landscapes |
| Columbian sharp-tailed grouse <i>Tympanuchus phasianellus columbianus</i> (State Endangered) | Columbia Sharp-tailed Grouse Recovery Plan | ^{1, 3} Restore degraded shrub-steppe habitat by: ❖ Restoring riparian and wet meadow hydrology ❖ Restoring riparian woody vegetation ❖ Controlling/removing invasive or nonnative plants ❖ Enhancing/restoring native grassland and shrub-steppe |
| Wenatchee Mountains checker-mallow <i>Sidalcea oregana var.</i> | Recovery Plan for <i>Sidalcea oregana var. calva</i> (Wenatchee Mountains) | Support Wenatchee Mountains checker-mallow recovery by: ❖ Restoring hydrology to support suitable habitat function |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| <i>calva</i> (ESA Endangered State Endangered) | Checker-mallow) | ❖ Controlling weedy shrubs |
| Monarch butterfly <i>Danaus plexippus</i> <i>plexippus</i> (ESA Candidate) | WAFWA Western Monarch Conservation Plan | ¹ Support Monarch butterfly conservation by: ❖ Incorporating milkweed and nectar resource planting into riparian restoration projects ❖ Promoting management, such as prescribed grazing, to increase diversity and profitability |
| Washington ground squirrel <i>Uroditellus washingtoni</i> (State Candidate) | Multiple Species General Conservation Plan Douglas County, WA | ^{1, 3} Support Washington ground squirrel conservation by: ❖ Controlling invasive weed populations ❖ Enhancing native bunchgrass and forb communities |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Washington: North Puget Sound and Eastern Straits Focus Area

Area Description: The North Puget Sound and Eastern Straits Focus Area is an ecologically diverse part of Washington State that falls between the crest of the Cascade Mountains and the Olympic Peninsula and covers the western slope of the North Cascades, the Puget Lowlands, San Juan Islands, and the northeastern Olympic Peninsula. Major river basins associated with the focus area include the Dungeness, Nooksack, Skagit, Snohomish, and Stillaguamish Rivers. Elevation of the focus area ranges from zero to greater than 7,000 feet above sea level. The total acreage for this focus area is just over 1.9 million acres, with 72% being privately owned. Land ownership is a mixture of private land; the reservations and trust lands of the Elwha Klallam, Jamestown S’Klallam, Lummi, Nooksack, Samish, Skagit, Snoqualmoo, Stillaguamish, Swinomish, and Tulalip tribes; the Washington Maritime National Wildlife Refuge Complex; National Park Service; U.S. Forest Service; and state-owned conservation properties

Skagit, Snohomish, and Stillaguamish Rivers. Elevation of the focus area ranges from zero to greater than 7,000 feet above sea level. The total acreage for this focus area is just over 1.9 million acres, with 72% being privately owned. Land ownership is a mixture of private land; the reservations and trust lands of the Elwha Klallam, Jamestown S’Klallam, Lummi, Nooksack, Samish, Skagit, Snoqualmoo, Stillaguamish, Swinomish, and Tulalip tribes; the Washington Maritime National Wildlife Refuge Complex; National Park Service; U.S. Forest Service; and state-owned conservation properties

2022-2026 Restoration Targets

- 250 acres Uplands
- 175 acres Wetlands
- 1 miles Stream/Shoreline
- 1 Fish Passage

Key Partners

Private landowners
 Natural Resources Conservation Service
 Conservation Districts
 Washington Department of Fish and Wildlife
 Washington Department of Natural Resources
 Whatcom Land Trust
 Whidbey-Camano Land Trust
 Prairie Rim Institute
 The Nature Conservancy
 Regional Fishery Enhancement Groups, Ecostudies Institute
 Tribes
 Xerces Society
 USFWS Coastal Program
 Maritime NWR Refuge Complex

Habitat Types: This area is characterized by U-shaped valleys and cirques carved by glaciers, rocky islands and shorelines, large estuaries, riparian areas, and uplands with mixed-old growth forest and remanent prairie

Conservation Issues: The focus area faces a range of threats to its ecological integrity, including a wide range of development and urban encroachment, invasive plant and animal species, impaired water quality, and lack of indigenous fire and harvests. Washington’s human population, especially that of the greater Seattle area, continues to grow significantly. Population centers are beginning to expand into more rural, undeveloped areas, such as the I-5/ Puget Sound corridor, which provides the means for expansion and growth, and bisects the North Puget Sound and Eastern Straits Focus Area.

