

Arizona Wildlife News



Volume 67

Issue 1

Winter 2022



Official Publication of the Arizona Wildlife Federation



What is AWF?

Our Mission Statement

Arizona Wildlife Federation is a non-profit organization dedicated to educating, inspiring, and assisting individuals and organizations to value, conserve, enhance, manage, and protect wildlife and wildlife habitat.

AWF is a statewide association of people interested in the present and future well-being of Arizona's wildlife, wildlife habitat and natural systems. We believe our wildlife heritage should not be jeopardized by any activity that fails to ensure its long-term health and sustainability. From the outset of the organization, AWF's primary goal has been the establishment and maintenance of a Commission/Department form of wildlife administration, free of political influence. We continue to work with the Arizona Game and Fish Department and Commissioners to assure that science-based best practices are used in the management of wildlife and habitat in Arizona.

Our Newsletter

The official publication of the Arizona Wildlife Federation, the State affiliate of the National Wildlife Federation, Arizona Wildlife News (ISSN) is published quarterly as a service to affiliate members and Federation members. The editorials and commentaries in this publication do not necessarily reflect the mission of the Arizona Wildlife Federation. AWF is an equal opportunity provider.

The Arizona Wildlife Federation welcomes stories, art, and photographic contributions! We will consider, but assume no responsibility for unsolicited proposals, manuscripts, art, photographs, and transparencies. Contact the AWF office at (480) 702-1365 for details.

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Published by the Arizona Wildlife Federation

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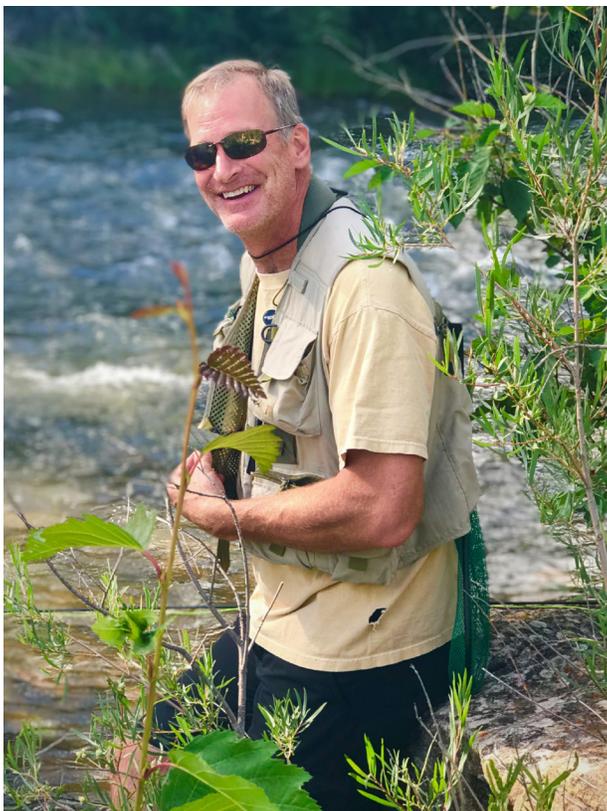
Front Cover Photo Courtesy of Michael Cravens. Articles by: Scott Garlid, Brad Powell, Lew Carpenter, Nikki Julien, Linda Dightmon, Glen Dickens, Trica Oshant Hawkins, & Alan Knobloch. Back Cover courtesy of Nikki Julien.

JOIN THE CONVERSATION



A Message from the Executive Director

By Scott Garlid, AWF Executive Director



Get outside, get educated, and advocate

Many of us have a deep and visceral passion for the outdoors. For most of us, it's something that was nurtured at a young age – perhaps seeing nature through the eyes of a loving grandparent, or experiencing the inclusiveness of the campfire at hunt camp. For some of us, it was a flame fanned by an experience as an adult – perhaps being lucky enough to be invited on a rafting trip with a group of friends, or a hike to the bottom of the Grand Canyon. But no matter how it came to be, at this point, it's a part of who we are and what we value. The love of the outdoors seems natural, honest, and right.

What we typically don't have is a natural affinity to advocate for outdoor places and the policies that shape those places. Advocating somehow seems to tarnish the experience. It takes what was simple and heartfelt, and makes it feel more complicated and academic.

