U.S. Fish & Wildlife Service

Partners for Fish and Wildlife Program

Mountain-Prairie Region

Strategic Plan

2022–2026

Cornerstones:

Trust

Respect

Honesty

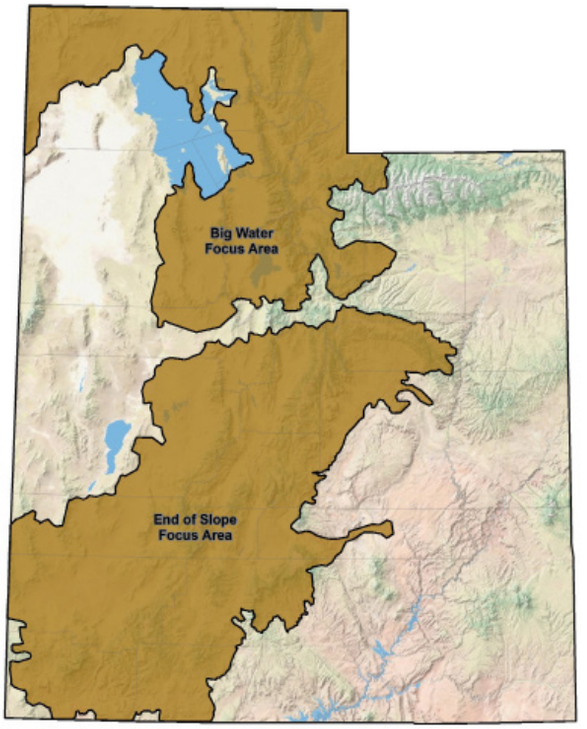
Flexibility

Friendship

Two-Way Communication

Voluntary Private Lands Habitat Restoration

Utah

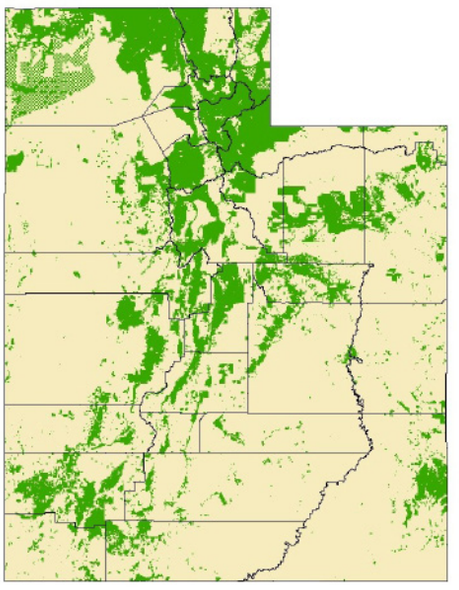


Utah PFW program Focus Areas. USFWS map.

Introduction

Utah is diverse in both its ecology and geology. From 12,000-foot peaks, to sagebrush-covered basins, into red rock canyons, and down to the Mojave Desert - Utah has a little bit of everything. Considering this, it is no surprise the soils, plants, wildlife, hydrology, climate, and people are equally as diverse. Some describe Utah as being fragmented by an abundance of surface geology which creates a patchwork of landscapes broken up by millions-of-years of geologic forces. Although Utah has intact landscapes, many of our wildlife species are adapted to these naturally fragmented habitats found here.

Much of Utah's private land is clustered along the north-to-south running Wasatch Mountains and the smaller west-to-east mountains of the Uinta Range. Vast tracts of public land lie in western and eastern Utah where little private land is found. Utah consists of approximately 25% private landownership while 75% is public lands (US Bureau of Census 1991).



Utah Private lands in green

The Utah landscape can vary dramatically. Shown here is Palmer's cleome blooming during a southern Utah monsoon rain. Photo by Clint Wirick, USFWS.

Another factor when considering wildlife, people, and ecosystems in Utah is annual precipitation. Utah is the second driest state, receiving only thirteen inches of annual precipitation on average. Water means everything here and being sensitive to the needs of both wildlife and people when implementing conservation is important. Prioritizing wet areas for habitat enhancement and restoration will be a key strategy to create drought and climate resiliency across the landscape while keeping landowners on the land.

Strategic Partnerships

The goal of the Utah Partners for Fish and Wildlife (PFW) program is to work cooperatively with diverse partners at meaningful scales for the benefit of Federal Trust Species and local communities. The Utah PFW program has a rich history of building strong partnerships to implement ecologically meaningful habitat conservation. It is said, "To best design the future you must take inventory of the past". This strategic plan is built on a strong existing foundation while considering the future conservation landscape in Utah.

During this strategic planning process, a heavy emphasis was placed on coordinating with internal and external partners to gather input and feedback. During these meetings, special consideration was given to recommendations on how the Utah PFW program may improve and grow as it moves into the future. The Utah PFW program underwent substantial staff changes in the year leading up to this strategic plan. Moving forward, the Utah PFW program will continue to be a leader, modernize strategies, and innovate where necessary while continuing to do what we do well.

