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## Private Land, Public Trust: Strategic Conservation Planning for Public Wildlife on Private Lands Through the USFWS Partners for Fish and Wildlife Program

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**Private land, Public trust: Strategic  
conservation planning for public wildlife on  
private lands through the USFWS Partners  
for Fish and Wildlife Program**

**A MASTERS OF NATURAL RESOURCES  
CAPSTONE**

**By**

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**3 Credit Capstone**

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**Logan, Utah**

**March 2020**

## Abstract:

Law requires federal agencies to develop long-term strategic plans. Strategic plans define goals, objectives, and performance measures defining how the agencies and programs will reach their stated goals. U.S. Fish and Wildlife Service's Partners for Fish and Wildlife (PFW) develops strategic plans every five years. Each individual state develops a plan for their respective state. Those state plans are compiled for the region and become part of Regional Comprehensive Strategic Plan. The current strategic plan expires in 2021. States will begin the strategic planning process in 2020. In Utah, PFW staff will also begin developing a strategic plan for the years 2022-2026.

This document explains the need for a strategic plan, policy and laws guiding strategic plans, and program goals, objectives, and Program cornerstone concepts. Strategic plans must take into account human social and cultural perspectives.

Several factors go into a strategic plan such as funding targets, goals, and partnerships. One major component of these plans are the concept of *Focus Areas*. These focus areas determine where the Program focuses restoration and enhancement on the ground. Focus areas designation is developed using focal species and focal ecosystems as well as other criteria such as partnerships and private-public landownership. In this document suggested considerations for focus area development is provided.

This capstone report will provide managers with information and guidance important to the Utah PFW Program planning process. The goal of this document is to inform and enhance the strategic planning process in Utah. This document will be shared with other state and regional leadership in USFWS Region 6. This report summarizes the need for a strategic plan, states goals and objectives of the PFW Program related to planning, and provides strategic planning guidance not currently found in any one document.

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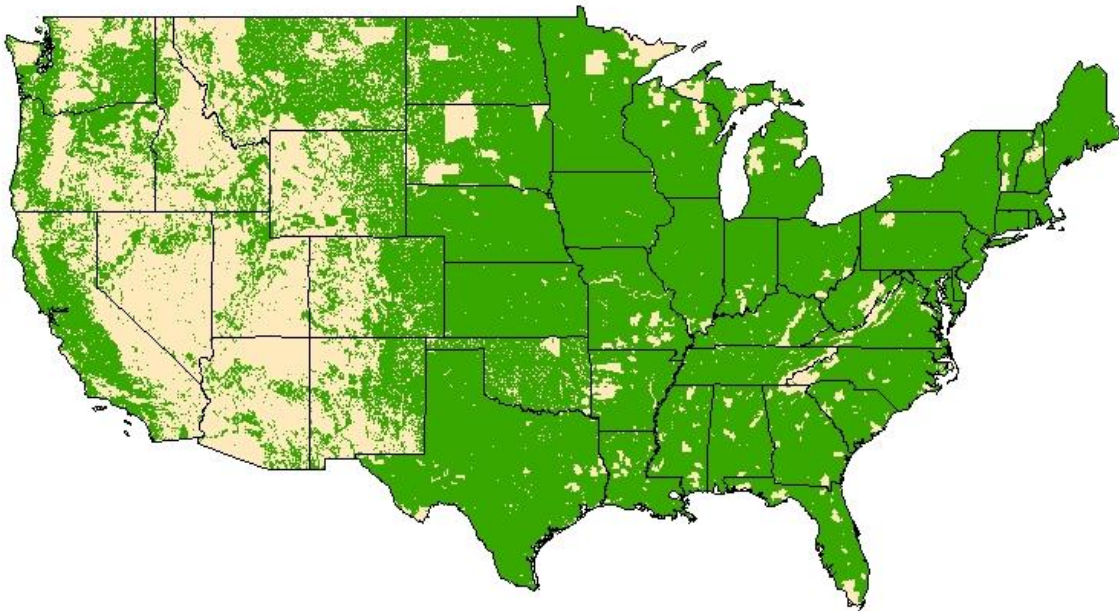
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# INTRODUCTION

## Problem statement

In the United States, wildlife is a public resource and held as a public trust for the American people. Wildlife does not occur exclusively on public lands. Private lands constitute a significant portion of landholdings (73%) in the United States and have potential to protect and improve wildlife habitat (Wilcove et al. 2004, Birch 1996, Alig et al. 2003). This creates a management paradox where the public owns wildlife, private landowners own much of the habitat, and state and federal wildlife managers are given the responsibility to manage wildlife. This private landownership scenario in the United States creates a wildlife management scenario where private lands are critical to sustainable wildlife management.

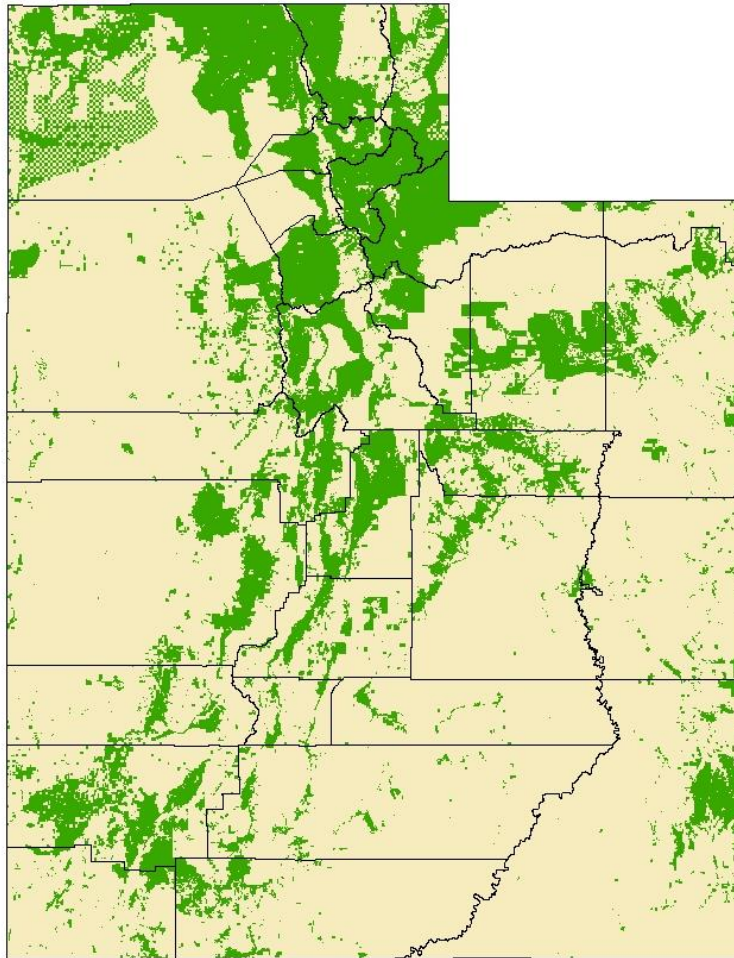
A challenge for wildlife managers is to elicit voluntary conservation projects by private landowners who make up the bulk of landownership across the United States. Approximately half of federally protected species have at least 80 percent of their habitat on private lands (U.S. Fish & Wildlife Service 2009). Beyond federally protected wildlife, USFWS works towards conserving other species like migratory birds and sensitive species whose populations are in decline.