But if we want others, and particularly future generations, to find the same joy in the outdoors that it brings to us, advocacy for federal and state policies affecting public lands and outdoor recreation is essential. We need to be willing to learn about the policies, the perspectives, and the motivations behind those... on both sides of the aisle. We need to be willing to engage in discussion and debate. And then we still need to be able to set all of that aside and go out and simply enjoy and share the blessing of public lands and outdoor recreation opportunities with our friends and families.

That's why at the Arizona Wildlife Federation (AWF), and with every issue of Arizona Wildlife News (AWN), we try very hard to share both the joy of the outdoors as well as educate readers about the issues affecting the outdoors. It's why we take the time to go to meet with our elected leaders to educate them and discuss policy and legislation, and why we sponsor events like "Camo-at-the-Capitol" and "A Sportsman's Perspective on Climate Change."

In this issue of AWN, we share the simpler joys of the outdoors through pieces on our Becoming and Outdoors-Woman (BOW) program and Arizona's Watchable Wildlife Experience. And there's no one more dedicated to Sonoran pronghorn than AWF Vice-President and retired AZGFD Wildlife Biologist and Manager, Glen Dickens, to keep the feel-good endorphins flowing as you read his piece on pronghorn reintroduction in the Sonoran Desert National Monument.

Moving over to the lane of education and policy, our Regional reports provide updates on important issues across Arizona--like the impacts of wild horses, burros, and off-highway vehicles, the challenges of forest thinning plans, and the key points on controversial issues like the Oak Flat mine. Lew Carpenter, our National Wildlife Federation Director of Conservation Partnerships, highlights the benefits of federal legislation that will provide much needed funding for conservation in Arizona in his column. As debates stir over initiatives like "30x30" and National Monument designations, get a solid foundation by learning about public land designations from our own expert, AWF President and retired USFS Regional Forest Director Brad Powell.

The ladder of advocacy starts with education, and we hope this issue of AWN helps get you educated. If you're inclined to step to the next rung, let us know—there's plenty of opportunity for letters to the editor or meetings with elected officials on your topic of interest. So read on, get engaged, and most of all, get outside and enjoy Arizona's great outdoors!

Yours in conservation,

Scott Garlid, Executive Director, Arizona Wildlife Federation

AWF Regional Roundup

Arizona Wildlife Federation divides the state into regions in the same manner as the Arizona Game and Fish Department. This map depicts each of those regions and the members of our Board of Directors who serve as directors for each area. Our Regional Directors are busy!



Bob Vahle
Region 1 Director



Travis Woolley
Region 2 Director



Loyd Barnett
Region 3 Director



Pat Headington
Region 4 Director



Duane Aubuchon
Region 5 Director



Amanda Moors
Region 6 Director

Region 1 Director's Report

By Bob Vahle, Regional Director

The following update is focused on three key land management issues that affect thousands of acres of wildlife/fish habitats in Region 1 on the Apache-Sitgreaves NF (ASNF) which have been highlighted in detail in the past and continue to be of primary focus for the AWF as they relate to our mission.

Four Forests Restoration Initiative Update Within Region 1

The AWF has been involved in, and is a supporter of the Four Forests Restoration Initiative (4FRI) project since its inception. The primary goals of 4FRI are to restore forest health; improve springs, streams, and wildlife and fish habitats; and to reduce the risk of uncontrollable “megafires” over the 2.4 million acres of the Apache-Sitgreaves, Coconino, Kaibab, and Tonto National Forests.

The original plan for the 4FRI project envisioned either single or multiple contractors mechanically thinning 50,000 acres per year over a 20 years to reduce excessive small diameter tree densities (< 16” diameter), and remove 80% of the residual materials (30 to 50 tons/acre) left after treatment. In addition, the objective of the 4FRI project is to use prescribed fire to reduce dense areas of pine saplings and regeneration to help restore the historic natural fire regime (i.e., cycle of low intensity ground fires every 3 - 7 years) in the Ponderosa pine ecosystem.

