



Focus on

HEALTHY LANDSCAPES

Photos, left to right: Upland sandpiper, Shovel-nose sturgeon, Greater sage-grouse, Northern bobwhite quail, Black-footed ferret, Greater prairie chicken

Any comments or suggestions can be emailed to kate_miyamoto@fws.gov.

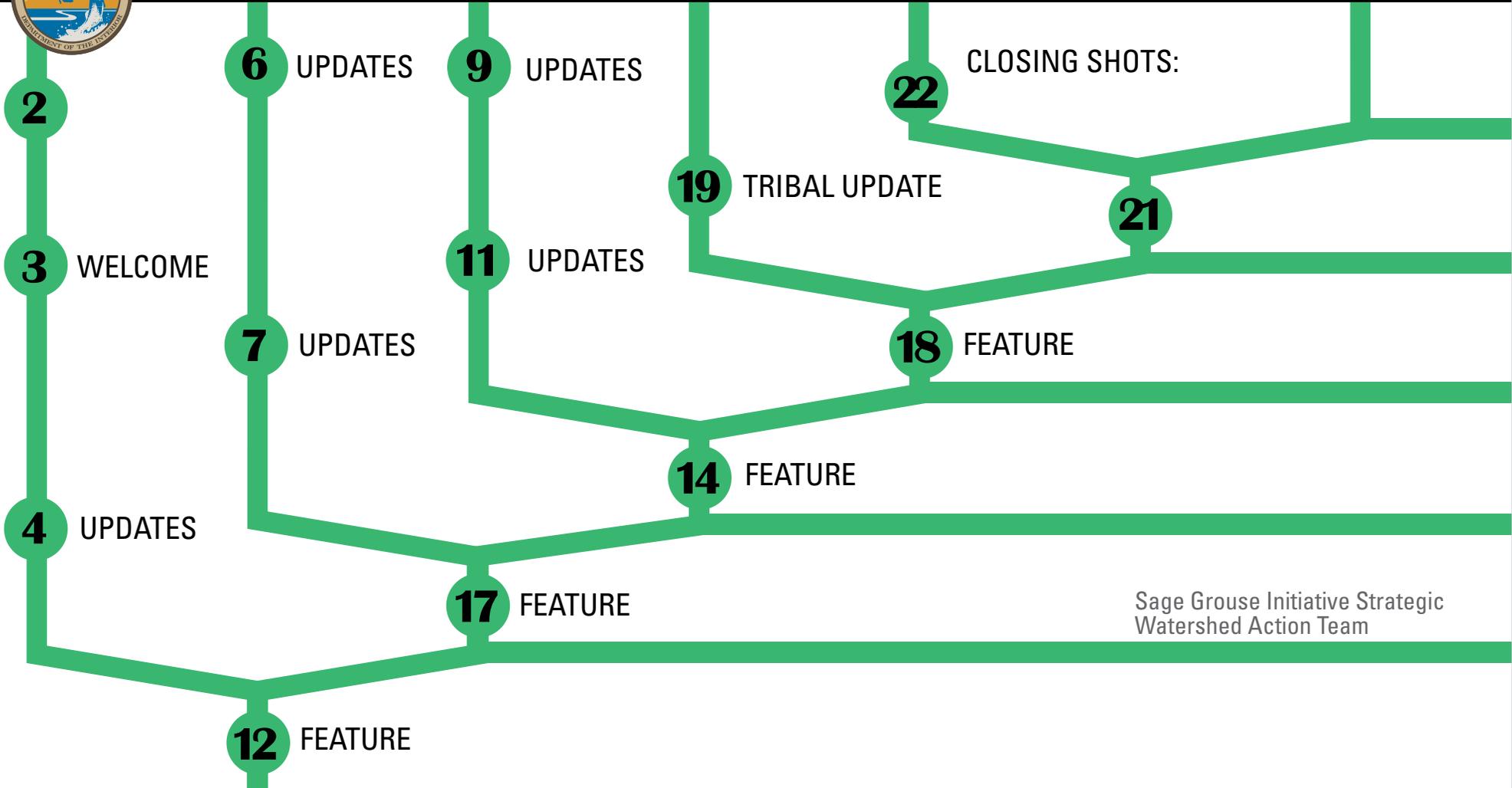
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The mission of the U.S. Fish and Wildlife Service is working with others to conserve, protect, and enhance fish, wildlife, plants and their habitats for the continuing benefit of the American people.



U.S. Fish and Wildlife Service What's inside

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Sage Grouse Initiative Strategic
Watershed Action Team



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U.S. Fish and Wildlife Service Welcome



Regional Director's Corner

I spend a lot of time nowadays thinking about what the future holds for my children and yours. Thinking about whether they will get to experience the same kind of wild places that have touched my heart and generated a sense of wonder about the diversity and beauty found on earth. I recently returned from a visit to the Centennial and Big Hole Valleys in Montana, and heard the voice of these places, first because of the raw beauty of these landscapes, but soon thereafter because of the good people I met. I was there to see firsthand, the efforts to conserve the Arctic grayling, a magnificent colorful fish of these mountain streams. Declining in recent times due to a variety of factors, these fish had come under consideration for Endangered Species Act protection.