**Map 1. Private lands (green) in the contiguous United States**

Not all regions of the contiguous United States have this same private-to-public surface landownership. Previously stated, greater than 73% of the United States is under private ownership. Conversely, in the West we find the private-to-public landownership ratio trending in the opposite direction with much of the land being public. In Utah, the opposite private-public land paradox occurs where a significant portion of landholdings is federally managed for

the public while the lesser portion of landholdings are under private ownership. Utah consists of approximately 25% private landownership while 75% is public (US Bureau of Census 1991).



**Map 2. Private lands (green) in Utah.**

This does not negate the need for public wildlife managers to collaborate with private landowners to conserve wildlife habitat. Some of the most productive wildlife habitats in the West are in private ownership. Fertile valleys, mesic areas, and surrounding rangelands are the primary areas in private ownership.

In the Great Basin, Donnelly et al. (2016) found in a study focusing on Greater Sage-grouse (*Centrocercus urophasianus*), private lands encompassed on average 75% of summer mesic resources. These private mesic lands and surrounding private rangelands are critically important to the health of wildlife populations. Research shows 60–80% of wildlife are dependent on mesic habitats (e.g., wetlands and riparian areas; Thomas et al. 1979, Patten 1998, Belsky et al. 1999, Peck and Lovvorn 2001). If true wildlife conservation is to take place on a sustainable level, public wildlife managers must engage private landowners.

## Partners for Fish and Wildlife Program Background

Understanding the need to conserve wildlife species in the United States and the important role private land habitat plays, the U.S. Fish and Wildlife Service (USFWS) developed a mechanism to work with private landowners called the Partners for Fish and Wildlife Program (PFW). PFW works on voluntary habitat enhancement and restoration projects with private landowners for the benefit of federal trust resources, such as migratory birds, endangered or threatened species and other declining at-risk species and habitats. The PFW Program is a relatively small program within USFWS and has limited staff, funding, and other resources to accomplish habitat goals.

The PFW Program evolved from early-1970's concerns about low waterfowl breeding populations and annual production in the north-central United States and southern prairie Canada (U.S. Fish & Wildlife Service 2019). Since then, PFW has expanded to every state with priorities extending far beyond waterfowl. PFW is a voluntary, landowner friendly, and results oriented approach to private lands fish and wildlife conservation. In Utah, the first full-time employee delivering habitat restoration on private lands began in 1997 (personal communication, Utah PFW State coordinator Karl Fleming). Currently, two full-time people work in the Utah PFW Program delivering on-the-ground habitat projects with private landowners. With limited personnel and resources, being strategic about private lands conservation requires careful planning and delivery.

## CAPSTONE GOALS

The current PFW R6 strategic plan is set to expire in 2021. The goal of this document is to summarize the need for a strategic plan and provide guiding information not currently found in any other single document. Information in this document can inform development of the 2021-2026 Utah Strategic Plan. This document will also help inform identification of focal species and focus areas (FA's). These focus species and FA's play a major role in the strategic planning process and subsequent plan implementation. Other goals include:

- **SYNTHESIZE STRATEGIC PLANNING EFFORTS AND DEVELOP A GUIDING DOCUMENT FOR UTAH AND OTHER STATES ACROSS THE REGION.**
- **PROVIDE PFW STAFF WITH A PLACE WHERE PROGRAM GOALS, POLICY, PROJECT RANKING FACTORS, AND GENERALIZED STRATEGIC PLANNING PROCESSES ARE IN ONE PLACE.**
- **PROVIDE UTAH PFW STAFF SOME RECOMMENDATIONS AND CRITERIA FOR DEVELOPING FOCAL SPECIES AND FOCUS AREAS DURING THE 2021 STRATEGIC PLANNING PROCESS.**
- **SYNTHESIZE HOW CONSERVATION PRIORITIES ARE DEVELOPED AT THE STATE LEVEL USING NATIONAL AND REGIONAL DIRECTORATE PRIORITIES.**
- **CONCEPTUALIZE DEVELOPMENT OF FOCUS AREAS FOR SPECIES VERSUS ECOSYSTEMS**



- **REVIEW MASTERS OF NATURAL RESOURCES CORE COMPETENCIES RELATED TO UTAH PFW STRATEGIC PLANNING.**

This document provides information and guidance important to Utah's PFW Program planning process now and in the future. The goal of this document is to inform and enhance the planning and implementation process for PFW strategic planning in Utah and potentially throughout other states in the region.

## **PFW STRATEGIC PLANNING POLICY AND ADMINISTRATION**

Finite resources for working on seemingly infinite ecological issues is the status quo for most natural resource managers. When diverting time, energy, personnel, and funding to one issue, this usually means another issue is lacking attention. A strategic approach for how time, money, and effort will be directed is an important part of habitat conservation. Strategic planning is a mechanism for wildlife managers to evaluate and prioritize resources and conservation goals. Strategic conservation plans need to be developed and should provide decision-making processes for delivering targeted conservation while maximizing ecological outcomes.