The U.S. Forest Service (USFS) awarded the first Phase 1 4FRI contracts primarily in the Flagstaff area about eight years ago. These contracts were dependent upon a number of key components and infrastructure needed to fully treat, remove, and utilize the volume of forest materials (e.g., adequate number of logging operators; adequate number and suitable location of facilities to utilize and process small logs and the residual biomass; and the development of valuable products and markets). Unfortunately, these key components and infrastructure are still not in place to this day. Consequently, the acreage and volume of materials to be removed to date has been well below the initial objectives.

Phase 2 of 4FRI, called the “Rim Country Project,” is targeted to treat priority areas along the Mogollon Rim and in the White Mountains. This phase has been planned and analyzed, but the USFS has been in negotiation with potential contractors trying to determine if small, local logging companies could effectively make a reasonable profit at no cost to the U.S. taxpayer. The USFS has recently concluded that they have insufficient funding to guarantee the bidders against the loss of hundreds of millions of dollars needed to invest in new facilities which are necessary to handle the volume of small trees and biomass that must be thinned, removed, and processed (e.g., high-tech plywood and composite wood products plants, biomass burning power plants, and new, small wood processing mills).

As a consequence, following several stakeholder meetings, the USFS proposed a new, scaled down 4FRI plan which reduces the acreage of proposed treatments and further concentrates priority treatments around communities at risk (e.g., Payson, Show Low, and Pinetop). The USFS plans to increase the funding in 2022 to \$54 million, and to focus on thinning projects on 135,000 acres of existing high priority areas over the next 10 years.

A USFS report on this new approach acknowledges that the USFS will need to find additional partners and utilize more taxpayer funding to effectively thin the more that 1 million acres of the 2.4 million acre 4FRI project (which includes most of the Mogollon Rim and the White Mountains) in order to reduce wildfire risk, protect watersheds, and protect forested communities.

Heber Wild Horse Territory Management Plan & Control of Feral Horses on the ASNF

I (Bob Vahle, Region 1 Director) recently submitted a letter to the editor (LTE) of the White Mountain Independent (WMI) newspaper about the issue of feral horses on the Apache-Sitgreaves NF. The letter was written in support of an excellent LTE submitted to the WMI by John Koleszar (Past AWF Board Member) regarding this issue. My LTE was published on December 3, 2021.

The letter provides an overview of the issue and presents scientific evidence that further support Koleszar's letter. As a result of a legal action filed by horse advocates in March 2007, the ASNF has still not completed the Heber Wild Horse Territory Management Plan and thus has limited capability to begin controlling the feral horse population primarily on the western (Sitgreaves portion) of the ASNF. Bob's LTE can be read in full at the website below:

https://www.wmicentral.com/opinion/letters_to_editor/support-for-the-koleszar-letter/article_93ee7db4-613c-530f-883b-a7185199f53a.html

ASNF Travel Management Plan

The final public comment period for the ASNF – August 2019 – Public Motorized Travel Management Plan: Revised Draft Environmental Impact Statement (DEIS) ended on October 29, 2019. At that time, AWF provided extensive comments on the proposed management plan and DEIS analysis. To date, the ASNF has not completed this critically needed plan which needs to be implemented in light of the significant increase in the sales and use of Off Highway Vehicles (OHV) that are adversely impacting many areas on the ASNF (e.g., creating new unauthorized roads/trails and damaging key wildlife habitats springs and wet meadows).



Region 2 Director's Report

By Travis Woolley, Regional Director

Four Forests Restoration Initiative Update Within Region 2

Following the cancellation of the Request for Proposals under the Four Forest Restoration Initiative (4FRI) industry and stakeholders met several times with the USFS to provide input on paths forward. In addition, the Infrastructure bill was passed and signed into law providing funding for fuels and forest restoration treatments and spurred the USFS to develop a 10 year Investment Strategy for wild-fire risk reduction and to improve resilience on public and private lands. The USFS subsequently announced the newest 4FRI Restoration Strategy in early November, which focuses on high-priority partnership projects, implements 5 year plans for 295,000 acres to maintain existing industry, conducts a rapid assessment and optimization effort, and among other things continues to focus on creating enabling conditions for future industry investment and success. This strategy will equate to \$54 million investment into restoration, road, and bridge projects in FY22 alone, and will result in offerings of ~20,000 acres of thinning projects on the Coconino and Kaibab Forests over the next year.