Here's what I saw:

- Ranchers who took a risk and entered into a partnership with the state and federal government to undertake projects that benefit Arctic grayling.
- Landowners willing to sacrifice some irrigation water in drought years for the good of the community, and to ensure there was enough water in the river to support the grayling.
- State and federal agency personnel who worked together, pooling skills, ideas, and resources, AS IF THEY WERE ON THE SAME TEAM! And they truly are one team, with a common goal, much camaraderie and success.
- And, ultimately, a fish that was increasing in numbers and connected to more of its historical habitat than before this partnership began.



Arctic grayling

I heard some common themes from landowners that I had the good fortune to meet. I heard about the history or evolution of this project, and it was clear that today's achievements were built on a foundation of communication and trust. They told me "We were a little skeptical of this thing called a 'candidate conservation agreement with assurances' (also known as a CCAA), but agency

staff took the time to get to know us, answer our questions, and work within our constraints on the ranch." I heard that, over time, these agency staff became trusted friends and colleagues of these landowners. Landowners knew that these agency reps cared not only about the fish, but about their needs and interests.

I heard three key reasons why this kind of partnership is working:

1. **VOLUNTARY:** The agreements are totally voluntary. Landowners know they can opt out at any time if they want to.
2. **FLEXIBLE:** Agency staff are very flexible in how landowners can meet the needs of the fish while meeting their needs of their operation.
3. **FINANCIAL ASSISTANCE:** Agencies were able to provide financial assistance for habitat improvement projects that were not likely to occur without assistance.

Ranchers talked to me about how the new, cost-shared, irrigation structures on their ditches allow for a more efficient use of available water. They told me it was easier to water cattle in the winter with new or improved stock water tanks, and had less maintenance and labor on irrigation ditches that now had quality head gates and control structures. In addition to all that, I clearly heard the pride they take in healthier riparian areas that support more wildlife, their appreciation in being able to give back to the land, and their desire to pass on a healthy watershed to future generations.

It is not surprising that the grayling really represents the full complement of native fish in these streams, and the birds and animals that shelter in the riparian willows. I expected the Arctic grayling to be a surrogate for other wildlife, but what I didn't expect was its role in bringing people together. As I returned to Denver, I was filled with pride and hope and optimism. Pride in the Service and state of Montana staff who have built an incredibly high functioning CCAA team that is a part of these communities. Hope and optimism that this kind of partnership is ensuring a viable future not only for the Arctic grayling, but for the people that call the Big Hole Valley, home. It is also a partnership that is sustaining a magnificent, wide open space that may touch the hearts of our children far into the future. ■

-Noreen Walsh, Regional Director



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U.S. Fish and Wildlife Service Updates

by Meg Dickey-Griffith, Public
Affairs Intern



Grizzly bear

Montana Grizzlies on the Road to Recovery

While the Yellowstone grizzly bear population (*Ursus arctos horribilis*) is well known, the largest population in the lower 48 states actually lives in northwestern Montana, on the border of Canada. Here, you can find close to 1,000 grizzlies living in several national parks and wilderness areas.

The grizzly bear, an iconic species evocative of the rugged landscapes of the Wild West, once roamed much of the western and midwestern United States, from the northern border down to Mexico. Grizzlies can reach one-thousand pounds and eight feet tall when standing on their hind feet. Despite their intimidating size and speeds of up to forty-five miles per hour, most grizzly bears are shy and elusive. Their varied diet includes plants, roots, berries, insects, and occasionally small mammals and fish. The flexibility of their omnivorous diet has allowed them to survive and adapt to changes in their food sources over time.

In 1800, an estimated 50,000 grizzly bears lived in the western United States, but by the 1930s, only a few hundred survivors remained. The species' decline was the result of human intolerance of bears, aggressive killing campaigns, and relentless habitat encroachment. For years, the survival of the population hinged on a few remaining bears in Yellowstone and Glacier National Parks, which provided a refuge for grizzlies to persist as habitat disappeared until 1975 when they were listed as threatened under the Endangered Species Act (ESA). By then, only six out of the thirty-seven grizzly populations existing in 1922 remained in the west.

The species has recovered to more than 1,700 wild bears in the U.S., despite naturally low reproductive rates. Today, grizzlies occur in five populations spread across Wyoming, Washington, Idaho, and Montana. *(continued)*

Montana Grizzlies on the Road to Recovery



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U.S. Fish and Wildlife Service Updates

Montana Grizzlies on the Road to Recovery



Grizzly bear family at the National Elk Refuge

Of these areas, the Northern Continental Divide Ecosystem, located in northwestern Montana, is home to the largest number of grizzlies. The Northern Continental Divide grizzlies are thriving—growing approximately three percent each year. Grizzlies here have even begun to move outside the designated recovery zone.

For the past thirty-two years, Dr. Chris Servheen, with perseverance akin to that of the bear itself, has spearheaded conservation efforts as the Grizzly Bear Recovery Coordinator for the Service. Servheen coordinates the efforts of a diverse team of partners committed to grizzly bear conservation, including the states of Montana, Wyoming, Idaho, and Washington, the U.S. Forest Service, National Park Service, Bureau of Land Management, several Tribes, and provincial authorities from British Columbia and Alberta. Conservation efforts have included successful habitat management, research, education, and outreach programs.