Conservation Strategies

- Utilize newly-created PFW biologist position (located in Mt. Vernon) to build trust and implement strategic conservation within the local communities.
- Work with key partners to plan and implement holistic restoration projects that benefit a multitude of species.
- Leverage resources/expertise with NRCS to implement priority conservation practices for trust species on working lands.
- Foster the development of landowner-led and collaborative conservation efforts to provide incentives to communities with strong agricultural traditions.



Photo above: Cattle Point conservation area (credit: USFWS)

Scientific Rationale: This focus area was selected using a strategic 10-step approach. This process was used to identify geographic areas that include focal species, analyze species population/range within Washington, analyze biological models, identify overlap in other conservation plans, assess landscape intactness, identify existing community-based conservation groups, and evaluate potential threats. Restoration efforts within this focus area identified opportunities to improve priority habitat for Oregon spotted frog, Island marble butterfly, as well as other priority species. The number of untapped local partnerships provide tremendous recovery potential on privately owned, agricultural properties. Additionally, this focus area overlaps with the Coastal Program’s North Puget Sound-Eastern Straits and Puget Sound Islands Focus Areas and is staffed with a restoration biologist for the first time. The biologist in this focus area will serve as both the Partners for Fish and Wildlife and Coastal Program biologist for restoration activities and will be co-located with NRCS in Skagit County.

Focal Species Objectives and Strategies for North Puget Sound and Eastern Straits Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| Coastal-Puget Sound bull trout <i>Salvelinus confluentus</i> (ESA Threatened State Candidate) | Recovery Plan for the Coterminous United States Population of Bull Trout Puget Sound Salmon Recovery Plan | ¹ Restore and protect riparian areas and estuaries ¹ Nearshore and shoreline habitat restoration and protection ¹ Indirect improvement of water temperature |
| Oregon spotted frog <i>Rana pretiosa</i> (ESA Threatened State Endangered) | Designation of Critical Habitat for the Oregon Spotted frog: Final Rule DRAFT Washington State Oregon spotted Frog Recovery Plan | ¹ Restore or maintain early succession vegetation structure at breeding areas ² Restore or maintain connectivity between breeding areas and permanent water ^{1, 3} Avoid management activities that enhance habitat for nonnative plants or nonnative aquatic predators |
| Golden paintbrush | Recovery Plan for the | ¹ Promote key occurrences on private lands |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|---|
| <i>Castilleja levisecta</i> (ESA Threatened State Endangered) | Golden Paintbrush Reintroduction Plan for Golden Paintbrush Hybridization Strategy (USFWS/WDFW/WDNR) | ¹ Augment existing populations to support populations of sufficient size and extent to be viable ¹ Establish new populations within the historical range of the species |
| Island marble butterfly <i>Euchloe ausonides</i> <i>insulanus</i> (ESA Endangered State Candidate) | Recovery Outline Island Marble Butterfly DRAFT Recovery Plan for Island Marble Butterfly (USFWS – under development) | ¹ Reduce host plant herbivory and incidental predation. ¹ Establish and expand suitable habitat patches for the species across its range ² Managing dispersal corridors and suitable habitat to improve connectivity |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Washington: South Puget Sound Focus Area

Area Description: The South Puget Sound Focus Area, an ecologically diverse area in Washington State that radiates from the I-5 corridor between Dupont and Castle Rock, includes glacial outwash, wet, and dry prairies. Large river systems include the Nisqually, Deschutes, Black, Chehalis, and Cowlitz Rivers, with smaller prairie streams and riparian habitat dispersed throughout. The total acreage for this focus area is just

over 1.4 million acres, with 84% being privately owned. Land ownership is a mixture of private land; Department of Defense (DoD; Joint Base Lewis-McChord); the reservation and trust lands of the Puyallup, Nisqually, and Chehalis tribes; National Wildlife Refuge (Billy Frank Jr. Nisqually NWR); state-owned conservation properties. Communities in this region range from small and rural to large population centers. Over the past 25 years, the conservation community has made tremendous investments into this area for expanding the extent of protected lands, the number of partners involved in prairie conservation, and high-quality habitat supporting rare and endangered species.