The *Government Performance and Results Act (1993)* and the *Government Performance and Results Modernization Act (GPRMA 2010)* formalized planning processes in government agencies. One of the crucial elements of GPRMA is each agency has to develop long-term, five-year strategic plans. Strategic plans define goals, objectives, and performance measures defining how the agency will reach their stated goals (Sparling 2014).

Congress recognized the effectiveness of the PFW program and ratified the *Partners for Fish and Wildlife Act* in 2006 (16 U.S.C. 3771-3774). The Act has provided strength and focus to the program, ensuring fiscal responsibility and strategy in how PFW delivers conservation on the ground (U.S. Fish & Wildlife Service Partners for Fish and Wildlife Program 2017). The Act provides for the restoration, enhancement, and management of fish and wildlife habitats on private land through the Partners for Fish and Wildlife Program. The Act also appropriates permanent funding for PFW to operate.

All PFW habitat restoration and enhancement projects must comply with Federal laws and regulations, such as the National Environmental Policy Act; the Endangered Species Act; the National Historic Preservation Act; the Federal Insecticide, Fungicide, and Rodenticide Act; and the Clean Water Act. Program projects must also comply with any applicable State, local and tribal laws and regulations not conflicting with, or are not preempted by, Federal laws and regulations (U.S. Fish and Wildlife Service Manual, section 640 fw1). Working on private lands does not exempt PFW from complying with federal and state law.

The Program is also guided by a national policy (U.S. Fish and Wildlife Service Manual, section 640 fw1) that has identified these objectives:

- **PROMOTE AND IMPLEMENT HABITAT IMPROVEMENT PROJECTS BENEFITING FEDERAL TRUST SPECIES.**
- **PROVIDE CONSERVATION LEADERSHIP AND PROMOTE PARTNERSHIPS**
- **ENCOURAGE PUBLIC UNDERSTANDING AND PARTICIPATION**
- **WORK WITH U.S. DEPARTMENT OF AGRICULTURE (USDA) TO IMPLEMENT CONSERVATION PROGRAMS.**

In addition, the Program policy has established priority ranking factors to help guide project selection. These priorities are stepped down to the state and local levels as field staff collaborate with our stakeholders to further refine habitat priorities and geographic focus areas. National priority ranking factors for the PFW Program are used to assign funding priority status to proposed projects meeting these conditions:

- **IMPROVE HABITAT FOR FEDERAL TRUST SPECIES, INCLUDING MIGRATORY BIRDS; THREATENED AND ENDANGERED SPECIES; INTER-JURISDICTIONAL FISH; MARINE MAMMALS; AND OTHER DECLINING SPECIES.**
- **COMPLEMENT ACTIVITIES ON NATIONAL WILDLIFE REFUGE SYSTEM LANDS, OR CONTRIBUTE TO RESOLUTION OF PROBLEMS ON REFUGES THAT ARE CAUSED BY OFF-REFUGE PRACTICES.**
- **ADDRESS SPECIES AND HABITAT PRIORITIES THAT HAVE BEEN IDENTIFIED THROUGH SERVICE PLANNING TEAMS (WITH OUR PARTNERS), OR IN COLLABORATION WITH STATE FISH AND WILDLIFE AGENCIES.**
- **REDUCE HABITAT FRAGMENTATION OR SERVE AS BUFFERS FOR OTHER IMPORTANT FEDERAL OR STATE CONSERVATION LANDS.**
- **RESULT IN SELF-SUSTAINING SYSTEMS THAT ARE NOT DEPENDENT ON ARTIFICIAL STRUCTURES.**

## **PFW STRATEGIC PLANNING PROCESS**

USFWS is divided into several geographic regions with Utah being in Region 6 (R6) along with Colorado, Montana, Wyoming, North Dakota, South Dakota, Kansas, and Nebraska. Every five years PFW undertakes a strategic planning process to develop state strategic plans and a regional comprehensive plan. Individual states first develop 5-year strategic plans and then the Regional Director reviews state plans before becoming part of the regional comprehensive strategic plan. The current R6 PFW Strategic Plan is set to expire in 2021 with states beginning the new planning process in 2020.



## PFW Program Goals

Within the Partners for Fish and Wildlife Program, five major goals were identified in the PFW National Vision Document and are re-iterated in the current R6 2017-2021 Strategic Plan (USFWS 2006, USFWS 2017).

- **GOAL I: CONSERVE HABITAT – RESTORE AND PROTECT PRIORITY HABITATS TO INCREASE AND MAINTAIN FEDERAL TRUST SPECIES POPULATIONS.**
- **GOAL II: BROADEN AND STRENGTHEN PARTNERSHIPS – ACCOMPLISH OUR WORK THROUGH VOLUNTARY PARTNERSHIPS.**
- **GOAL III: IMPROVE INFORMATION SHARING AND COMMUNICATION – COLLABORATE AND SHARE INFORMATION AND CONCERNS WITH OUR PARTNERS, STAKEHOLDERS, POTENTIAL FUTURE PARTNERS, DECISION-MAKERS, AND OTHERS TO PROTECT, RESTORE, AND ENHANCE TRUST RESOURCES.**
- **GOAL IV: ENHANCE OUR WORKFORCE – THE STAFF OF OUR PROGRAM IS OUR MOST IMPORTANT RESOURCE. MAINTAINING AND SUPPORTING THIS STAFF IS THE KEY TO SUCCESS IN ACHIEVING ON-THE-GROUND RESULTS FOR FEDERAL TRUST SPECIES.**
- **GOAL V: INCREASE ACCOUNTABILITY – MEASURE, ASSESS, AND REPORT ON THE EFFECTIVENESS, EFFICIENCY AND FISCAL INTEGRITY OF OUR HABITAT CONSERVATIONS PROGRAM AND ACTIVITIES.**

## Focus Area Selection

The R6 Strategic Plan for 2017-2021 states the following criteria as part of FA selection:

- **FEDERAL TRUST RESPONSIBILITIES**
- **DIRECTORATE PRIORITIES**
- **INTACT LANDSCAPES (FRAGMENTATION)**
- **THREATS**
- **PUBLIC LAND - PRIVATE LAND PATTERNS**
- **PARTNERSHIP OPPORTUNITIES**
- **PROXIMITY TO SERVICE FIELD STATIONS**