As the Northern Continental Divide population moves closer toward recovery, we recognize the remarkable results that effective protection measures and conservation efforts carried out by states, other federal agencies and the Service. On the verge of extinction in the lower 48 states just thirty-five years ago, grizzly bears are slowly and steadily re-populating some of their historic range.

As grizzlies rebound, Servheen says, "...challenge for the future is balancing the needs of bears with the needs of people." Human-bear conflicts have risen as bear populations expand and human activity in bear habitat increases. Americans will need to keep informed and aware of grizzlies to enable a successful and permanent recovery of one of the nation's most iconic animals. ■

Montana Grizzlies on the Road to Recovery



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U.S. Fish and Wildlife Service Updates

Northern Rocky Mountain Wolf Report

The Service, in collaboration with other federal, state and Tribal agencies, announced the 2013 Northern Rocky Mountain (NRM) Gray Wolf Population numbers in April 2014. This annual report is conducted as part of the Service's work to monitor the wolf population to ensure that it continues to exceed recovery goals under professional state management, and no longer requires federal protection under the Endangered Species Act (ESA). As of December 2013, there were at least 78 breeding pairs, and 1,691 wolves within the NRM area. The wolf population remains well above the recovery levels identified by the Service and partner biologists in the recovery plan. Minimum management targets are at least 45 breeding pairs and at least 450 wolves across the NRM area.

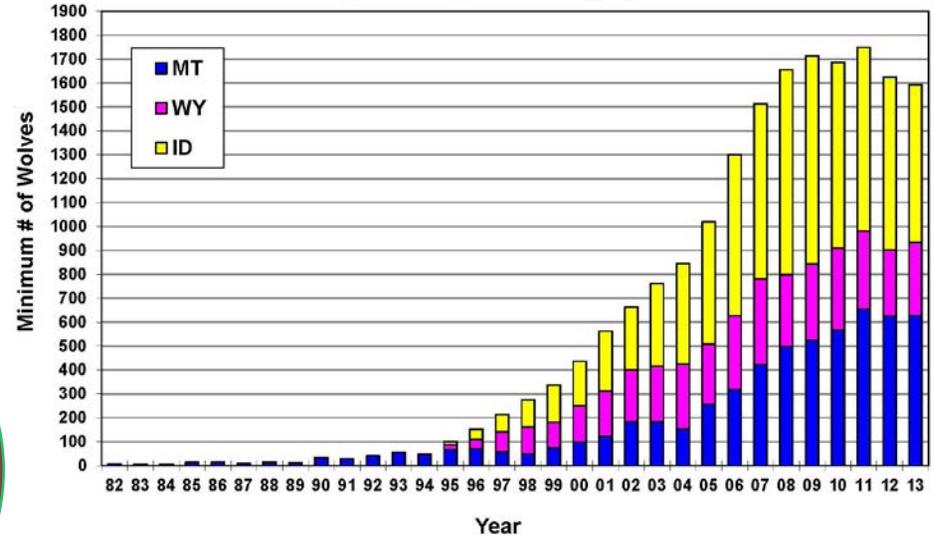
Long-term, the Service expects the entire NRM population to maintain a long-term average of around 1,000 wolves. These wolves represent a 400-mile southern range extension



Northern Rocky Mountain Wolf Population Numbers

Inset photo: Gray wolf

Figure 7a. Northern Rocky Mountain Wolf Population Trends in Montana, Idaho and Wyoming: 1982-2013
(excludes Oregon and Washington)



of a vast contiguous wolf population that numbers over 12,000 wolves in western Canada and about 650,000 wolves across all of Canada and Alaska. The Service and partners will monitor wolves in the Region for at least five years to ensure that the population's recovered status is not compromised, and if relisting is ever warranted, will make prompt use of the ESA's emergency listing provisions. ■

To read the full report visit www.fws.gov/home/wolfrecovery and www.westerngraywolf.fws.gov.

The report is a cooperative effort by the Service, Idaho Department of Fish and Game, Montana, Fish, Wildlife & Parks, Wyoming Fish and Game, the Nez Perce Tribe, National Park Service, Blackfeet Nation, Confederated Salish and Kootenai Tribes, Wind River Tribes, Colville Tribe, Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife, Utah Department of National Resources, and USDA Wildlife Services.



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U.S. Fish and Wildlife Service Updates

by Angela Kantola, Deputy Director
for the Upper Colorado Endangered
Fish Recovery Program



Upper Colorado Endangered Fish Recovery Program

Electrofishing is a common non-lethal method biologists use to collect fish. Researchers in the Upper Colorado and San Juan recovery programs use electrofishing to monitor fish populations and to remove detrimental nonnative fishes from the rivers. Typically, a boat-mounted generator creates electrical currents that pass through partially submerged positive (anodes) and negative electrodes (cathodes), producing a field of electricity in front of the boat. Appropriate settings on the electrofishing box elicit “taxis” (pronounced tak-sis), an involuntary muscular response that causes fish to swim toward the anodes.

Electrofishing involves a complex and dynamic mix of electrical theory, water quality, mathematics, and fish physiology and behavior. In light of these complexities and the need to minimize harm during sampling, biologists working on the endangered Colorado River fishes have monitored the effects of electrofishing on the fishes and electrofishing efficiency for many years.