Strategic Partnerships are key to the success of the PFW program. Pictured is a Utah PFW program biologist discussing a collaborative project with external partners where shared goals are being achieved. Photo by Utah Watershed Restoration Initiative.

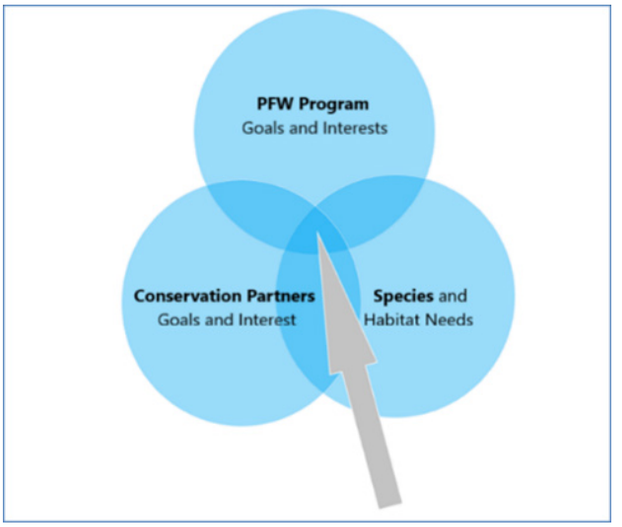
Generalized Strategic Planning Process

1. Meet with external and internal partners and discuss overlapping goals, priorities, initiatives, and cost-share potential.
2. Identify focal species (i.e., Federal Trust Species, declining species, species identified in other plans, and initiatives based on meetings with partners).
3. Identify key habitat areas for species.
4. Identify areas of key habitat privately owned.
5. Identify conservation practices and develop accomplishment goals (i.e., acres, miles)

The Utah PFW strategic plan is built as a framework to direct limited staff, time, and resources in key landscapes to achieve the greatest ecological outcomes. In other words, instead of shot-gunning conservation across the state, this plan will focus Utah PFW program staff in areas where we can leverage partnerships to have greater impacts on habitats, species, and local communities. To do this we identify focal species and focus areas. Below is the generalized process of how we identified these.

Generalized criteria for focus area development

1. Federal trust responsibilities.
2. National and regional directorate priorities.
3. Intact landscapes (fragmentation).
4. Threats.
5. Public land - private land patterns.
6. Partnership opportunities.
7. Proximity to PFW field stations.



Finding overlap among partners and conservation goals will enhance successful strategic planning and implementation (adapted from Utah State University 2012).

Generalized criteria for focal species development

1. Federal trust species and threatened, endangered, or candidate species.
2. Interagency conservation agreements with the species.
3. Utah Wildlife Action Plan species of greatest conservation need.
4. USFWS priorities.
5. Data available.
6. Social, political, or logistical ability to deliver projects.
7. Other factors of significance.

Decisions on focus areas and focal species were made based on the totality of information gathered internally and externally through partnership meetings, reviewing of other conservations plans, GIS data, Utah PFW program capacity, and many other factors. For more detailed information contact the Utah PFW program state coordinator.

Strategic Planning Highlights 2022-2026

Building Internal and External Leadership

The Utah PFW program team has been a leader in partnership-based conservation throughout Utah, serving in leadership positions among many partnership groups. Through this next generation of the strategic plan, even more emphasis will be placed on serving in leadership roles among partnership groups. In doing so, PFW can maximize opportunities to benefit Federal Trust resources while also enhancing our workforce.

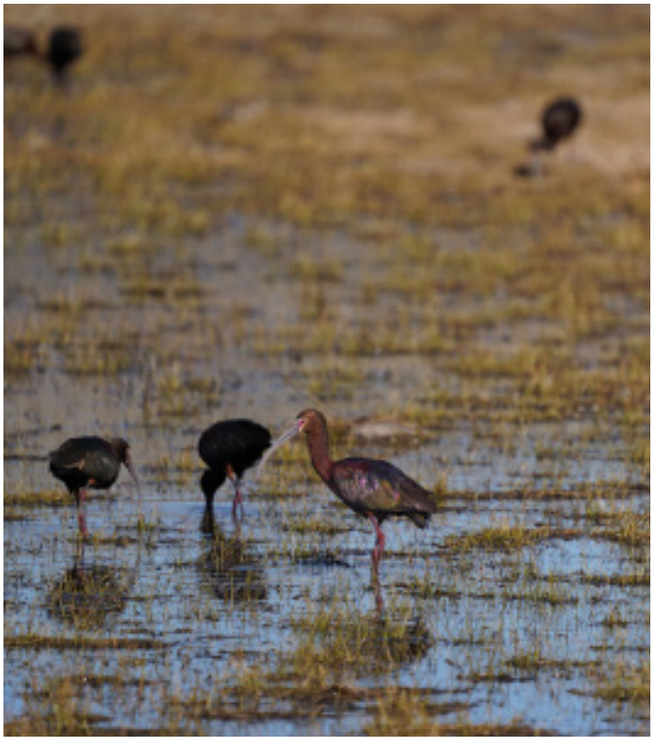
Community-based conservation is a strategy the Utah PFW program can utilize to implement goals and objectives outlined in this strategic plan. Community-based conservations is where conservation is administered by local people at local geographies. An often under considered aspect of community-based conservation is the need to develop local conservation leaders. While the Utah PFW program will continue to seek opportunities to be involved in locally led conservation, Utah PFW program staff will look to develop more local conservation leaders. This can be achieved by identifying key landowners, building relationships, and through mentorship. All too often, partnership meetings are full of "agency people". Utah PFW program must do more to develop local landowner-based leadership to achieve the full potential of conservation efforts.