Mexican Spotted Owl Restoration Treatments Continue

Under the Flagstaff Watershed Protection Project (FWPP) and the First Phase of 4FRI Environmental Impact Statements, several management experiments were planned by US Fish and Wildlife Service and the US Forest Service to mechanically thin and prescribe burn Mexican Spotted Owl "Protect Activity Centers" in order to reduce risk to wildfire and improve habitat conditions. Prescribed burn treatments begin in 2017 and the fifth year of monitoring will be completed in 2022 with a report on outcomes to follow. Some mechanical thinning and burning treatments in FWPP were completed prior to the Museum fire in 2018, and are continuing to be monitored. Mechanical thinning treatments were commenced in 2021 under 4FRI, and will continue in partnership with the National Forest Foundation followed by prescribed burning and monitoring. Stay tuned to see how this pro-active management approach affects the owls!



Havasus Falls, Grand Canyon. Photo by Nikki Julien

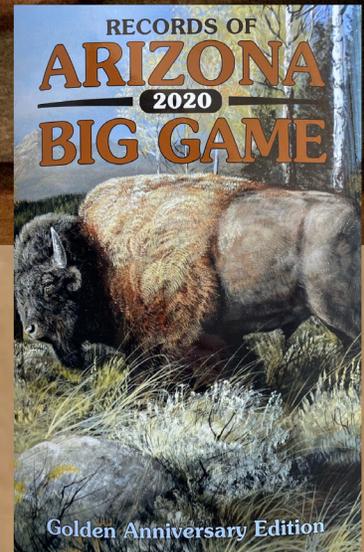
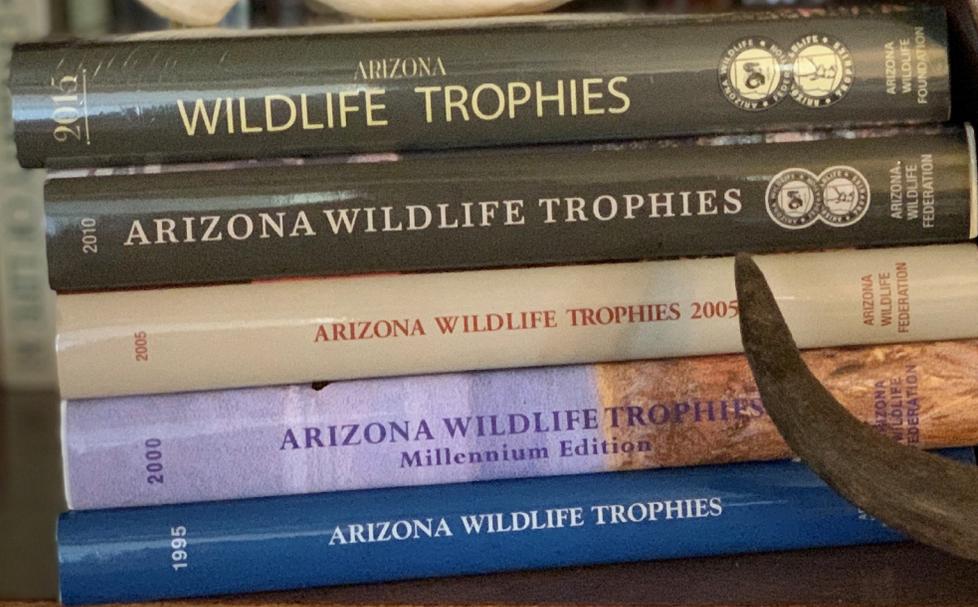
Humpback Chub Down-Listed to Threatened Status

Effective November 17, 2021, the humpback chub (*Gila cypha*) has been reclassified as threatened from its former endangered status. The fish was first listed as endangered in 1967. According to the US Fish and Wildlife Service, the species is no longer in danger of extinction following a thorough review of the best available science and information. This includes a 5 year species status assessment that concluded that there is a stable population of about 12,000 adults in the Colorado and Little Colorado rivers. Ongoing monitoring, flow management, and predatory fish control will hopefully continue the stabilization seen in this native fish species.