Pat Martinez and Larry Kolz (retired Service employees) recently collaborated with field biologists to standardize the Recovery Program’s entire electrofishing fleet of aluminum-hulled jon-boats and whitewater rafts. This work provides scientific measurements to

Electrofishing Standards in Place

support intensive electrofishing as a safe, effective, and efficient method to sample endangered, native, and nonnative fishes. Standardization requires a comprehensive understanding of electrical principles, especially of power transfer theory (how electrical power is transferred to fish). Electrofishing studies recognize a relationship between fish injury and the power (watts) of exposure per pulse of electricity. This can be compared to safety standards for livestock fence chargers that limit the magnitude of the electrical current and the time duration of the pulsed waveform. *(continued)*

Service biologists electrofishing



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Together, Larry and Pat refined and simplified the application of the power transfer theory specifically for Recovery Program electrofishing boats and rafts. Their model compensates for the need to deliver constant electric power to fish in waters with differing conductivities (Conductivity is a measure of water's ability to pass electrical current.) This is important because the recovery programs' researchers electrofish in many river reaches with different water conductivities, and those conductivities also vary by season.

Working with field crews over the past few years, Larry and Pat measured electrode resistance and power output characteristics of boat electrofishing equipment. They then graphed the relationship between the variations in resistance for the electrode configurations used by the Recovery Program. The graphs also identify the approximate required electrofishing power, the voltage and current required to successfully capture fish at any water conductivity. This information has been made available in tables that allow field crews to quickly analyze conditions and appropriately adjust their equipment without making manual calculations.

Electrofishing Standards in Place

Standardizing the Recovery Program's electrofishing fleet allows better comparison of catch data and may improve the catch of target fishes, while reducing potential injury to fish. As project leader for the Colorado River Fishery Project (CRFP) in Grand Junction, Colorado, Dale Ryden supervises crews on both the Colorado and San Juan rivers. Dale says, "Standardizing our electrofishing equipment and procedures simplified field crew training due to the similar set-up of electrofishing boats and rafts. It also improves our ability to interchange crew members." Colorado State University Larval Fish Laboratory researcher Cameron Walford says: "A huge pat on the back to Pat and Larry for the easy-to-use guidelines for setting our new electrofishing units." ■



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U.S. Fish and Wildlife Service Updates

by Steve Segin, Public Information Officer

Service Teams with FEMA, CO Counties to Help Flood Victims and Preble's Recovery

As Colorado continues to clean up from the historical flooding of September 2013, the Service is working with the Federal Emergency Management Agency (FEMA), other Federal agencies, county governments and Colorado citizens to keep the recovery efforts underway, while protecting and rehabilitating habitats for one special and rare mouse—the federally listed Preble's Meadow Jumping Mouse, or 'Preble's' (*Zapus hudsonius preblei*).

Listed as threatened in 1998 under the Endangered Species Act (ESA), this unique and rare mouse lives only in lush riparian (streamside) habitats that grow near streams, rivers, and other water bodies along the Colorado Front Range and southeastern Wyoming. After those heavy rains and flash floods, many habitats where the Preble's live were affected—some 60 percent of its occupied range and 70 percent of its designated critical habitat in Colorado.

"Many Preble's may have drowned where the flash floods were large, unpredictable, or destructive," said Craig Hansen, wildlife biologist at the Colorado Field Office. "So far, we have worked with our partners on more than 100 flood recovery projects that help people impacted get repairs done and move forward with the restoration," Hansen added.

Preble's Meadow Jumping Mouse



Inset: Preble's meadow jumping mouse



Riparian habitat

Despite the total team effort, some inaccurate information continues to make the rounds, suggesting that the ESA and the Preble's Meadow Jumping Mouse were still delaying flood recovery projects in Colorado.

"We are working very closely with FEMA and other partners to make sure important flood recovery projects proceed on time while ensuring no harm occurs to species listed under the ESA," said Noreen Walsh, Regional Director for the Mountain-Prairie Region. "Let me be clear: the Preble's and other federally listed species have not, and will not, delay flood recovery efforts in Colorado," Walsh added.



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Service Teams with FEMA, CO Counties to Help Flood Victims and Preble's Recovery

Specifically, the Service and FEMA collaborated with other federal, state and local partners to expedite the processing, review and funding of Colorado's flood recovery measures, while still ensuring compliance with regulatory requirements under the ESA for threatened and endangered species, including the Preble's. Consultation between the two federal agencies was required for flood recovery projects within occupied and designated critical habitat for the federally threatened mammal, and other listed species under the ESA.

The flood's effects on Preble's habitat were significant, especially in more mountainous (montane) habitats of the Front Range foothills. And despite solid progress in the last several months, it's still an area of concern for USFWS wildlife biologists. "Preble's densities were low before the flood disaster, especially in the montane habitats at the westernmost extent of the Preble's range, so the floods may have significantly reduced rangewide population numbers," said Hansen.

However, in areas where flood intensities were low or the floodwaters remained within the floodplain, there is good news. "The Preble's is mobile, a good swimmer, and evolved under historic flood regimes, so individuals could have reasonably been able to disperse upslope or outside the floodplain to escape rising floodwaters," said Hansen.