Focus Areas

Focus area proximity to a PFW field station was carefully considered for this generation of the Utah strategic plan. The Utah PFW program team currently consists of two fulltime employees, the State Coordinator based in Richfield and a Wildlife Biologist based in Brigham City. Some key changes were made to focus areas based on staff capacity and distance to PFW field stations. Due to limited staff, time, and funding, some outlying focus areas were omitted from the current plan. The new focus area boundaries will provide an increased ability to work with partners more effectively to accomplish on-the-ground conservation at meaningful scales.

Focal Species

While developing the Utah focal species list, the goal was to be targeted, keeping the focal species list as concise as possible but still achieving conservation goals for as many species as possible. The focal species list is not an all-inclusive list of species needing conservation measures. For example, the American avocet and white-faced ibis were selected as focal species after thoughtful consideration and discussions with partners.



White-faced Ibis, using a seasonally flooded wetland to feed during spring migration. Photo by Clint Wirick, USFWS.

These species represent a diversity of habitat uses, habitat conditions, and habitat types. Habitat enhancements for these species will benefit many other species of concern with overlapping habitat needs not included in the focal species list. This same logic was used while evaluating all species for Utah's focal species list. The goal was to keep focal species lists short, concise, and simple while benefitting other species in need.

Pollinators

While Utah PFW program strategic plans have historically focused on vertebrate species, elevated consideration for pollinators is warranted due to increasing information about pollinator population declines as well as recent Endangered Species Act (ESA) listings and petitions. Pollinators are essential for the reproduction of many wildflowers and food crops. One out of every three bites eaten by humans, a pollinator played a role (Ingram et al. 1996). Ecosystems, habitats, and human food production must have pollinator services to function.

Early settlers gave Utah the nickname of the "Beehive State" for the industrious nature of early pioneers, comparing themselves to industrious bees. In recent years, with new research emerging, this nickname is taking on a different ecological meaning. Utah is home to some of the greatest native bee diversity in

Monarch butterfly and bumble bee feeding on showy milkweed. Photo by Jim Hudgins, USFWS.

in the United States. In fact, Utah has more species of native bees than the eastern United States combined. Utah has over 1,000 species of bees compared to approximately 750 species east of the Mississippi River. A recent study found 660 bee species in southern Utah's Grand-Staircase Escalante National Monument alone (Carril et al. 2018).

Monarch butterfly populations have dramatically declined across their range and consideration was given for protection under ESA in 2020. Additionally, the western bumble bee was once the most common species of bumble bee in western North America yet has fallen in reported sightings by more than 40 percent, with only a few records across most of its central range in the last decade.

While new pollinator research is still emerging, finding detailed information about specific species population numbers, distributions, critical habitats, seasonal patterns, and threats is difficult at best. Waiting for data to catch up before considering pollinators as focal species may be too late. The Utah PFW program team has taken the approach of using monarch butterflies as an "umbrella species" for prioritizing all pollinator conservation practices. An umbrella species is defined as a species whose conservation is expected to confer protection to a large number of naturally co-occurring species (Roberge 2004). The umbrella species concept is based on the assumption animals with large home ranges and/or specific habitat requirements can serve as surrogates for the conservation of co-occurring species (Fleishman et al. 2000). Monarch butterfly dependence on milkweed is just one example of how monarch conservation will benefit many naturally co-occurring pollinator species. A recent study found (Wilson 2021) nearly 300 bee species also using milkweed plants as a nectar source.

By using the monarch as an umbrella species in Utah, the PFW program will prioritize conservation practices, habitats, and seek targeted pollinator funding sources to further the conservation of all pollinators. Monarch butterflies will also be a useful tool for pollinator conservation outreach because of the recognizability of monarchs and the emotional connection many people have from seeing them as a child. Furthermore, Utah may play a larger role in monarch butterfly conservation than once thought. Anecdotal evidence is leading scientist to hypothesize Utah may be a genetic melting pot of sorts where different migratory populations mix.