Grand Canyon Protection Act Status

The Grand Canyon Protection Act, introduced earlier this year by Reps. Raúl Grijalva and Tom O'Halleran and Sens. Kyrsten Sinema and Mark Kelly, has passed the House and awaits a vote in the Senate after referral to the Committee on Energy and Natural Resources. If passed, it would make permanent the 20 year temporary ban (from 2012) on any new uranium and other hard rock mining on 1 million acres near the Grand Canyon National Park. The Arizona Wildlife Federation has long supported permanent protections of the Grand Canyon. Its unique hydrology makes it particularly vulnerable to mining, and the risks of toxicity are too great for wildlife and the economic benefits from hunting, fishing, and other outdoor pursuits. The Act would also protect the people who live in the region from these risks. The Inter Tribal Association of Arizona, which includes 21 tribal nations, has already passed a United Action Resolution supporting the Grand Canyon Protection Act.

READY TO
SHOW OFF?



2020 Records
of Arizona
Big Game

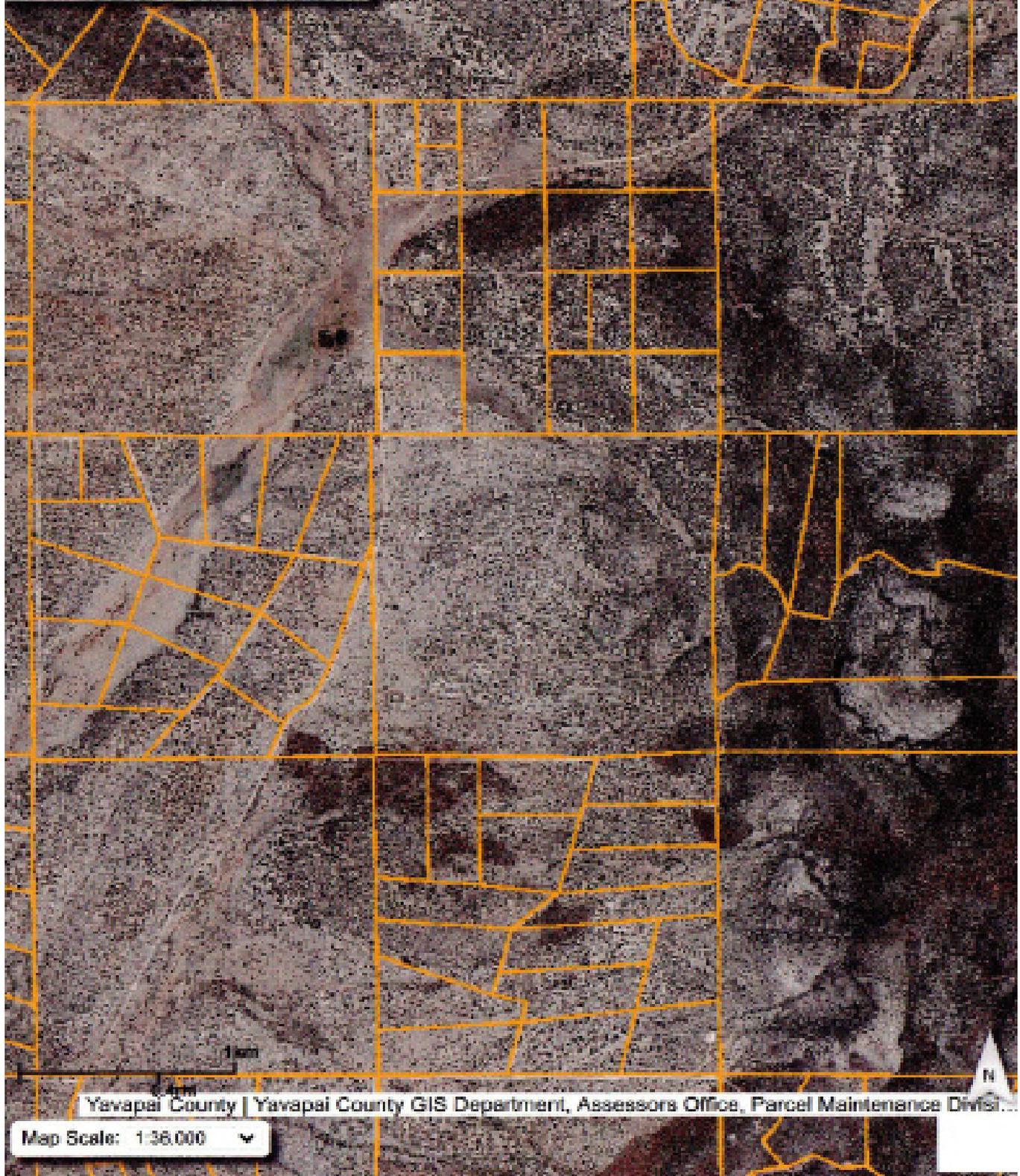
azwildlife.org/shop

WE ARE
READY
TO SHIP!

Region 3 Director's Report

By Loyd Barnett, Regional Director

YAVAPAI GIS PARCEL MAP SAMPLE



Friends of the Verde River

Friends of the Verde River (Friends), an affiliate of the AWF, recently marked their 10th anniversary with their FY2021 Impact Report, which illustrates the breadth of programs and activities the organization is leading. For the last several years there have been three primary emphasis areas: sustaining flows; restoring habitat; and promoting community. They have recently launched a new program, River Friendly Living, which aims to promote a culture of voluntary river conservation. Through the River Friendly Living program, Friends will recognize and certify homes, businesses, farms, ranches, real estate developments, congregations, communities, and others that do their part to protect the Verde River for future generations.

One of the most impressive accomplishments of Friends is the degree and complexity of community participation they have obtained. This includes local governments, organizations, businesses and many individuals with widely diverse ages, backgrounds, and skills. As a part of providing education about the Verde, their website provides access to a large number of YouTube videos related to the river and the watershed, bringing in subject matter experts, community leaders, business people, and others of interest. They are just beginning their second season of "Listening to the Verde" videos. You can access them through YouTube or directly from their website at www.verderiver.org/listening.