Preble's Meadow Jumping Mouse



“Let me be clear: the Preble's and other federally listed species have not, and will not, delay flood recovery efforts in Colorado.”

Additionally, the floods ended before the Preble's entered winter hibernation and after the breeding seasons, so most Preble's were likely active and able to disperse from low intensity floodwaters.

“This is yet another good news story for the Service and the State of Colorado,” said Walsh. “When concerned partners come together to work hard and do the right thing for everyone, it's a benchmark for others to see,” she added.



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U.S. Fish and Wildlife Service Updates

by Otto Jose, Wildlife and Sport Fish Restoration Program

Wildlife and Sport Fish Restoration Program

The Wildlife and Sport Fish Restoration Program (WSFR) implemented a new accomplishment reporting system named Wildlife TRACS, an acronym for Wildlife Tracking and Reporting Actions for the Conservation of Species. The system is a web based tool to allow state partners to track their performance accomplishment of on-the-ground fish and wildlife conservation paid for in part by WSFR grant programs (In FY13, \$140 million was provided to our states by the Mountain-Prairie Region WSFR program). The Region's WSFR program kicked off an introductory training for state partners at the State Coordinator's meeting held in Rapid City, South Dakota last spring, and assisted in a national effort to train state partners in reporting their accomplishments in the new system. There have been six classes conducted on the Denver Federal Center, which included staff from all eight of our states as well as several states outside of the Region in order to bring all parties up to speed with the new system. ■



Sport fishing



Inset photo: Region 6 employees at the Fisheries Academy



WSFR program staff and state partners

Wildlife and Sport Fish Restoration Program and Fisheries Academy

Fisheries Academy

by Joanne Grady, Aquatic Invasive Species Coordinator

The Service was proud to send four nominated candidates to the 2014 Fisheries Academy; Mitch Adams of D.C. Booth National Historic Fish Hatchery (NFH), Chris Hooley of Gavins Point NFH, Chris Kennedy of the Colorado Fish & Wildlife Conservation Office, and Aaron Webber of the Colorado River Fish Program.

The mission of the Fisheries Academy is to inspire and educate future leaders of the Fish and Aquatic Conservation Program. Using a team approach to learning, collaborative problem solving, and creativity, the Academy strives to foster leadership, broaden perspectives, and expand the capacity of students to address the key conservation challenges that the Service faces today.

"The Fisheries Academy taught me how vital communications is to our mission. I now have a greater appreciation for the scope of work that the Fisheries Program is doing. It was amazing to see how much is being done with so little." - Mitch Adams

"I learned the breadth of activities and programs the Fisheries and Aquatic Conservation is involved in to protect our fisheries resources. Hearing what all my classmates and what each of the regions are involved in was very enlightening." - Chris Kennedy



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FEATURE: HEALTHY LANDSCAPES

Surrogate Species Update

by Ivy Allen, Tribal Communications Specialist

At the end of January, two technical team meetings wrapped up between the Service and the Kansas Department of Wildlife Parks and Tourism (KDWP) and additional outside experts. Working side-by-side with partners, a set of possible surrogate species was proposed for testing the applicability of this approach along with a possible set of species for the Flint Hills landscape.

The Flint Hills are a special landscape, marking the western edge of the tallgrass prairie, one of the most altered landscapes in the Nation. There is less than four percent of the original native prairie remaining intact and approximately three-fourths of the remaining native tallgrass prairie lies within the Flint Hills. This ecoregion also supports many grassland birds, contains the largest concentration of pristine freshwater streams in Kansas, and supports over eighty species of native fish and shellfish. All of these unique characteristics make this an appropriate landscape to begin work on this approach.

During the workshops, the Surrogate Species Technical Team evaluated a host of species and developed a preliminary list of surrogates for consideration by the Surrogate Species Oversight Team. Over twenty-five people discussed and strategized on the proposal and provided input. As the team worked through the deliverables, they defined the gaps of knowledge that exist in relation to limiting factors, species population performance, and stressors, and took into account on-the-ground conservation actions, which can address some of the limiting factors. The team also assessed the status of population objectives and will provide a list of inventory and monitoring needs along with defining the financial and human resources it will take to accomplish these objectives. After finalizing the feedback received during the workshops, they made revisions to the proposed surrogate report and submitted it to the Regional Surrogate Species Oversight Team. *(continued)*

Inset photo: Freckled madtom / © Clint Robertson

HEALTHY LANDSCAPES

Flint Hills grassland landscape



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FEATURE: HEALTHY LANDSCAPES

Surrogate Species Update

Over 2,000 comments were received from employees and the public on the Surrogate Species Technical Guidance. Based on those comments, the drafting team revised the guidance, and after necessary changes were incorporated into the document, it was submitted for peer review. The final guidance document will likely be released in August of 2014.



Planning efforts in the Flint Hills will assist KDWPT and the Service with identifying procedures and uncertainties in the surrogate approach so that as the effort is implemented, there will be the benefit of lessons learned. This effort by KDWPT and the Service provides an important feedback loop on the guidance, ultimately through the lens of implementation and the Strategic Habitat Conservation cycle.

A strong partnership approach will continue to be vital to success. The Service is fortunate to have an existing base of research and a common interest with our state partner in the Flint Hills.