*Federal Trust Responsibilities* are species USFWS has management authority over such as migratory birds and species listed as threatened or endangered under the Endangered Species Act (ESA). *Directorate Priorities* are special conservation priorities coming from the USFWS directorate leadership in Washington D.C. Examples may be Secretarial Orders or special ecosystem priorities. *Intact Landscapes* are considered because conserving large tracts of unbroken habitat requires less human and financial capital while having the highest likelihood of conservation success. Having knowledge about what the *threats* to a species and the likelihood of mitigating these threats is considered when developing FA's. If threats are relatively unknown then mitigating threats driving population declines is difficult. Because PFW

works with private landowners, looking at *Public land-Private Land Patterns* is necessary. In Utah, this is important because private land is limited. *Partnership Opportunities* are a very important part of the FA development process. PFW is a small program, especially in Utah where only two full-time employees implement the program. Having partners to help plan, implement, and fund projects is critical.

The focus area selection criteria are part of several national and regional documents and should be applied to the 2021 strategic planning process. Latitude is given to individual states to consider additional criteria given individual state circumstances, habitats, and partnerships.

The geographic focus area concept and designation in the strategic plan is primarily directed by the identification of focal species. Each focal species has specific habitat requirements which are addressed prior to developing the focus area boundaries. By identifying key focal species, PFW can develop where on the landscape to implement conservation benefiting these species given habitat needs and ecology (USFWS 2017).

## ECOLOGY

### Introduction

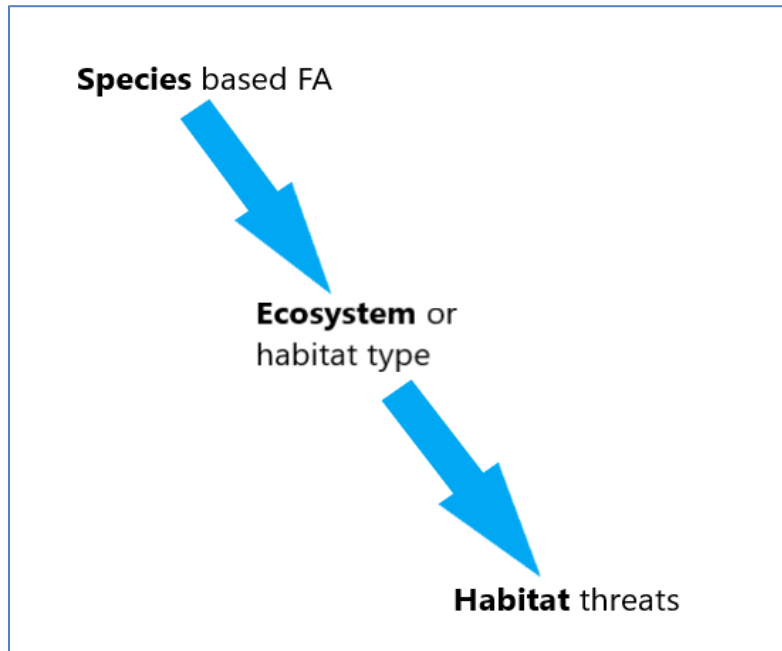
The mission of the USFWS states their purpose is to “work with others to conserve, protect, and enhance fish, wildlife, plants, and their habitats for the continuing benefit of the American people”. Furthermore, the mission of the PFW Program is to “work with private landowners to improve fish and wildlife habitat on their lands.” Understanding the ecology of species and habitats is core to accomplishing these missions.

Conservation of wildlife populations is typically accomplished through preservation and management of habitats upon which they depend (Ruth 2003). A simple meaning of *habitat* is the location in the natural environment where a species lives including physical and biological resources. PFW’s primary goal is to work with private landowners to provide quality habitat for focal species. As previously discussed, FA’s are usually developed following the designation of focal species first.

### Ecosystem versus Species Selected Focus Areas

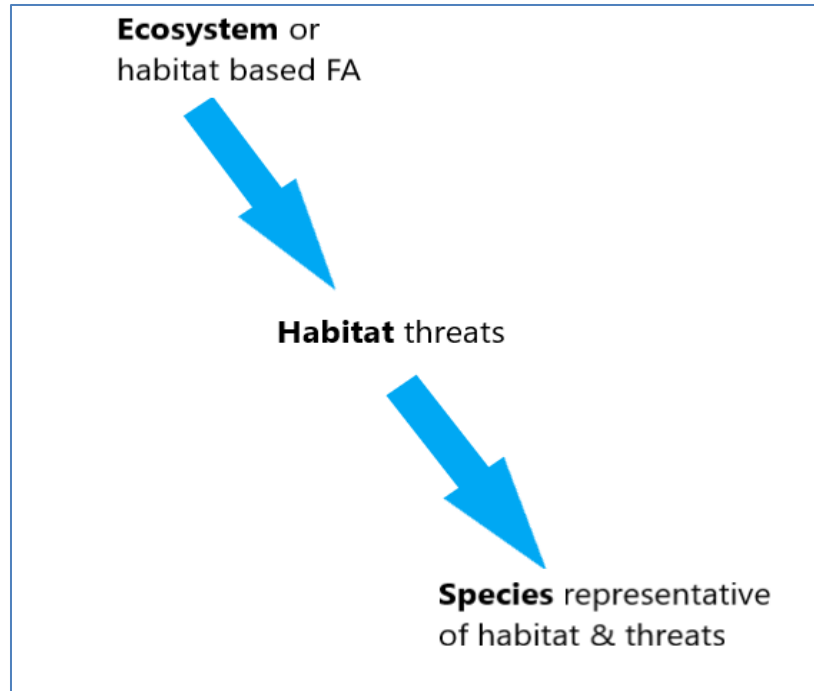
Directorate priorities often focus on conservation of ecosystems rather than individual species first. These ecosystems provide habitat for a diverse suite of species. For example, in 2016 western sagebrush ecosystems and the Rainwater Basin wetlands in Nebraska were identified by USFWS Directorate leadership as priority ecosystems to focus conservation efforts. These key ecosystems directed conservation benefitting a diversity of wildlife species.