2022-2026 Restoration Targets

350 acres Uplands
 100 acres Wetlands
 0 miles Stream/Shoreline
 0 Fish Passage

Key Partners

Private landowners
 Natural Resources Conservation Service
 Conservation Districts
 Billy Frank Jr. Nisqually National
 Wildlife Refuge Complex
 Washington Department of Fish and
 Wildlife
 Washington Department of Natural
 Resources
 Center for Natural Lands Management
 Washington State University Extension
 Ecostudies Institute
 Washington Farmland Trust
 Department of Defense (Joint Base
 Lewis-McChord)
 Tribes
 Voluntary Stewardship Program
 Xerces Society

Habitat Types: Prairie, oak savanna, woodlands, and associated wetlands and streams

Conservation Issues: Due to a wide range of threats, including development, invasive species, and the lack of indigenous fire and harvests, the remaining prairies are fragmented and degraded. The stretch of land between Portland and Seattle is predicted to experience incredible growth over the next several decades, due to the open, relatively low-priced land, and the projected influx of climate refugees moving north from the burned landscapes of California and Oregon. The heavy development pressure on the region's prairies that exist primarily along the I-5 corridor will further fragment that which remains in this largely rural ecosystem. Agricultural communities are already struggling due to some of the same development pressures that threaten rare species and their habitats. This leads to a high cost of doing business and increasing challenges for small farm viability.

Conservation Strategies

- Work with species recovery teams to achieve recovery goals where possible on private lands.
- Foster the development of landowner-led and collaborative conservation efforts to build trust within local communities with strong agricultural traditions.
- Identify incentives for conservation-based practices that provide win-win scenarios for both the rural farming communities and the rare species that occur on these working lands.

Scientific Rationale: This focus area was selected using a strategic 10-step approach that identified focal species; analyzed species population/range and biological models within the state; identified overlap in other conservation plans; assessed landscape intactness; identified existing community-based conservation groups; and evaluated potential threats. Restoration efforts within this focus area identified opportunities to create sufficient habitat for Mazama pocket gopher, Oregon spotted frog, and other early-successional/prairie-dependent species. Recently created landowner-led collaboratives provide ample resources to achieve objectives outlines in priority recovery plans.

Focal Species Objectives and Strategies for South Puget Sound Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|---|--|
| Mazama pocket gopher <i>Thomomys mazama</i> (ESA Threatened State Threatened) | DRAFT Recovery Plan for Four Subspecies of Mazama Pocket Gopher Mazama Pocket Gopher Recovery Plan and Periodic Status Review | ³ Enhance habitat by controlling/removing invasive species, modifying grazing regimes, and enhancing perennial forbs ¹ Implement outreach and education |
| Oregon spotted frog <i>Rana pretiosa</i> (ESA Threatened State Endangered) | Designation of Critical Habitat for the Oregon Spotted frog: Final Rule (USFWS 2016) DRAFT Washington State Oregon spotted Frog Recovery Plan | ¹ Restore or maintain early succession vegetation structure at breeding areas ² Restore or maintain connectivity between breeding areas and permanent water ³ Avoid management activities that enhance habitat for nonnative plants or nonnative aquatic predators |
| Golden paintbrush <i>Castilleja levisecta</i> (ESA Threatened State Endangered) | Recovery Plan for the Golden Paintbrush Reintroduction Plan for Golden Paintbrush Hybridization Strategy (USFWS/WDFW/WDNR) | ¹ Promote key occurrences on private lands ¹ Augment existing populations to support populations of sufficient size and extent to be viable ¹ Establish new populations within the historic range of the species |
| Oregon vesper sparrow <i>Poocetes gramineus</i> <i>affinis</i> (ESA positive 90-day | Status Report for the Oregon Vesper Sparrow | ³ Control scotch broom and exotic grasses ³ Reestablishment of native grasses and forbs ³ Release oak trees from competition |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|---|
| finding State Endangered) | | |
| Kincaid's lupine <i>Lupinus oregonus</i> (ESA Threatened State Endangered) | Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington | ³ Reduce competition from nonnative plants ³ Restore historical disturbance regimes on priority sites ¹ Establish new populations within species' historical range |
| Nelson's checker-mallow <i>Sidalcea nelsoniana</i> (ESA Threatened State Endangered) | Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington | ³ Reduce competition from nonnative plants ³ Restore historical disturbance regimes on priority sites ¹ Establish new populations within the species' historical range |
| Mardon skipper <i>Polites mardon</i> (State Endangered) | Washington State Status Report for the Mardon Skipper | ¹ Use herbicide, fire, and mechanical methods to restore native prairie; planting/seeding native prairie species ³ Remove invading trees and shrubs from quality habitat |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.