Project Selection and Inclusion

Utah PFW biologist can work with a landowner at any time during the year to develop project plans and inquire about participation in the Program. Individual projects are developed and implemented through a Private Landowner Agreement (PLA) between the Service and the landowner. Project selection is based on several criteria such as location in relation to PFW focus areas, threats addressed to PFW focal species, partnerships, other non-PFW funding sources, cost-benefit considerations, drought and climate resilience, other adjoining projects, and local community impacts. Voluntary PLA's involve geospatial mapping and calculation of attributes associated with resource concerns, practices and priorities; consultations with landowner and partners; development of technical specifications; establishment of scope, timeline and budget; administration of archaeological clearances, biological evaluations, project selection and NEPA; evaluation of benefits to Federal Trust Species and contribution to national/regional priorities and conservation plans; monitoring, and incorporation of long-term maintenance plans.

The Utah PFW program can assist with habitat restoration projects through both financial and technical assistance. Technical assistance may be in-kind services such as planning, coordinating with partners, implementation of other programs to accomplish work, facilitating communication with other funding sources, and in-kind labor.

To better understand the socioeconomic and cultural diversity in Utah PFW focus areas, a demographic analysis using the USFWS Headwaters Economics' Economic Profile System (U.S. Dept Commerce 2021) was conducted selecting the most common counties (Box Elder, Cache, Rich, Morgan, Sevier, Beaver, Piute, Wayne, Garfield, Iron, Carbon, Emery) Utah PFW works in within the focus areas.

At the time of the analysis, the median age of the population in the combined area was 35 years old, while 92.6% of the population was white (caucasian), 0.6% are black or African American, 1% were Native American, and 1.2% were Asian American. 4.4% of the population were another race than previous listed or considered themselves two or more races. 9.4% of the population were considered Hispanic or Latino (of any race).

Utah PFW will use this information to enhance our engagement with traditionally underserved landowners such as landowners of diverse backgrounds, tribal landowners, women landowners, new and beginning farmers and ranchers.

Other Programs and Initiatives

The goal of the Utah PFW team is to pool resources with our partners to share the collective responsibility of landscape conservation. In doing so, we accomplish common goals under various programs for the collective good. For example, the Utah PFW program has been working closely with the Natural Resource Conservation Service (NRCS) to implement the Working Lands for Wildlife Program. Under this program Utah PFW program has been assisting with the implementation of projects under the Southwestern Willow Flycatcher Initiative and the Sage Grouse Initiative.

Additionally, the Utah PFW program has been partnering with the state of Utah to implement cross-program projects in priority big game migration corridors. These habitat enhancement and restoration projects have benefitted big game species as well as high priority Federal Trust Species identified in the Utah strategic plan. Utah PFW program will continue to prioritize migration corridor projects where they overlap with our strategic plan focus areas and focal species. In doing so, the Utah PFW program will address the National Priority for Habitat Connectivity by implementing landscape level projects to improve habitat connectivity and functionality.

Furthermore, the Utah PFW program will work closely with the NWRS in Utah. Part of working with our NWRS partners is having a field biologist stationed at Bear River Migratory Bird Refuge in northern Utah. The Utah PFW program will utilize private lands conservation tools to promote sustainability of water resources, control invasive species, and restore native plant communities around NWRS lands whenever possible to meet goals across both programs and build relationships between the Service and local communities.

Mule deer buck feeding in a recently completed migration corridor restoration project. Photo by Clint Wirick, USFWS.

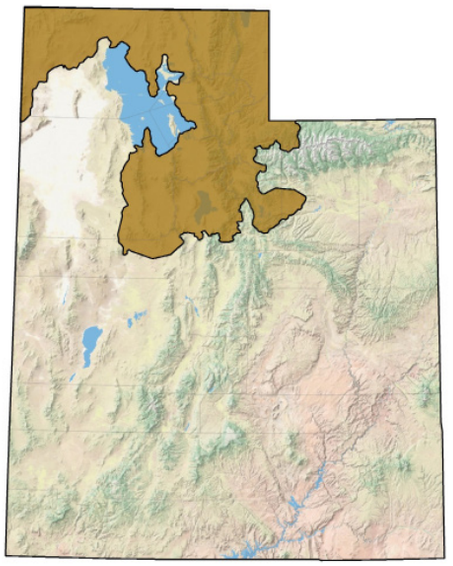
Working collectively as a Service family will enhance our ability to achieve cross-program conservation goals and build relationships with the communities we are part of. Photo by Tom Koerner, USFWS.

Working Lands

Utah tourism, and more specifically eco-tourism, is booming in Utah. This tourism boom is increasing jobs, dollars, and diversifying rural economies by opening new revenue for landowners. On the other hand, many private lands are under immense pressure for development of small recreational properties for houses, cabins, and recreational vehicle parks. Breaking up these large contiguous ranches and fragmenting the landscape has a negative impact on wildlife and erodes local culture. The Utah PFW program wants to keep working agricultural lands working. Ranchers and farmers are some of our greatest wildlife stewards. We will continue to target conservation practices benefitting working lands and landowners - keeping agricultural operations profitable while enhancing and restoring wildlife for the American people. In doing so, we will conserve America's lands, waters, and biodiversity.