Yavapai Ranch

Last quarter we reported on the nearly 100,00 acre Yavapai Ranch, which consists of a checkerboard pattern of Prescott National Forest and private lands. The majority of the private sections are not separated by fences from the adjacent National Forest, and they are managed together. The public can recreate and hunt on the private sections as well as on the National Forest. However, there is no assurance that this is permanent; the private lands are zoned so they can be subdivided as small as 2 acres.

As previously reported, the AWF has supported two separate proposals to continue the current access and habitat availability, and to maintain the grassland habitat. Both of our responses were led by our affiliate, the Arizona Antelope Foundation. The first was a proposal by the Central Arizona Land Trust to obtain Farm Bill funding for a conservation easement on eight private sections on the southeast corner, adjacent to private land in Big Chino Valley which already has conservation easements. In August of 2021, the AWF submitted written support for a proposed purchase of about 12 sections of private land for inclusion in the Prescott National Forest, moving west and northwest of the area applied for conservation easement. We have since learned that the Farm Bill funding for a conservation easement was not funded in FY 2021; however, it will be resubmitted in FY 2022.



Much of the private land adjoining the north and west Forest boundaries is subdivided into "ranchettes" of about 36-40 acres. Land adjoining National Forest or other open space land is valued for its adjacency to open space and commands a higher price for residential development. When these lands are residentially developed, especially in a checkerboard pattern, the impacts on wildlife go well beyond the private land boundaries. Fences, dogs, and increased daily human disturbance all create habitat impacts. Some species, such as rabbits and coyotes adapt quite well to rural residential development. Elk, and sometimes deer, have also learned to adapt, though not necessarily as well as with larger areas of unimpacted habitat. However, pronghorn antelope need open space and the ability to roam freely.