As stated, traditionally FA selection is a species down approach where the species are selected based on some preliminary criteria (example of some criteria previously discussed) while looking at other factors such as partnerships, threats, and important habitats. In this species down approach, the focal species are selected first, then focal areas are designated based on those species habitat requirements, and lastly conservation practices are considered to alleviate threats to the species habitat. Conceptually the process resembles this:



**Figure 1. Simplified diagram of species down approach to focus area development.**

In the case where Directorate priority ecosystem guidance comes down to field offices, such as the sagebrush ecosystem conservation previously mentioned, an alternative approach may be considered. This approach begins with ecosystem prioritization. In this ecosystem or habitat down approach, the focal area is selected first, then ecosystem or habitat threats are identified, and lastly focal species are selected to represent the habitat and threats. Conceptually the processes resembles this:



**Figure 2. Simplified diagram of ecosystem down approach to focus area development.**

This simplified conceptualization offers two approaches to developing focal species and focus areas. In either scenario, conservation practices will be identified addressing threats to identified focal species and habitats.

### Focal Species Development Considerations

Selecting focal species during strategic planning processes is the heart of individual state PFW strategic plans and largely directs where FA's will be located and how conservation is delivered. Below are some other considerations when developing focal species for strategic planning.

#### Keystone Species

Keystone species play a critical role in the structure, function, and processes of an ecological community; having a large impact on the landscape, and the biota making up the landscape. The concept's potential significance to conservation biologists is it designates species exerting influences on the associated assemblage, often including numerous indirect effects, out of proportion to the keystone's abundance or biomass (Paine, 1995). Another commonly used definition for keystone species comes from Power et al. (1996) where the authors describe keystone species as, "a species as one whose impact on its community or ecosystem is large, and disproportionately large relative to its abundance." Take beavers as an example. The American beaver (*Castor Canadensis*) has the unique ability to modify the landscape and the

importance of beaver activity to a variety of other species make them a keystone species (Naiman et al. 1988). Beavers directly and indirectly influence the assemblage and abundance of ungulates, plants, insects, macro-invertebrates, birds, water quality and quantity, small mammals, fish, and many species and biotic factors. Predators like wolves and even plants like Mangrove trees are keystones in their respective ecosystems.

### Umbrella Species

Umbrella species also play an important role ecologically. 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 specific habitat requirements can serve as surrogates for the conservation of co-occurring species (Fleishman et al. 2000). Many consider the Greater Sage-grouse as an umbrella species for sagebrush steppe ecosystems in the West. Greater Sage-grouse are an umbrella species because they require a diversity of seasonal habitat types over large areas of western rangelands. Captured under those landscape needs are hundreds of other wildlife species.

### Threatened and Endangered Species

Because of USFWS' management responsibility for species federally protected under the Endangered Species Act, special consideration needs to be given to ESA protected species when developing strategic plans and focal species. As previously stated, approximately half of federally protected species have at least 80% of their habitat on private lands in the United States (U.S. Fish & Wildlife Service 2009). USFWS must work with private landowners for the conservation of federally listed species. PFW is the primary mechanism USFWS has to work with landowners to implement conservation measures for these species of greatest conservation need.

### Candidate Species

Candidate species are species of wildlife for which USFWS has sufficient information on their biological status and threats to propose them as endangered or threatened under ESA, but for which proposed listing regulation is precluded by other higher priority species (USFWS 2001). Candidate species receive no statutory protection under ESA. However, the USFWS is encouraged and is actively engaged in partnership conservation efforts to prevent future needs of listing these candidate species under ESA. The PFW program should take an active look at candidate species in their respective state and consider including these species when developing strategic plans and FA's.



## State Wildlife Action Plans and Other State Sensitive Species

Two stated goals in the 2017-2021 R6 Strategic Plan are; 1) Broaden and Strengthen Partnerships, and 2) Improve Communication through collaboration. An important way PFW can accomplish these goals is to work with their respective state wildlife agencies.

State Wildlife Action Plans (WAP) are conservation plans submitted to USFWS as a condition to receive federal funding through the State and Tribal Wildlife Grants Fund Program. State Wildlife Action Plans can serve as the blueprints for conserving fish and wildlife and preventing endangered species within the state. Within these plans, state wildlife agencies, along with partners, have identified important habitats, landscapes, and wildlife species needing conservation.

In addition to WAP species, PFW may work with state wildlife agency partners to identify other state listed sensitive and threatened species not specifically mentioned in WAP's.

## Conservation Agreement Species

Conservation Agreement Species are species having a specific conservation plan developed in cooperation with U.S. Fish and Wildlife. These species are of special concern because of population declines. These agreements are primarily designed to ensure the persistence of a species within their respective distributions. This is achieved through conservation actions to protect and enhance the species and their habitats within their range and agreements can be developed cooperatively with state, federal, and tribal agencies. The goal of these conservation agreements is to preclude the need for federal protection under ESA by collaboratively implementing a strategy among resource agencies to support conservation, mitigate threats, and ensure persistence of the species (Utah Department Natural Resources 2006).

## Supporting National Wildlife Refuges

National Wildlife Refuges (NWR) were established to serve a statutory purpose targeting the conservation of native species dependent on their lands and waters. NWR's are also mandated to develop strategic plans to guide species and habitat management within their respective refuge. PFW strategic planning processes should give special consideration to nearby NWR's in aligning conservation efforts for habitats and wildlife species.

## Pollinators

A pollinator is an animal that carries pollen from the male part of a flower (stamen) to the female part of the flower (stigma). Most pollinators are insects including bees, wasps, moths, butterflies, flies, and beetles. While in fewer numbers, other wildlife like bats, birds, and even

small mammals can be pollinators. In this discussion when referencing pollinator, we refer to insect pollinators.

Pollinator declines have been a cause of special concern in recent years. Pollinators are essential for the reproduction of many wildflowers and crops. For one out of every three bites eaten by a human, a pollinator played a role (Ingram et al. 1996). Pollinators are necessary part of healthy ecosystems. Estimates of flowering plant dependence on animal pollination vary between 78% and 94% in temperate and tropical ecosystems, respectively (Ollerton et al. 2011). Ecosystems, habitat, and human food production rely on pollinator services.