This young cowboy is working to herd cattle between pastures. Large ranches like this one are home to many Federal Trust Species and keeping these landscapes intact is important for the conservation of species, communities, and families. Photo by Jeanie Jensen, Tavaputs Ranch.

Big Water Focus Area



The Great Salt Lake, the largest salt lake in the western hemisphere, plays a huge ecological and climatic role in this focus area. It is said indigenous people referred to the area as "big water" or Pi'a-pa.

The northern part of Utah has diverse habitat types influenced primarily by changes in elevation and precipitation. Much of the wetland habitats found within this focus area are associated with the Great Salt Lake and the valley corridor of the Bear River.

The value of local wetland complexes in the Great Salt Lake area to shorebirds is recognized with a designation as a site of hemispheric importance by the Western Hemispheric Shorebird Reserve Network. This designation indicates the area has at least 500,000 shorebirds annually and at least 30% of a species biographic population. These wetlands are also important to waterfowl with approximately 50% of nesting cinnamon teal and the greatest concentration of redheads in North America occurring in the Great Salt Lake area (Bellrose 1976).

The upland portions of this focus area at lower elevations are dominated by sagebrush and mountain brush communities intermixed with areas of grasslands. These areas provide valuable habitat to greater sage-grouse, sagebrush obligate songbirds, pygmy rabbits, big game, and other upland species. As you move up in elevation the vegetation changes to spruce, fir, and aspen communities. Interspersed throughout are small, localized wet meadows, springs, streams, and riparian communities. These wet habitats are critically important to native fish, amphibians, neo-tropical birds, and other surrounding wildlife. Healthy wet habitats are also critical for the surrounding rural communities and economies. Several Sage Grouse Management Areas (SGMA's) and the Bear River Watershed Conservation Area (BRWCA) are also within this focus area.

Mixed flock of ducks at sunset in the Mountain-Prairie Region. Photo by Tom Koerner, USFWS.

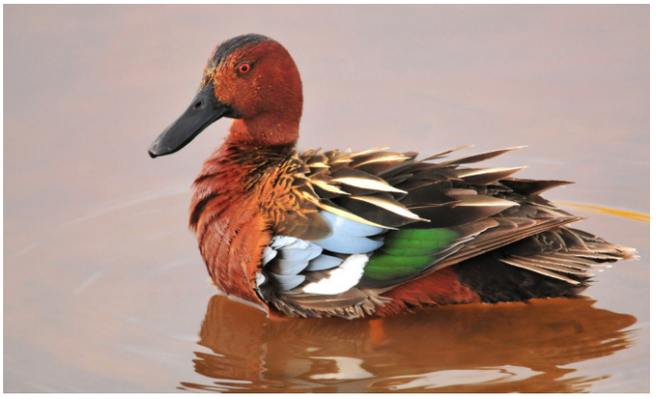
Primary Habitat Restoration and Enhancement Practices

- Upland
  - o Seeding/vegetative manipulation
  - o Invasive species control
  - o Grazing management

- Stream and Riparian
  - o Channel and in-stream habitat restoration
  - o Riparian plantings
  - o Invasive species control
  - o Grazing management
  - o Removal of fish barriers
  - o Installation of fish screens

- Wetland/Mesic Management and Enhancement
  - o Repair/installation of dikes and water control structures
  - o Invasive species control
  - o Grazing management
  - o Wet meadow erosion control

A sagebrush sparrow feeding in the sagebrush. Photo by Tom Koerner, USFWS.



Drake Cinnamon teal using wetlands in the Mountain-Prairie Region. Photo by Tom Koerner, USFWS.

Providing landowners the tools for healthy grazing management is a way the PFW program works with ranching families. Photo by Jeanie Jensen, Tavaputs Ranch.

This photo was immediately following a wetland restoration in southern Utah where historic wetlands had been drained and land leveled for pasture. Photo by Clint Wirick, USFWS.

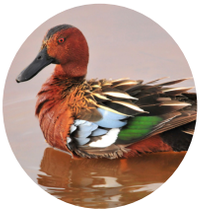
This photo is at the same spot three months later. In a desert state, these green wetted areas hold entire ecosystems together. Photo by Clint Wirick, USFWS.

Native cutthroat trout were historically found throughout most of Utah. Today efforts are being made to restore cutthroat populations in targeted watersheds. Cutthroat need functioning cold, clean, complex, and connected streams and rivers. Photo by Clint Wirick, USFWS.