Washington: Yakima Basin Focus Area

Area Description: The Yakima Basin Focus Area starts at river mile 70 of the Yakima River at the confluence of Satus Creek, the lowest tributary on the Yakima River (elevation 652 ft) and extends north to the crest of the Cascade Mountains (elevation 8,170 ft). The Yakima River, a tributary of the Columbia River, flows for 215 miles in south-central Washington provides drinking and irrigation water to local communities and vital

habitat for a multitude of species. Annual precipitation within the focus area ranges from over 120 inches in the mountains to approximately seven inches in the lower Yakima Valley. Competition for limited water resources within the Yakima Basin Focus Area creates major challenges for the fish, farms, and families that call this area home. The focus area encompasses 3.2 million acres within Kittitas, Yakima, and Klickitat Counties, and counties and is comprised of Yakama Nation Reservation lands (27%), private lands (32%), federal lands (35%), and state lands (6%).

2022-2026 Restoration Targets

- 25 acres Uplands
- 10 acres Wetlands
- 5 miles Stream/Shoreline
- 3 Fish Passage

Key Partners

Private landowners
 Yakima Basin Integrated Plan
 Yakima Basin Fish and Wildlife
 Recovery Board
 Yakima Tributary Access and
 Habitat Program
 Mid-Columbia Fisheries
 Enhancement Group
 Kittitas Conservation Trust
 Trout Unlimited
 Irrigation/Reclamation Districts
 Conservation Districts – Kittitas &
 North Yakima
 Yakima County
 Yakama Nation
 Mid-Columbia Fish and Wildlife
 Conservation Office

Habitat Types: Wetlands, streams, riparian zones, shrub-steppe

Conservation Issues: There are 5 water storage reservoirs within the focus area and innumerable irrigation canals, ditches, and diversion dams that prevent fish passage into headwaters. Flow management has also significantly altered the Yakima Basin’s hydrograph, impacting instream, floodplain, and shrub-steppe habitats. Threats that can be addressed on private land include: fish passage barriers, poor water quality due to increased temperature and sedimentation, loss of seasonal wetlands, instream habitat complexity, and habitat fragmentation. Threats that cannot be addressed solely on private land are the large number of nonnative fish throughout the basin (e.g., bass, brook trout, etc.), and fish passage at reservoir dams. Climate change is altering the basin’s hydraulic cycle including a significant reduction in snowpack, an increase in the frequency and intensity of storm events, and the timing and type of precipitation, which are all leading to more powerful flooding, reduced summer base flows and higher stream temperatures. Increased frequency of catastrophic wildfire will impact designated critical habitats through sedimentation, vegetation loss, streambank instability, and higher stream temperatures.

Conservation Strategies

- Work with community-based conservation teams to prioritize, develop, and implement protection and restoration projects.
- Restore and enhance priority cold-water habitat to buffer the effects of climate change.
- Restore stream floodplains and instream habitat complexity and connectivity.



Photo above: Restoring stream complexity (credit: USFWS)

Scientific Rationale: Recovery plans for Bull trout, Mid-Columbia steelhead, and salmon (spring, summer and fall Chinook, Coho, and sockeye salmon), watershed plans, and fish and wildlife sub-basin planning have been completed and identify priority restoration actions within the defined boundary of this focus area. These documents form the scientific basis for restoration priorities and identify the biological benefits from project implementation. Additionally, climate change studies and evaluations conducted by researchers at the University of Washington, Bureau of Reclamation, and Washington State Department of Ecology show that the Yakima Basin Focus Area will be heavily impacted by changes in precipitation, stream flows and temperature, and vegetation patterns. Projects that buffer these impacts (e.g., floodplain reconnection) have been identified as a priority and will be vital to the maintenance and recovery of the focal species and habitats. Work of the PFW Program in the focus area will follow recommendations and guidance in these plans.