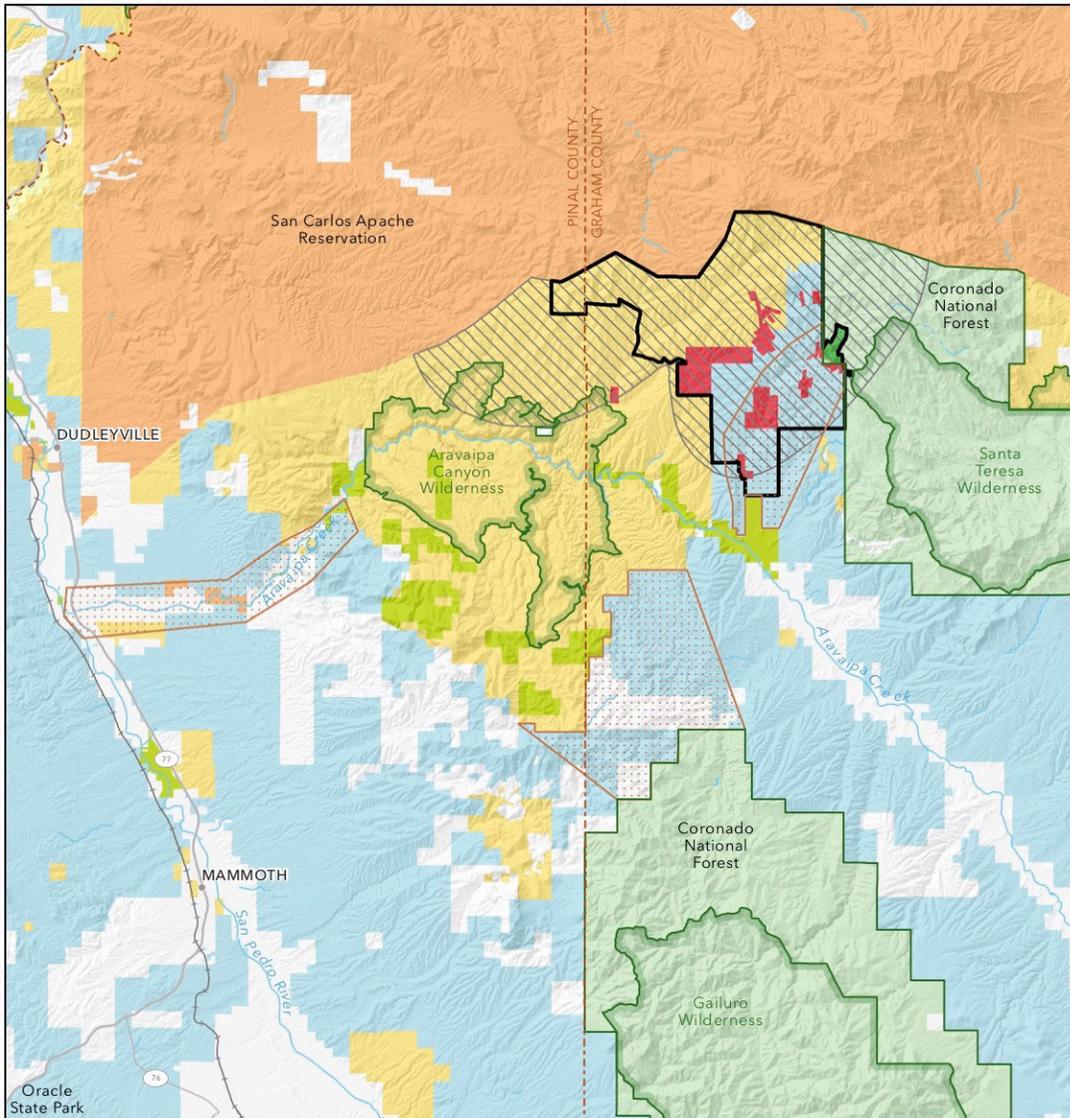
To the west and northwest of the Yavapai Ranch, within Game Management Unit (GMU) 18A, large areas are checkerboarded between Arizona State Land Department lands and private lands. The facing illustration is from Yavapai County's GIS parcel map. The large squares are each one section, 1 mile by 1 mile, equaling 640 acres. The whole sections which are in one parcel are Arizona State Land Department lands, which are in a checkerboard pattern. The alternating sections have platted subdivisions in varying configurations. Many of these private parcels have not yet been developed and fenced. However, the majority may eventually be developed.