As the Service implements this new facet of Strategic Habitat Conservation, there will be unknowns and challenges; however, as a team we will find ways to tackle them and move forward. ■



Inset photos: Kansas workshop, Northern bobwhite quail / © David Ellis

HEALTHY LANDSCAPES

Konza prairie / © Steve Torbit



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FEATURE: HEALTHY LANDSCAPES

Why Care About America's Sagebrush?

The sagebrush ecosystem of the western United States is to the casual eye an arid and monotonous expanse of sagebrush (*Artemisia tridentata* Nutt.). Yet, this "flyover country," which may appear devoid of life and thus immune to human impact is, in fact, a widespread ecosystem type in the United States, and teems with wildlife and also contains other important natural resources that fuel our nation's economy. Across America's sagebrush landscapes, a diverse array of partners is working to balance development of these resources with sustainable populations of native wildlife and arrest the decline of this vital place.

Functionally, sagebrush serves as a nursery area for a multitude of wildlife species including pygmy rabbits, sagebrush voles, sagebrush lizards, golden eagles, pronghorn, mule deer and elk. While the diversity of wildlife in the sagebrush ecosystem may be less than other ecotypes such as forests, many species found in sagebrush, such as the Greater sage-grouse (*Centrocercus urophasianus*) live nowhere else in the world.

Beginning with the Native American peoples who used the sagebrush landscapes for hunting and other subsistence activities, this vast intermountain landscape has long held economic value for humans. As Europeans colonized the West and established large-scale agricultural economies, sagebrush communities became – and remain – central to livestock grazing throughout much of the West. More recently it has been utilized for energy development from conventional sources such as coal, oil and gas, to renewable sources such as wind. This system also supports a variety of recreational activities, notably hunting for big game species and for upland birds. Lastly, the uniquely American aesthetic of the "sagebrush sea" occupies a special spot in our natural heritage and reminds us all of the wide-open spaces that continue to define a large portion of our national geography and the shared history and culture of the West. *(continued)*

...the sage-steppe ecosystem is one of the most imperiled ecosystems in America.

WHY CARE About America's Sagebrush?



Pronghorn in sagebrush



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FEATURE: HEALTHY LANDSCAPES

Why Care About America's Sagebrush?

Despite the significant values it provides to wildlife and humans, the sagebrush ecosystem is one of the most imperiled ecosystems in America. Recently, the Services review of a Greater sage-grouse listing under the Endangered Species Act has brought additional attention to the state of the sagebrush ecosystem. This iconic bird's habitat has been fragmented by development and there has been a considerable loss of suitable sagebrush habitat to support the bird's life history, including its needs for food, cover and nesting space. The fragmentation has been exacerbated by invasive weeds, especially cheatgrass, which fuels unchecked wildfires; and, land-management practices that preclude restoration of large, contiguous blocks of sagebrush. Fragmentation of sagebrush habitats can have a particularly acute impact on wildlife because in the arid west, food, cover and water resources are distributed unequally across the landscape.



The sagebrush that dominates this landscape plays a critical role in the hydrologic cycle of the arid West. Sagebrush often serves as a "nurse" plant for other plants, many of which are important to sustaining grazing wildlife and domestic livestock. In addition to the hundreds of birds, mammals, reptiles and amphibians that depend on sagebrush, many unique insects, spiders, plants and lichens are associated with the sagebrush community. Imperiled wildlife, grazing livestock, and people whose livelihoods depend on healthy sage-steppe have been impacted by the loss of the sagebrush ecosystem.

Fire is one of the primary factors linked to loss of sagebrush habitat. Loss of sagebrush habitat to wildfire has been increasing in the western extent of the ecosystem due to an increase in fire frequency. The increase in fire frequency in sagebrush ecosystems has been facilitated by the incursion of nonnative annual grasses, primarily cheatgrass and medusahead. Annual grasses and noxious perennials continue to expand their range, facilitated by ground disturbances, including wildfire, improper grazing, agriculture, and infrastructure associated with energy development. Climate change may alter the range of invasive plants, potentially expanding the importance of this threat across the entire ecosystem. *(continued)*

WHY CARE About America's Sagebrush?



*Inset photo: Greater sage-grouse and hen
Bluebirds in sagebrush*



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FEATURE: HEALTHY LANDSCAPES

Habitat loss is also occurring from the expansion of native conifers and juniper in part due to changes in fire return intervals and the overstocking of domestic livestock, particularly during the latter 1800s and early 1900s. Encroaching conifers uptake significant amounts of water from this arid landscape, reducing the availability of an already-scarce resource for both wildlife and people.

The persistent and increasing demand for energy resources means continuous development of the sagebrush ecosystem, which results in habitat fragmentation. Fragmentation of habitat is causing significant reductions of wildlife populations, such as Greater sage-grouse, pronghorn and other sagebrush-dependent species. Although data are limited, impacts resulting from renewable energy development are expected to have negative effects on sagebrush habitats due to their similarity in supporting infrastructure and there will likely be permanent infrastructure developments within the sagebrush ecosystem, which will have long-lasting impacts.

Other factors associated with habitat loss and fragmentation in the sagebrush ecosystem include conversion of sagebrush habitats for agriculture, the expanding human populations in the western United States and the resulting urban development in sagebrush habitats, vegetation treatments resulting in the alteration or removal of sagebrush to enhance grazing for livestock, and impacts from wild ungulates and free-roaming equids (horses and burros).