Focal Species Objectives and Strategies for the Yakima Basin Focus Area

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|---|---|--|
| Bull trout <i>Salvelinus confluentus</i> (ESA Threatened State Candidate) | Recovery Plan for the Coterminous United States Population of Bull Trout (<i>Salvelinus confluentus</i>) Yakima Basin Bull Trout Action Plan - 2017 Action Update | ³ Restore complexity of occupied habitats by: <ul style="list-style-type: none"> ❖ Restoring levels of large woody debris to stream systems ❖ Removing artificial channel constrictions (e.g. levees) ❖ Restoring channel and floodplain shape, pattern, and functions ❖ Restoring instream flow and temperature ❖ Restoring riparian vegetation ^{1, 2} Restore connectivity between occupied and unoccupied streams by: <ul style="list-style-type: none"> ❖ Removing fish passage barriers ❖ Installing fish screens on irrigation ditches to eliminate entrainment |
| Mid-Columbia steelhead <i>Oncorhynchus mykiss</i> (ESA Threatened State Candidate) | Middle Columbia River Steelhead Recovery Plan 2009 Yakima Steelhead Recovery Plan | |
| Pacific lamprey <i>Lapetra tridentata</i> | Yakima River Basin Integrated Water Resource Management | |

| Focal Species Common name, scientific name, status | Applicable Plans | Objectives and Strategies |
|--|------------------|---------------------------|
| (ESA Endangered State Candidate) | Plan | |

National priority(ies) addressed by objectives: ¹Species Conservation, ²Habitat Connectivity, and ³Resilient Ecosystems.

Washington PFW Focus Area Selection Approach

The Washington Partners for Fish and Wildlife program used a 10-step approach for Focus Area selection. Focal species were the foundation of the approach. This shift of emphasis to focal species populations was based on two primary principles. The first was consistency with the Strategic Habitat Conservation (SHC) model where selecting focus species and understanding their population dynamics is fundamental. Secondly, to positively affect the populations of focal species, work needs to occur in landscapes that support a large percentage of the species populations. The processes also included a robust inreach and outreach effort. This led to the selection of 7 Conservation Focus Areas (focus areas) encompassing 38.4% of the private land in Washington.

Step 1: Potential Focal Species

A list of potential focal species was compiled using 6 different sources including: species listed under the ESA, federal trust species, Birds of Conservation Concern (BCC), Washington Department of Fish and Wildlife (WDFW) Species of Concern; Washington Natural Heritage Program Vascular Plant Species of Conservation Concern; and Washington State Ecological Services 2020 Priorities. Only those species that occur in Washington from these sources were used as part of the process.

Step 2: Species' Population/Range in Washington

Each of the potential focal species was evaluated based on the percentage of their known populations or range that occurs in Washington. After evaluating each species, selection of a presence of 10% or greater was determined to be a natural break for selection of a focal species. For many species, there are known breeding population numbers. An example is Oregon spotted frog, where 36.2% of the breeding population occurs in Washington (Oregon spotted frog SSA). For the species lacking population level data, the best available information related to percentage of range for the species habitat that occurs in Washington was utilized. Bull trout is an example where there isn't a solid population number occurring in Washington; however, a reasonable surrogate for species range is depicted in the form of designated critical habitat. The Service designated critical habitat data shows 20% of the species' range occurs in Washington (ECOS/EOSphere).

10-Step Approach

1. Identify potential focal species for Washington focus areas
2. Calculate percentage of species' population/range in Washington
3. Determine data availability for species
4. Calculate private/public ownership of species population/range
5. Identify social and political considerations
6. Prioritize species in a tiered format
7. Analyze priority habitat for Tier I species
8. Conduct landscape-scale assessment of multiple species
9. Perform threat analysis for each species
10. Select final Conservation Focus Areas