Big Water Focal Species

-Greater Sage-Grouse
-Sagebrush Sparrow
-Sage Thrasher
-Brewer's Sparrow
-Cinnamon Teal
-Redhead
-Cutthroat Trout (Yellowstone, -Bonneville, Colorado)
-Northern Leatherside Chub
-Yellow-billed Cuckoo (federally threatened, western distinct population)
-White-faced Ibis
-American Avocet
-Western Toad (Boreal Toad)
-Monarch Butterfly

Greater Sage-Grouse



Cinnamon Teal

Monarch Butterfly

Big Water Focus Area Partnership Targets

-Number of private landowner partners = 20
-Number of additional partners = 60
-Technical assistance activities = 75
-Leveraging ratio = 1:3

Big Water Focus Area Habitat Targets

-Upland restoration/enhancement = 5,000 acres
-Wetland restoration/enhancement = 250 acres
-River/Stream/Riparian restoration/ enhancement = 3 miles
-Fish Passage Structures = 5

PFW Contact

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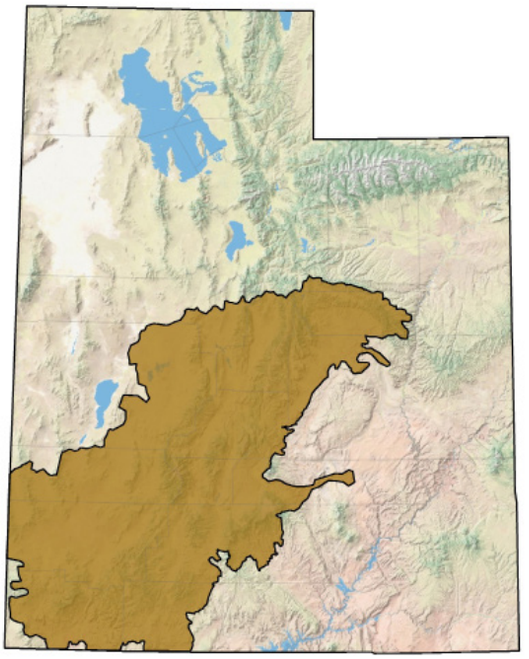
End of Slope Focus Area



Southern Utah is made up of numerous plateaus and small mountain ranges, with some of the most productive habitats being at the end of these slopes. It is said that local indigenous people of the region referred to many areas in southern Utah as Ma'haut-sa, or "end of slope".

Three physiographic regions are within this focus area, the Colorado Plateau, the Great Basin, and a small piece of the Mojave Desert. The landscape consists of a wide variety of habitat types with upland areas consisting of sagebrush, pinyon and juniper, and aspen conifer communities. Streams and rivers with riparian habitats occur throughout with some small, localized wetland habitat interspersed in valley bottoms. This focus area has four SGMA's and the southernmost sage-grouse population anywhere.

The focus area is primarily made up of rural communities who rely on the landscape for their economies. Agriculture, eco-tourism, fishing, and hunting are a few examples of the economic drivers of these rural economies. Healthy ecosystems are vital to the culture and economic viability of the people of central and southern Utah.

This site was once covered in non-native Russian olive. The Utah PFW program worked with partners to remove the invasive trees and seeded the area with a diverse seed mix. This photo is from the following year, a bird and pollinator haven. Photo by Clint Wirick, USFWS.

As you drop off the plateau at the southeast end of this focus area you find a small segment of the Mojave Desert. Many Federal Trust Species such as neotropical migrant birds and native desert fishes are associated with desert waterways here. The Virgin River and its tributaries provide life giving water to the area's wildlife and people. The exceptional landscapes and habitats of this region harbor unique plant and animal communities found nowhere else in the World. Without the water of the Virgin River system, these species could not exist. The word Mojave is composed of two indigenous words meaning "beside the water" or "people who live along the water". The Utah PFW program will work with landowners along these waterways for the benefit of unique Federal trust resources and local communities.

Pictured is the Virgin River, a critically important artery in the Mojave region of Utah. Many species of wildlife are unique to the river systems here. Photo by Steve Meismer, Virgin River Program.

"A little effort goes a long ways. The Partners Program helped the land a hundred fold. Thanks goes to the Partners Program and all the other partners who help put these projects together." --- Lynn Harris, Beaver Valley Grazers

Conservation partners gathered to install low-tech restoration structures to enhance soil water capacity and restore mesic vegetation. Photo by Clint Wirick, USFWS.

Primary Habitat Restoration and Enhancement Practices

- Upland
  - o Seeding/vegetative manipulation
  - o Invasive species control
  - o Grazing management

- Stream and Riparian
  - o Channel and in-stream habitat restoration
  - o Riparian plantings
  - o Invasive species control
  - o Grazing management
  - o Removal of fish barriers
  - o Installation of fish screens

- Wetland/Mesic Management and Enhancement
  - o Repair/installation of dikes and water control structures
  - o Invasive species control
  - o Grazing management
  - o Wet meadow erosion control

A landowner watches as a plane drops seed on a sagebrush steppe restoration project in southern Utah. Photo by Clint Wirick, USFWS.

A greater sage-grouse hen and chicks using brood rearing habitat. Photo by Tom Koerner, USFWS.