While the impacts to the health of the sagebrush ecosystem are widespread and persistent, partners ranging from federal land management agencies to private landowners are coming together to identify and pursue strategies to arrest the decline of sagebrush and dependent species across the range. A growing awareness and appreciation for this remarkable place and its values is an important first step in fostering lasting stewardship of this uniquely American landscape. ■

Why Care About America's Sagebrush?

A growing awareness and appreciation for this remarkable place and its values is an important first step in fostering lasting stewardship of this uniquely American landscape.

WHY CARE About America's Sagebrush?



Sage hens at Seedskadee National Wildlife Refuge



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FEATURE: Intermountain West Joint Venture

Sage Grouse Initiative Strategic Watershed Team

In the pre-settlement days, Greater sage-grouse numbered in the millions across the American West. Their populations have since plummeted to about 200,000.

Fortunately, much of this bird's ideal habitat is found on private rangelands and what is good for rangelands is often good for grouse. Ranchers and wildlife conservationists are sharing a vision for conserving sagebrush habitats vital to sage-grouse and are collaborating extensively through the Sage Grouse Initiative (SGI). Within this initiative, a team of natural resource specialists has assembled to live and work in key ranching communities within the sage-grouse range. Known as the Strategic Watershed Action Team (SWAT), this force was established in 2011 to build field capacity and strengthen the science guiding SGI. The conservationists and biologists that make up the SWAT provide on-the-ground technical assistance to private landowners and facilitate conservation projects that improve sage-grouse habitat and the sustainability of ranching.

The SGI SWAT represents a bold step to conserve sagebrush landscapes at a scale that transcends anything attempted to date. It is rooted in the reality that sage grouse and sustainable ranching are inextricably linked, and that science-based landscape-level conservation delivery is the recipe for success. ■

The Intermountain West Joint Venture (IWJV), in close collaboration with the Natural Resources Conservation Service (NRCS), manages the SWAT and, to date, they have achieved the following:

- 1,065,762 acres of rangeland improvement to increase sage-grouse hiding cover during nesting season. Additional grass cover is expected to increase sage-grouse populations by 8-10%.
- 177,208 acres of conifer removal in key nesting, brood-rearing, and wintering habitats. Removing encroaching conifers from sagebrush rangelands eliminates tall structures in otherwise suitable habitat. As birds re-colonize former habitats, increased bird abundance is anticipated.
- 121 miles of "high risk" fence near leks to be marked or removed. Marking fences is expected to reduce sage-grouse fence collisions by 83%.



For contact information and quarterly reports on the SGI SWAT click [here](#).

The Intermountain West Joint Venture (IWJV) conserves priority bird habitats through partnership-driven, science-based projects and programs. The IWJV is the largest of eighteen bird habitat joint ventures in the United States, working across eleven states. Through innovation and capacity building, we link continental bird populations, national conservation, and local partners together. Find out more about the IWJV and join our partnership [here](#).

Delivering Landscape Scale Sagebrush Habitat Conservation: Sage Grouse Initiative Strategic Watershed Action Team



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FEATURE: PRAIRIES CONSERVATION LAUNCH

The Power of the U.S. Prairie Pothole Region

In March 2014, the Service, along with multiple partners, launched the Prairies Conservation Campaign to bring public attention to the dramatic conversion of grasslands and wetlands to cropland in the Prairie Pothole Region. The U.S. portion of the Prairie Pothole Region, or PPR, consists of 118 million acres and includes parts of Montana, North and South Dakota, Minnesota and Iowa. This area is commonly referred to as America's "duck factory" because it is the most productive area for nesting waterfowl on the continent. This infographic illustrates the power of the Prairie Pothole Region and all the benefits it has to wildlife and people. It is critical that we raise public awareness about these issues that are occurring across the PPR.

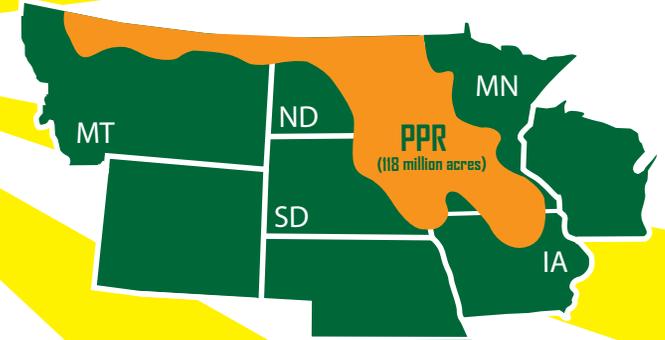
THE POWER of the U.S. PRAIRIE POTHOLE REGION (PPR)

Visit www.fws.gov/prairiesconservation to learn how you can be part of the solution and follow and participate in the conservation online using the #ConserveThePrairies hashtag. ■

More than **50%** of North America's ducks depend on the vital mix of wetlands and grassland habitats in the PPR.



Contains **26 million** acres of grassland, and **3.44 million** wetland basins.



Regarded as one of the **MOST DIVERSE ECOSYSTEMS** and one of America's national treasures.