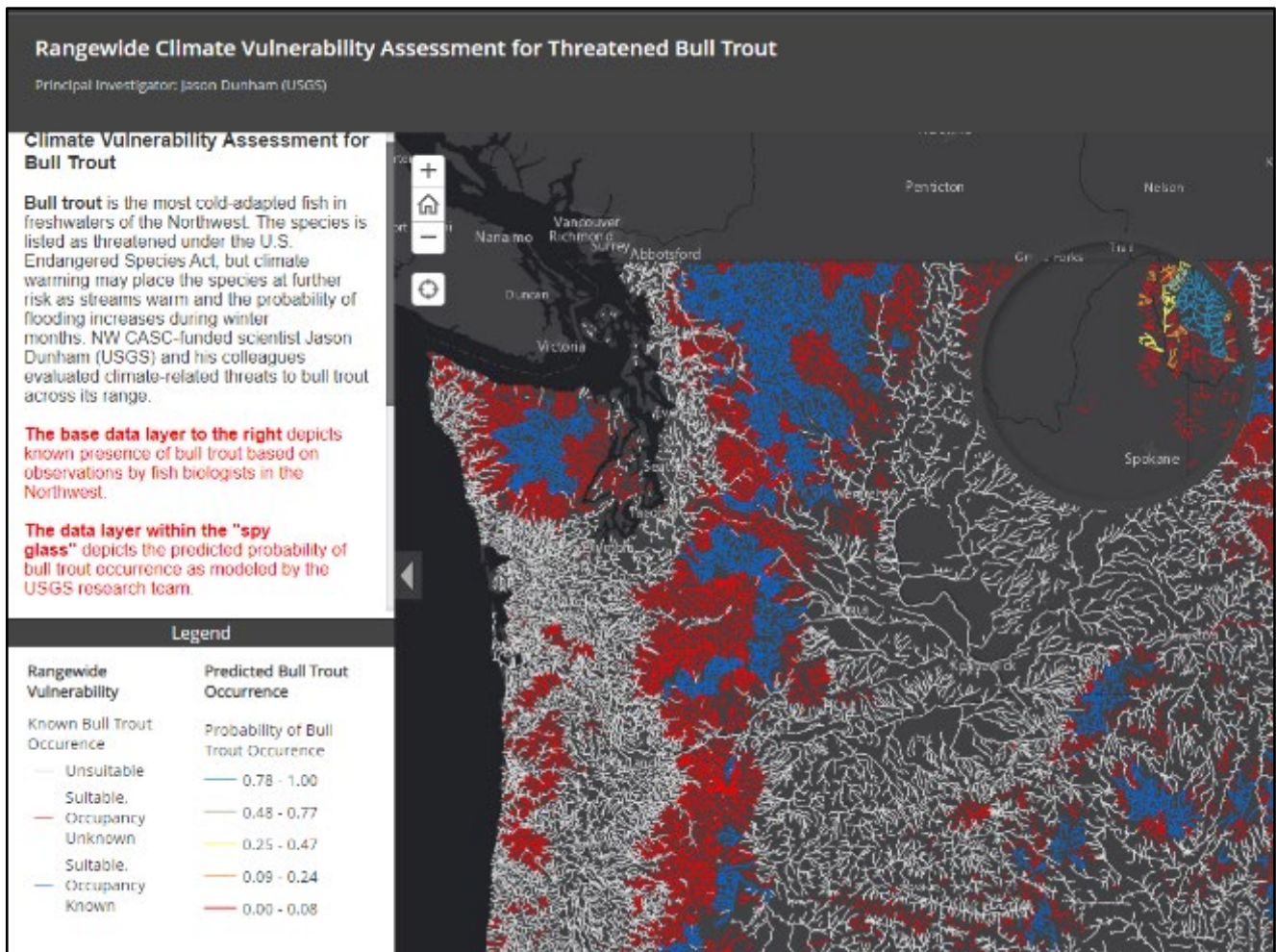


Photo above: Example of data used in the focus area selection approach depicting bull trout distribution based on observation data with the "spy glass" highlighting predicted probability of occurrence as modeled by USGS.

Step 3: Species Data Availability

The third step in the process involved evaluating data availability for each potential focal species based on the SHC model. For a species to be considered a focal species, these four criteria had to be met: (1) Is there spatial population/range data available at a statewide level that will allow for prioritization of on-the-ground conservation efforts to affect the largest percentage of the population? (2) Is there enough scientific data available that documents the threats to an individual species? (3) Can threats be linked to PFW conservation measures for implementation of on-the-ground conservation to alleviate those threats? (4) Is there long-term (greater than 5 years) population trend data available for the given species within Washington, and will that data be collected for the next 5 years or more?

Step 4: Private Lands Opportunities

Spatial population/range data available for the potential focal species was evaluated to assess what proportion of the population or habitat is occurring on privately-owned lands in Washington. The PFW Program can only fund on-the-ground activities on private or tribal lands. In some cases, species, or distinct population segments for a species, occur primarily on public lands, and a different program or entity would be necessary to work on

conservation delivery in those cases. An example is Mt. Rainier white-tailed ptarmigan where >95% of the population and threats occur on public lands.