While historically, PFW Strategic Plans have largely focused on vertebrate wildlife species, elevated consideration for pollinators is warranted due to the increasing research related to pollinator declines.

## HUMAN DIMENSIONS

The stated cornerstones in current and previous strategic plans revolve around the human element (USFWS 2012, 2017). PFW cannot accomplish its mission to “work with private landowners to improve fish and wildlife habitat on their lands” without human relationships. The PFW cornerstones are stated as:

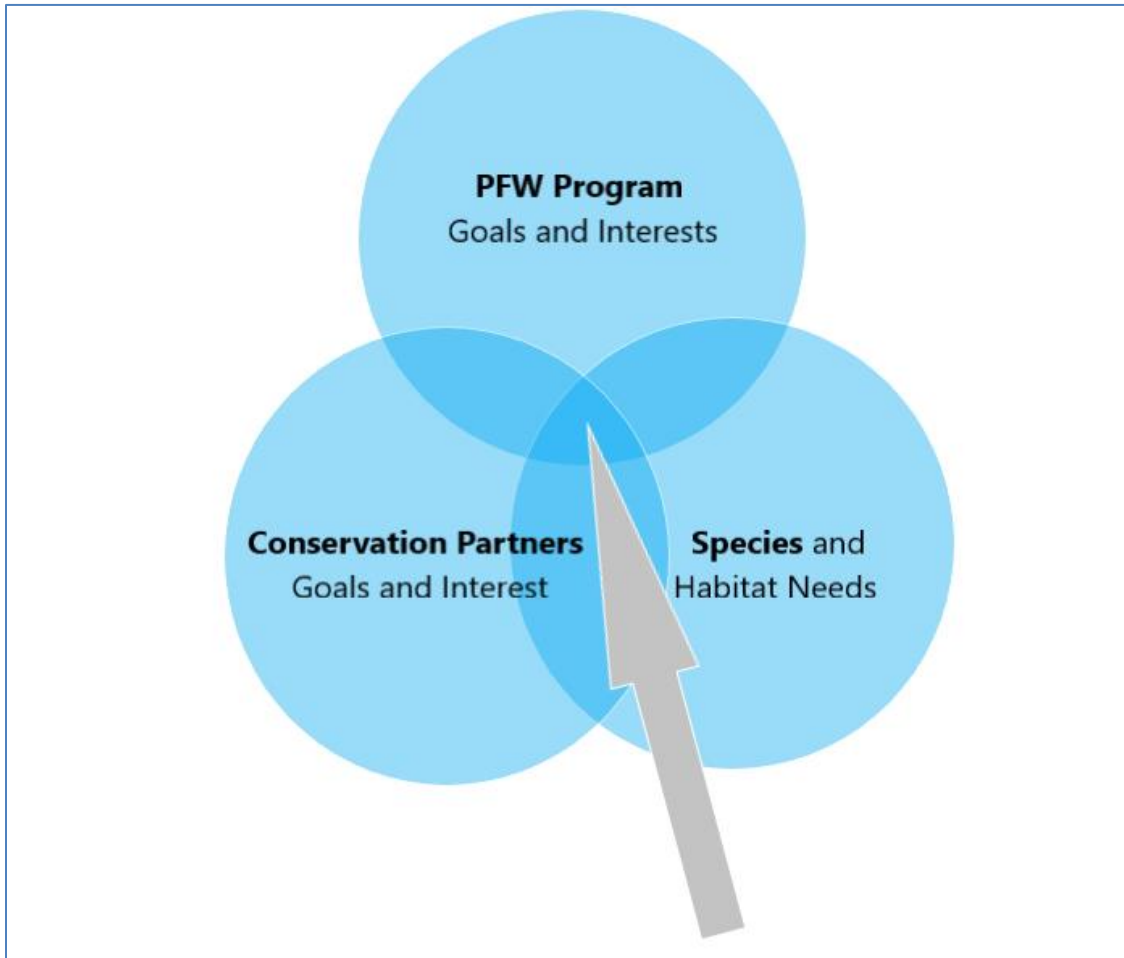
- **TRUST**
- **RESPECT**
- **HONESTY**
- **FLEXIBILITY**
- **FRIENDSHIP**
- **TWO-WAY COMMUNICATION**

These cornerstones are likely to stay the same in the next strategic planning process. Whether the cornerstones change or not, these elements of human relationships should be considered.

Conservation partners play a key role in PFW’s ability to accomplish its mission. PFW is a relatively small program and identifying and working with key partners is important to

successful strategic plan development and implementation of program goals. Key partners include both internal and external partners.

Conservation planning and implementation is a collaborative effort between PFW and these key conservation partners. To maximize conservation effort, outcomes, and share financial burdens, finding common goals and interests is important.



**Figure 3. Finding PFW Program overlap among partners and conservation goals will enhance successful strategic planning and plan implementation (adapted from Utah State University Extension 2012).**

## External Partners

### Landowners

The future of wildlife populations in America is in the hands of private individuals who own and manage forest, agricultural, and rangelands to produce a myriad of goods, services, and

intangible values (Burger Jr. 2006). Landowners are the crux of the PFW Program. Without our landowners and their voluntary habitat conservation, the program would not function.

Landowners differ widely in land management goals. Some have to make a living off the land while other have land purely for recreational and aesthetic values. By using some strategy, you can usually reach key landowners and local leaders to gain an understanding of local culture and values. Listed below are some potential meetings you can attend to gain some key insights about landowner values.

- CONSERVATION DISTRICT MEETING
- AGRICULTURAL MEETING SUCH AS GRAZING BOARDS AND OTHER LAND BOARDS
- COUNTY COMMISSIONER MEETINGS
- LOCAL WORKING GROUPS
- WEED MANAGEMENT GROUPS
- CONSERVATION PARTNERSHIPS
- OTHER LANDOWNER CENTRIC GROUPS IN YOUR AREA OF INTEREST
- IDENTIFY KEY LANDOWNERS TO SIT DOWN FACE-TO-FACE WITH

In USFWS R6, rural areas provide much of the habitat for focal species. Because of this focus areas are largely rural, undeveloped and in agriculture. PFW anticipates continuing to work in these areas, but acknowledging the changing socio-demographics is important as well.