Arguably the most **UNIQUE wetland resource** found **anywhere in the world.**

#ConserveThePrairies

SOCIETAL BENEFITS



1. filters water
2. reduces erosion
3. reduces sedimentation
4. absorbs flood waters

Functional grassland and wetland ecosystems not only protect the watersheds in which they occur, but also **PROTECT** downstream waterways and communities.



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U.S. Fish and Wildlife Service Tribal Updates

by Ivy Allen, Tribal Communications Specialist

Eagle Summit III

Eagle Summit III

On March 20, 2014 the Service and the Native American Fish and Wildlife Society (NAFWS) hosted Eagle Summit III at the Rocky Mountain Arsenal National Wildlife Refuge in Denver, Colorado. The date and location were chosen to coincide with the Denver March Powwow, one of the largest pow wow gatherings in the Nation.

Eagle Summit III was followed by a government-to-government consultation regarding eagles. The Summit was designed to improve communication and build knowledge around eagles and eagle regulations between Native American Tribes and the Service. Discussions centered on topics of mutual interest and help to identify outstanding issues that need improvement.

Eagle Summit III kicked off with a joint panel discussion led by Steve Oberholtzer, Special Agent in-Charge of Law Enforcement and the National Eagle Repository. He was joined by Alvin Windy Boy, Sr. from the Chippewa Cree Tribe of the Rocky Boy's Reservation and Clint Riley, Assistant Regional Director for Migratory Birds. The morning discussion covered new processes for the National Eagle Repository regarding the distribution of eagle feathers to permit holders along with the laws, permits and regulations governing eagle feather possession. A brief presentation on each main topic was provided, but the panel operated as an open discussion with the audience asking questions and raising concerns from the Native American communities' perspective.

The lunch was hosted by the Native American Fish and Wildlife Society and included a traditional and cultural storytelling session with Rick Williams. Other opportunities provided at *(continued)*



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Eagle Summit III

the meeting included a tour of the wildlife refuge which is home to more than 330 species of animals, including bison, deer, coyotes, bald eagles and burrowing owls. The National Eagle and Property Repository hosted several tours and offered Tribal members a chance to see where and how full eagles and individual parts and feathers are prepared for and distributed to federally recognized Tribal members.

The afternoon session was dedicated to a government-to-government consultation and it was extended through the following morning. Official Tribal representatives from tribes across four Service Regions engaged in the consultation. The consultation was led by Regional Director, Noreen Walsh. Noreen and her leadership team spoke with the Tribes about potential policy and regulatory changes concerning eagle rehabilitation, propagation, and depredation.

The Summit was attended by more than fifty-five Tribal leaders and members. The Service had five senior leaders from the Denver Regional office and one from Washington D.C. listening to and engaging in the open dialogue. Conversations at the Summit were sincere and resulted in a group effort to look for ways and means to move forward in eagle conservation while meeting the inherent religious and cultural rights of Native Americans. ■



Inset photo: Government-to-government consultation



Eagle feathers



National Eagle and Property Repository tour



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U.S. Fish and Wildlife Service Trending

Top Government Tweets



Top Tweets



US Fish and Wildlife
@USFW3MtnPrairie

Grassland is being turned into farmland @ a rate not seen since the 1920s #ConserveThePrairies prospect.org/article/plowed...



USFWS Bear River
@USFWSBearRiver

FLYDAY FRIDAY (JUMPday Friday?) Little Wood Ducklings jump 2 their Mama who beckons from the ground below #BRBR #Utah



US Fish and Wildlife
@USFWSMtnPrairie

Short-eared owls are in decline due to loss of habitat and grassland conversion. #ConserveThePrairies #USFWS



US Fish and Wildlife
@USFWSMtnPrairie

A recent visitor to our CO recovery center captured this shot of an #endangered black footed ferret. #USFWS #ESA



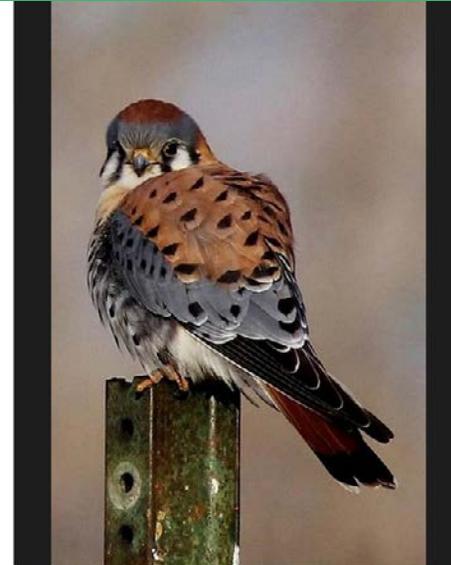
US Fish and Wildlife
@USFWSMtnPrairie

No photoshop here! Bighorn sheep defy gravity at the @NatiElkRefuge in Wyoming. #USFWS #ElkRefuge



National Elk Refuge
@NatiElkRefuge

Our version of #MarchMadness @NatiElkRefuge, complete with spectators. #USFWS



US Fish and Wildlife
@USFWSMtnPrairie

American kestrels can be seen year-round at Denver's Rocky Mountain Arsenal National Wildlife Refuge. #USFWS #birds



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U.S. Fish and Wildlife Service

Closing Shots



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