Photo above: Mount Rainier white-tailed ptarmigan in winter (credit: USFWS)

Step 5: Political or Social Challenges

The fifth step involves assessing whether any species have special political or social challenges. In private lands conservation, staff need to be able to sell the product (species) at a landscape scale to generate buy in and affect the population of that given species. With a small number of species, current political and social acceptance can hinder accomplishments and positive impacts to the species. An example of this is Mazama pocket gopher. The species ranks high in every category, but its conservation is not widely supported across the range at this time due to several local challenges. PFW program staff will make every effort to enhance habitat for this species but will be cognizant of the issues as they conduct outreach and solicit new projects. A focus for the program during outreach events will be to highlight examples of win-win situations between local working landscapes and Mazama pocket gopher. The hope is that these opportunities will shed light on the financial and technical incentives available to local landowners who are willing to find common ground between this species and their agricultural operations.

Step 6: Species Tiers

The sixth step involved assigning each of the individual species into one of five tiers.

Tier I – Focal species are those species that didn't conflict with Steps 1 – 5.

Tier IIA – Secondary species are those species that had no conflicts for questions 1–4 above but not did in step 5 (see step 5).

Tier IIB – Secondary Species are those species where less than 10% of their population occurs in Washington, but where they do occur in Washington is in a concentrated area where the population can be positively influenced.

Tier III – Data needs or science needs are those species where the necessary SHC data isn't available to select them as a Tier I or II Species (see step 3).

Tier IV – Limited Private Lands Responsibility as it relates to the WA PFW program's abilities to affect the overall population an individual species on private lands verses public lands (see step 4).

Tier V – All other species are those species where less than 10% of the population occurs in WA and they are not covered under Tier IIB.

Step 7: Tier I Priority Habitat

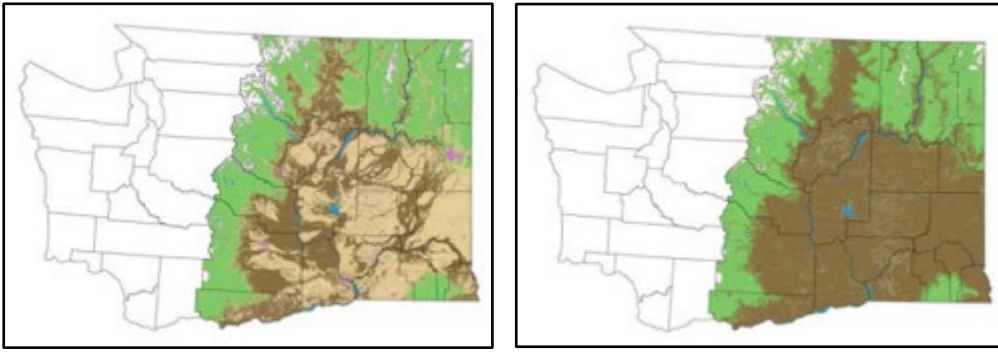
The seventh step in the process is analyzing priority habitat for Tier I focal species. For each of the Tier I species, species distribution and population densities were assessed, and priority habitat was mapped. Priority habitat varies from species to species and is data driven. In all cases, experts were consulted for each Tier I species to assist in the selection of the priority habitat parameters.

Step 8: Landscape Scale Assessment

The eighth step entailed grouping multiple species priority habitats by HUC 12 watershed. This assessment helped identify landscapes that benefit multiple species. Assessing priority habitat for individual Tier I focal species (step 7), as well as suites of Tier I focal species (step 8), was the basis of delineating draft Focus Areas.

Step 9: Threats and Landscape Intactness

The ninth step involved evaluating potential threats and assessing landscape intactness for Tier I focal species and the draft priority Focus Areas. Threats to individual species were evaluated with available scientific data. Examples include climate change models for bull trout and extent of shrub-steppe in eastern Washington. Overlaying priority habitats with possible potential threats allowed us to assess the potential for long-term persistence of the individual or suites of species. It also helped to prioritize Focus areas that are currently functional but have an imminent threat.



Photos above: (left) Map depicting the current extent of forest cover (green), shrubsteppe/grassland (brown), agriculture (tan), water (blue), and urban areas (magenta) in eastern Washington; and (right) A map depicting the historic extent shrubsteppe/grassland (brown) in eastern Washington.