During the past 2 decades, rapid rural population growth, driven in part by urban migrants seeking a relaxed lifestyle (Davis and Nelson 1994, Deller et al. 2001), has transformed private landownership in many areas. For example, in Utah, PFW has worked with private landowners in Southern Utah's desert riparian habitats to benefit Western Yellow-billed Cuckoo (*Coccyzus americanus*) and Southwest Willow Flycatchers (*Empidonax traillii extimus*). The value systems amongst landowners here varies widely. Many landowners are migrants from urban areas as stated, while others are multi-generational families still using the land as income property by producing agricultural products.

USFWS's PFW Program is largely an incentive-based program. PFW provides incentives in the form of financial assistance, planning and project design, and beneficial land management practices. Considering local culture, values and social demographics, past, present, and future will improve successful strategic planning and implementation.

As stated PFW works on a voluntary basis with private landowner to benefit federal trust species. Some of these species include federally protected species under ESA. Some suggest ESA generates an anti-conservation attitude among private landowners and leads some landowners to take preemptive actions against endangered species to avoid potential regulation (Wilcove et al. 1996, Innes et al. 1998, Bonnie 1999, Main et al. 1999, Bean 2002).

Careful consideration of focal species designations during strategic planning should be taken. Landowner perspectives and values towards species may affect PFW's ability to implement conservation practices. Using the previous discussion about species ecologies, selecting a lesser non-threatening species such as an umbrella or keystone species as a surrogate to a federally protected species may be more acceptable to some landowners.

### Government Organizations

Other federal and state government agencies are critical to PFW's successful implementation of the Program. A federal agency PFW closely works with is the Natural Resource Conservation Service (NRCS). NRCS is under the U.S. Department of Agriculture (USDA) and administers Farm Bill programs. A large part of PFW work includes coordinating with the USDA to provide technical assistance in the development, implementation, and evaluation of the Farm Bill conservation programs and initiatives to meet shared conservation goals.

Many Farm Bill programs address natural resource concerns on private land. During the strategic planning process PFW staff should be in close contact with state NRCS staff to understand where potential overlap may occur in habitat conservation. For instance, under the Environmental Quality Incentives Program (EQIP) a special initiative for the endangered Southwest Willow Flycatcher was developed to work with private landowners to implement conservation practices benefitting this songbird. Working with NRCS staff, PFW can cooperatively work with landowners to implement practices for recovering populations of this endangered species.

Collaborating with other federal agencies like Bureau of Land Management and U.S. Forest Service can further inform PFW strategic planning processes. Knowing public land agencies goals, initiatives and other areas of resource focus may help direct PFW focal species and FA development to dovetail private lands work into surrounding public lands conservation. Doing so, and working collaboratively across landownerships, may create a larger conservation footprint and potentially address landscape needs for focal species and habitats.

Working with state wildlife agencies is also key to PFW successfully developing and implementing strategic plans. As previously mentioned, most state wildlife agencies have developed Wildlife Action Plans. These plans serve as blueprints for conserving fish and wildlife and preventing endangered species within the state. Within these plans, state wildlife agencies, along with partners, have identified important habitats, landscapes, and wildlife species needing conservation. Selecting focal species and developing focus areas that overlap with state priorities will provide more opportunities to further conserve wildlife species and their habitats in a state.

## Non-governmental Organizations

Non-governmental organizations, or NGO's, are private organizations not formally part of any government agency. PFW has worked across the country with numerous NGO's to carry out habitat conservation efforts. NGO's can range from local community-based organizations up to large national organizations. The same consideration and collaboration should be given to NGO's as other partners when developing a strategic plan. The role NGO's play in conservation has continued to grow over the last three decades (McKinnon et al. 2015). The relationship PFW has with its NGO partners plays an important part to implementing on-the-ground conservation. Continuing to foster these relationships with NGO's is very important.

## Internal Partners

### Refuges

National Wildlife Refuges are the crown jewel of the USFWS. Today, there are 567 national wildlife refuges covering every habitat type imaginable. Many PFW offices are located in or near a NWR. As previously stated, NWR's are also mandated to develop strategic plans to guide species and habitat management within their respective refuge. PFW strategic planning processes should give special consideration to nearby NWR's in aligning conservation efforts.

### Ecological Services

Ecological Services (ES) is responsible for administering laws such as the Migratory Bird Act and Endangered Species Act (ESA). ES works with government and non-government entities to conserve, protect, and recover declining wildlife species. Because ES is responsible for administering ESA, closely coordinating the development of focal species and FA's will help further the mission of USFWS as a whole. ES may provide valuable information on declining species, current federally protected species, threats, and areas of federally designated 'critical habitat' for specific species of wildlife.

## ECONOMICS

### Economic Costs

Providing habitat on private lands comes at an economic cost to the landowner, another party (i.e. government, conservation group) , or potentially both. As an example of the cost of wildlife conservation to the government, consider the 2019 federal budget for USFWS. The 2019 President's budget for FWS totals \$2.8 billion, including current appropriations of \$1.2 billion. The budget includes \$1.6 billion available in permanent appropriations, most of which will be provided directly to States for fish and wildlife restoration and conservation. Funding

included \$35.8 million to support voluntary, citizen, and community-based conservation on private lands through the Partners for Fish and Wildlife Program (USFWS Bureau Highlights 2019).

During fiscal year 2018, the R6 PFW program completed 483 projects with individual private landowners and provided \$1,535,007 of PFW program base funding for on-the-ground private lands projects. These funds were leveraged with \$7,705,766 partner dollars, and an additional \$3,233,996 in-kind match. For every dollar R6 PFW program spent, they received more than \$5 dollars of non-PFW program sources which resulted in a 1:5, PFW:Non-program match. With the in-kind match of landowners and other partners a 1:7, PFW:Non-program match, was obtained (USFWS FY2018 Annual narrative 2019).