This father and son team has been working with the Utah PFW program for several years improving in-stream, wetland, riparian, and upland habitat. Here they are constructing fence for a riparian pasture along Otter Creek in southern Utah. Relationship building is one of the unmeasurable aspects of PFW program projects. Photo by Clint Wirick, USFWS.

Yellow-billed cuckoos use healthy riparian forests with cottonwood and willow vegetative communities. Photo by Peter Pearsall, USFWS.

End of Slope Focal Species

-Greater Sage-Grouse
-Sagebrush Sparrow
-Sage Thrasher
-Brewer's Sparrow
-Cutthroat Trout (Bonneville, Colorado)
-Southern Leatherside Chub
-Virgin River Spinedace
-Virgin River Chub (federally endangered)
-Razorback Sucker (federally endangered)
-Roundtail Chub
-Southwestern Willow Flycatcher (federally endangered)
-Yellow-billed Cuckoo (federally threatened, western distinct population)
-Western Toad (Boreal Toad)
-Utah Prairie Dog (federally threatened)
-Monarch Butterfly

Brewer's Sparrow

Razorback Sucker

Monarch Butterfly

End of Slope Focus Area Partnership Targets

-Number of private landowner partners = 25
-Number of additional partners = 75
-Technical assistance activities = 75
-Leverage ratio = 1:3

End of Slope Focus Area Habitat Targets

-Upland restoration/enhancement = 5,000 acres
-Wetland restoration/enhancement = 75 acres
-River/Stream/Riparian restoration/ enhancement = 4 miles
-Fish Passage Structures = 3

PFW Contact

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Pictured above is a before and after sequence of a wetland restoration project using hand-built rock structures to move water out of a trench and across a meadow in sagebrush steppe habitat. Pictures were taken October 6th, 2020 & 2021. USFWS Photos.

Utah Statewide Goals

Improve Information Sharing and Communication

Goal: Collaborate and share information with internal and external partners, stakeholders, potential future partners, decision-makers, and others to protect, restore, and enhance trust resources.

Number Outreach Activities = 100

Specific activities include:

- Participate in public outreach whenever possible such as youth outdoor education, local college job fairs and lecturing, public meetings, written material for publication in various media outlets.
- Attend partnership coordination meetings, state technical meetings, local working groups, and other partnership driven groups and play an active role in these groups as active participants and leaders.
- Give presentations at local, state, and national meetings, conferences, and workshops.
- Conduct field tours and site visits to habitat restoration projects throughout the state to exchange information regarding restoration techniques and funding opportunities.

Enhance our Workforce

Goal: Maintain and support PFW program staff to ensure successful strategic plan implementation and achieve on the ground results for Federal Trust Species.

Number of Employee Development Activities = 35

Specific activities include:

- Technical training
  - o Media and public outreach training
  - o Grant writing training
  - o Resource orientated training such as GIS, census techniques, restoration techniques, etc.
- Leadership program
  - o Attend leadership training and share experiences through job shadowing.
  - o Temporary details to work with other programs and branches within and outside the Service.
- Ensure IDP's and employee performance appraisal plans are reviewed and implemented with input from the employees.

Ensure Accountability

Goal: Measure, assess, and report the effectiveness, efficiency, and fiscal integrity of the PFW program in Utah.

Objectives:

- Achieve 90% habitat accomplishment within established focus areas.
- 100% projects linked to focus area species in HabITS.
- Projects reported in HabITS will have photo associated with the project.
- 100% of projects complete level I monitoring.
- Complete 100% HabITS data entry by due date each fiscal year.
- Work with universities, extension service, agency partners, and NGOs to increase monitoring of PFW program project sites.

Utah PFW Monitoring

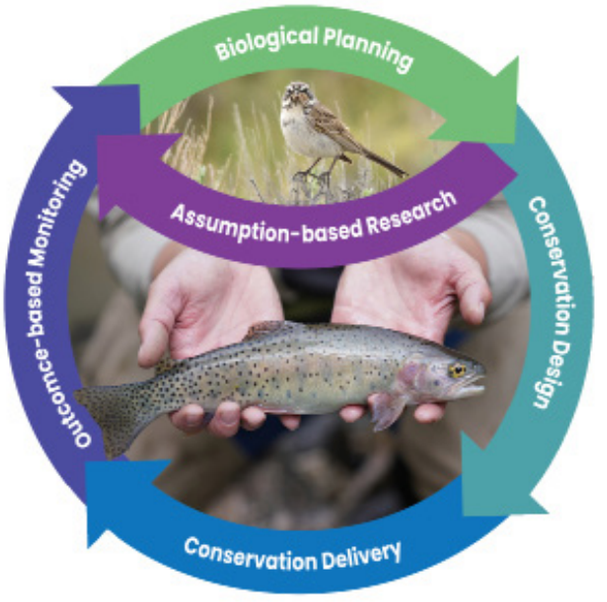
Introduction

The PFW program in Utah has been working with private landowners since 1992. Early efforts focused on private landowners adjacent to the Bear River Migratory Bird Refuge and the enhancement of wetland and riparian habitat. The program currently works with landowners in focus areas throughout the state to restore and enhance wetland, upland, in-stream, and riparian habitats. Monitoring has been a component of PFW program projects at varying levels and time intervals throughout its past. Habitat monitoring is performed by PFW program biologists or by working with other project partners. This monitoring section will identify basic standardized monitoring and outline potential for site specific and landscape scale monitoring efforts that could be implemented. Three levels of monitoring are recognized within this monitoring plan framework.