The ninth step also involved assessing landscape intactness from the perspective of ecological sustainability. One tool used was the Human Footprint model developed by EcoWest. This data set layered human activities on the landscape and ranked them from 1-10, with 10 having the greatest footprint or impact. Priority habitats that ranked higher than 5.0 were considered highly fragmented and no longer functioning in an ecologically sustainable way.

Step 10: Final Focus Areas

The tenth and final step was selecting the final set of Focus Areas based on the nine steps outlined above. Considerations were also given to present and projected budget and realistic staff levels expected during this planning timeline. The seven Focus Areas include 16 million acres or 35.1% of the total land area in Washington. The private lands component within the final Focus Areas is 11.5 million acres or 44.5% of the private land in Washington.

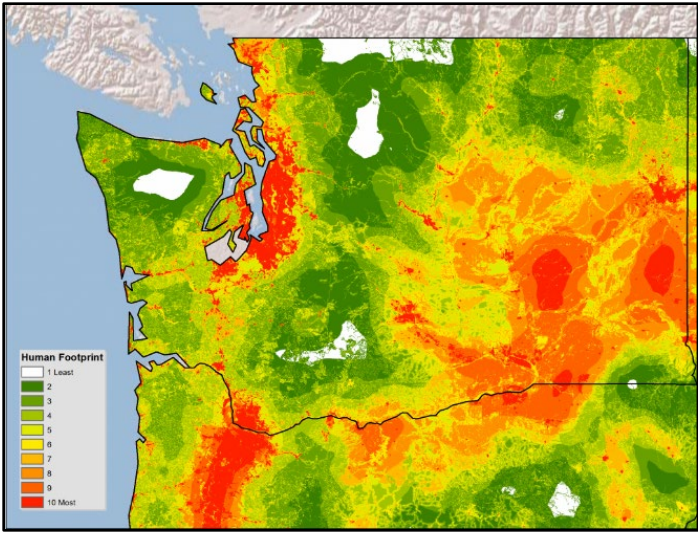


Photo left: Geospatial representation of the human footprint in Washington depicted by the Ecowest model that was used to inform landscape intactness. Red indicates a higher density of human activities.

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Appendix A. Federally recognized tribes of Idaho, Oregon, and Washington

Idaho (4)

- Coeur D'Alene Tribe
- Kootenai Tribe of Idaho
- Nez Perce Tribe
- Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho

Oregon (10)

- Burns Paiute Tribe
- Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians of Oregon
- Confederated Tribes of the Grand Ronde Community of Oregon
- Confederated Tribes of the Siletz Reservation
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs Reservation of Oregon
- Coquille Indian Tribe
- Cow Creek Band of Umpqua Tribe of Indians
- Fort McDermitt Paiute and Shoshone Tribes of the Fort McDermitt Indian Reservation (Nevada and Oregon)
- Klamath Tribes

Washington (29)

- Confederated Tribes of the Chehalis Reservation
- Confederated Tribes of the Colville Reservation
- Confederated Tribes and Bands of the Yakama Nation
- Cowlitz Indian Tribe
- Hoh Indian Tribe
- Jamestown S'Klallam Tribe
- Kalispel Indian Community of the Kalispel Reservation
- Lower Elwha Tribal Community
- Lummi Tribe of the Lummi Reservation
- Makah Indian Tribe of the Makah Indian Reservation
- Muckleshoot Indian Tribe
- Nisqually Indian Tribe
- Nooksack Indian Tribe of Washington
- Port Gamble S'Klallam Tribe
- Puyallup Tribe of the Puyallup Reservation
- Quileute Tribe of the Quileute Reservation
- Quinault Indian Nation

- Samish Indian Nation
- Sauk-Suiattle Indian Tribe of Washington
- Shoalwater Bay Indian Tribe of the Shoalwater Bay Indian Reservation
- Skokomish Indian Tribe
- Snoqualmie Indian Tribe
- Spokane Tribe of the Spokane Reservation
- Squaxin Island Tribe of the Squaxin Island Reservation
- Stillaguamish Tribe of Indians of Washington
- Suquamish Indian Tribe of the Port Madison Reservation
- Swinomish Indian Tribal Community
- Tulalip Tribes of Washington
- Upper Skagit Indian Tribe of Washington