During fiscal year 2018 in Utah, PFW completed 23 projects with landowners and provided \$144,018 of Utah PFW program base funding for on-the-ground private lands projects. These funds were leveraged with \$995,984 partner dollars, and an additional \$46,470 in-kind match. For every dollar Utah PFW program spent, they received nearly \$7 of non-PFW program sources which resulted in a 1:7, PFW:Non-program match. With the in-kind match of landowners and other partners, there was more than a 1:8, PFW:Non-program match (unpublished Utah PFW data).

Fiscal Year: 2018										
Accomp Type	1121 Cash	1121 In-Kind	Total 1121	1124 Cash	1124 In-Kind	Total 1124	Non Program Service Dollars	Partner Cash	Partner In-Kind	Total Partner
Assessment	-	-	-	-	-	-	-	-	-	-
Enhancement	\$20,805.00	\$0.00	\$20,805.00	\$0.00	\$0.00	\$0.00	\$0.00	\$310,848.00	\$11,500.00	\$322,348.00
Establishment	-	-	-	-	-	-	-	-	-	-
Maintenance / Follow-up	\$1,001.00	\$0.00	\$1,001.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.00	\$0.00	\$1.00
Protection	-	-	-	-	-	-	-	-	-	-
Re-Opened	-	-	-	-	-	-	-	-	-	-
Restoration	\$122,212.00	\$0.00	\$122,212.00	\$0.00	\$0.00	\$0.00	\$0.00	\$685,135.00	\$34,970.00	\$720,105.00
<b>TOTALS</b>	<b>\$144,018.00</b>	<b>-</b>	<b>\$144,018.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$995,984.00</b>	<b>\$46,470.00</b>	<b>\$2,654,197.00</b>
<b>GRAND TOTALS</b>	<b>\$144,018.00</b>	<b>-</b>	<b>\$144,018.00</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$995,984.00</b>	<b>\$46,470.00</b>	<b>\$1,042,454.00</b>

**Table 1. Fiscal year 2018 Utah PFW Program project financials.**

The economic costs shown above demonstrate the importance of partnerships discussed in the previous human dimensions portion of this document. Wildlife conservation is a financial burden. Some funding comes through appropriations in the President’s budget down to PFW field offices. A greater portion of those costs comes through working collaboratively with

partners. Strategically aligning priorities such as focal species and FA's during strategic planning will maximize PFW's financial ability to implement habitat conservation.

## Economic Benefits

Through the PFW Program, USFWS and private landowners work to implement local conservation strategies identified in strategic plans. In turn, these restored areas provide valuable benefits, including providing clean air and water, supporting tourism and recreation, protecting communities from flood damage, and supporting America's agricultural production by conserving soil, controlling pests, and benefitting pollinators. Furthermore, money spent in support of restoration projects creates more jobs, generates tax revenues, and stimulates economic activity as wages and purchases flow through the economy. Nationally, for every one dollar PFW contributed to a project in 2018, \$15.70 was generated in economic returns (USFWS Budget Justifications 2019).

The PFW Program strives to provide rural landowners with conservation practices to improve their ability as land stewards that keep landscapes healthy and economically viable. By improving land management practices PFW is investing in the future of healthy open landscapes for people and wildlife. Conservation practices such as seeding, fencing, water control structures, and livestock watering are examples of practices that can improve landscape health and landowner economics. By helping to keep landowners economically viable, it protects the land from being sold and developed.

Furthermore, private landowners are taking advantage of the wildlife recreation and tourism industry to supplement property income. By doing this, wildlife becomes an additive resource rather than extractive resource. For instance, hunting has become a substantial source of supplemental income to many landowners through selling hunting permits, trespass fees, or leasing hunting rights on their land. Landowners can also financially take advantage of hunting through public state access program payments. For example, in Utah the state wildlife agency makes annual payments to landowners who sign-up their properties under a public access program for public fishing and hunting access.

Conservation can provide economic benefits in other forms as well – for example, property values surrounding refuges are higher than equivalent properties elsewhere and developed areas with green spaces are more valuable to people than areas without such spaces (Pimentel et al. 1997). In addition, pollinators, including bees and butterflies, are necessary to pollinate human food crops. Globally, insects supply pollination services, valued at \$215 billion U.S. dollars in 2005, to about 75% of crop species and enable reproduction in up to 94% of wild flowering plants (Vanbergen 2013).



Of all the wildlife in the United States, birds attract the largest following. In 2011, there were 47 million birdwatchers 16 years of age and older in the United States, which amounts to about 20 percent of the population (USFWS Birding in the United States 2013). Bird watching and other wildlife watching can be an economic boost to farm and ranch incomes wanting to diversify revenue.

During the strategic planning process, considerations may be given to species and threats where conservation practices are dually beneficial to landowners and wildlife. When conservation practices appear to come at an economic cost to landowners finding trade-offs is important. For example, riparian fencing is often used to exclude or minimize grazing in sensitive habitats. Landowners can perceive this as a negative cost in lost forage for livestock. Biologist should look to off-set these perceived costs by improving other aspects of a landowners operation. In this example, the biologist and landowner can look to improve forage conditions away from the riparian area through seeding or invasive species control.

The importance of communicating these diverse economic benefits habitat conservation can provide landowners is important for PFW in accomplishing its mission of habitat and wildlife conservation on private lands. Often, acceptance of implementing conservation practices on private lands is closely tied to positive landowner economics. Field staff must understand how to evaluate project economics and articulate economics to landowners and other partners.

## DISCUSSION

The intended purpose of this document is to provide PFW staff with a place where program goals, policy, project ranking factors, and generalized strategic planning processes are in one place. Secondly, this document should provide Utah PFW staff some generalized recommendations and criteria for developing focal species and focus areas during the 2021 strategic planning process. This document may be shared with other states in the region and used as seen fit by program coordinators and field staff.

This document needs to be treated as a living document. This means as the program adapts goals, policy, ranking, etc., this document can and should be updated to best meet the current needs of PFW Program strategic planning implementation. This document is far from being fully comprehensive of every factor deserving consideration when developing a strategic plan. This document is a good jumping off point to provide background information to staff developing strategic plans and provides recommendations to consider when developing state priorities and focus areas.

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