- Level I (Project Status Review)
- Level II (Biological Site Level)
- Level III (Biological Landscape Scale)

If another project partner has the capacity to complete level II or level III monitoring, the PFW program would defer to their monitoring protocol and include a copy of the monitoring report in the file. Additionally, the PFW program would adopt partner monitoring protocols if it would add to long term datasets. For example, the Utah Division of Wildlife Resources (UDWR) has a long-term range monitoring program. When the opportunity arises the PFW program will work with UDWR to either have their range crew conduct monitoring or the PFW program will conduct monitoring according to UDWR protocols so data would be additive to the established dataset.

To ensure conservation objectives are being met and specifically benefit Federal Trust Species, all funded projects will be monitored via the established Utah PFW program monitoring protocols. Level I monitoring will be conducted on all funded projects and reported in the HabITS database. Level II will be conducted on a subset of Private Landowner Agreements (PLA) and level III monitoring will occur on a subset of projects where this level of monitoring is possible.



U.S. Fish and Wildlife Service Strategic Habitat Conservation science framework. USFWS Graphic.

Level I - Monitoring – Project Status Review: To ensure on-the-ground habitat restoration practices identified within a PLA were completed and are functioning per the scope of work, a site visit will be conducted when restoration practices are completed. A site visit form will be completed by the PFW biologist in coordination with the landowner. The information collected on the form can also be used to complete reports in HabITS, Grant Solutions, and to close awards. The Level I Site Visit Report form developed by the R6 PFW program can be found in Appendix A.

Level II - Monitoring – Biological Site Level: Monitoring included in level II will be sufficient to determine if habitat objectives are being met and document removal or reduction of threats. Three types of information are routinely collected in project design and corresponding monitoring: 1) pre-restoration conditions, 2) post-restoration conditions, and 3) characteristics and conditions of suitable reference site. This may include reference reaches or ecological site descriptions.

Level II monitoring will be completed on a subset of PLAs prior to initiating habitat restoration work and repeated at future intervals. During the site visits the project will be evaluated to determine if the vegetative composition and fish and wildlife use of the project is meeting anticipated goals. Examples of level II monitoring are photo points, stream cross-sections, vegetation transect monitoring, and presence/absence surveys of wildlife species. In the example of photo point monitoring, photos will be taken from established points to document changes in project conditions over time. The PFW program level II form will be filled out and recorded in HabITS to capture qualitative data concerning habitat conditions and if habitat accomplishment objectives are being met. Additionally, level II monitoring before and after project photos will be uploaded to the HabITS database. See Appendix A for the Level II Monitoring Form and guidelines.

Level III - Monitoring – Biological Landscape Scale: Landscape scale monitoring will be done to evaluate habitat conditions, wildlife populations, and assess biological outcomes from habitat restoration work. The Utah PFW program will work with internal and external partners to identify species and landscapes with the potential for level III landscape scale monitoring. When achievable, level III monitoring will include close coordination with conservation partners (i.e., UDWR, Universities, and NGO's) to assist in identifying, prioritizing, implementing, and funding level III landscape scale monitoring efforts where opportunities exist. As a part of this process, each Utah PFW program biologist will work with their conservation partners to assess opportunities for level III monitoring efforts within their respective focus areas. Examples of level III monitoring can be found in Appendix A. Outcomes for level III monitoring efforts may include (a) decision support tools, (b) habitat use models, and (c) other tools to help guide future conservation efforts.

A citizen scientist working with the Utah PFW program and Utah Division of Natural Resources surveying milkweed and monarch butterflies on a project. Photo by Clint Wirick, USFWS.

Region 6 PFW Program Level I Monitoring Form

R6 PFW Level I Monitoring Form

SITE VISIT REPORT

Landowner Agreement #_____

Prism FA Award # _____

Final ☐ or Interim ☐
Select One

Scope of Work

Project Status

Species Benefited

Optional/ Literature Cited:

Payment Method

As the PFW biologist managing this project I certify that Landowner Agreement # _____ has been completed (or for interim…is in the process of being completed) in accordance with all provisions of the agreement.

_____ _____
PFW Biologist Date

_____ _____
*Landowner / Cooperator Date

* Landowner signature only needed for Final Site Visit when final payment is made for habitat restoration work completed.