Region 5 Director's Report

By Duane Aubuchon, Regional Director

Cross F Ranch Acquisition

When I began working in southeastern Arizona in 2004, the road to old town Aravaipa was open and one could drive past its ruins onto the public lands beyond. Shortly thereafter, a new landowner closed the road. Though records clearly indicated that Graham County had purchased a right-of-way along the road to the old townsite prior to statehood, the county would not press its claim since subsequent deeds from property sales had not listed the easement. About this same time, public access through the Dry Camp Ranch northeast of the Aravaipa Canyon Wilderness and adjacent to the Cross F Ranch, also closed. As a state Game and Fish Department employee at the time, my colleagues and I worked with the county and Bureau of Land Management (BLM) to reestablish public access to these sites. It took over 15 years, but in November 2021 the BLM acquired 2,831 acres of the Cross F Ranch, which will open access to 30,000 acres of formerly inaccessible public lands.



In a complex arrangement, the BLM was able to purchase the property from the Trust for Public Land using the Land and Water Conservation Fund (LWCF). Other partners in the land acquisition included the U.S. Forest Service, Arizona Game and Fish Department, and the Nature Conservancy. The LWCF is used to fund and protect federal public lands and waters – including national parks, forests, wildlife refuges, and recreation areas – and voluntary conservation on private lands. In this case, besides securing public access and recreation opportunities, it will also improve and protect wildlife corridors for mule deer, white-tailed deer, desert bighorn sheep, black bears, and Gould’s turkey. As part of the acquisition, access through the Dry Camp Ranch has also been secured and will allow travel to areas on the north rim of Aravaipa Canyon, home to one of Arizona’s first successful desert bighorn sheep translocations. Reestablishing access to these areas is a huge win for the people of Arizona and the management of public lands.

Location in Arizona

- Proposed purchase
- Potential USFS purchase
- US Forest Service administrative boundary
- Cross F Ranch
- Wildlife corridor*
- Additional public land access provided for sportsmen and other recreational users
- Wilderness boundary

- Bureau of Land Management
- US Forest Service
- Bureau of Reclamation
- State
- Tribal land
- Private
- Nature Conservancy (private)
- County boundary

0 2.5 5 Miles

N

June 29, 2020. Copyright © The Trust for Public Land. The Trust for Public Land and The Trust for Public Land logo are federally registered marks of The Trust for Public Land. *Wildlife corridor data from The Nature Conservancy. Information on this map is provided for purposes of discussion and visualization only. www.tpl.org

Rosemont Mine

There still has not been a decision from the 9th Circuit Court of Appeals regarding the Rosemont Mine case. Almost two years ago, Hudbay Minerals Inc. announced that it would be test drilling at eight other sites in the Santa Rita Mountains to search for additional copper deposits, and the drilling would involve grading two new roads and improving some existing ones to gain access to these sites. After observing some of this work for the first time on a recent trip to Sonoita, I learned that Hudbay had announced finding additional high-grade copper sulfide and oxide mineralization at its "Copper World" project, located on wholly owned private lands in the Santa Rita Mountains of southern Arizona. The Copper World project is located within five miles of the Rosemont copper project and has mineralization located closer to the surface than Rosemont. Hudbay completed the test drilling between January and June 2021, and believes that Copper World is growing into an attractive copper development. Though not yet analyzed, the impacts may be similar to those expected from the Rosemont Mine project. For now, additional test drilling continues on the 4,500 acres of private lands that Hudbay owns in the Santa Rita Mountains.

Interstate 11

As detailed in my last report, the Arizona Department of Transportation (ADOT) and Federal Highway Administration (FHWA) had released the Tier 1 Final Environmental Impact Statement (FEIS) for the proposed Interstate 11 (I-11) route from Nogales to Wickenburg. The two potential Preferred Alternatives were a West Option through Avra Valley and an East Option that joins I-11 with I-19 and I-10 through the Tucson region. On November 16th, ADOT and FHWA published a Record of Decision on the project, selecting as a Preferred Alternative the route that still maintains both an East and West option through the Tucson area. The City of Tucson, Pima County, and the Town of Sahuarita all formally opposed the West Option through the Avra Valley based on potential encroachment onto important wildlife areas such as Saguaro National Monument, the Ironwood Forest National Monument, and the Bureau of Reclamation's Central Arizona Project Canal Mitigation Corridor.

As a continuing project, additional steps will include NEPA approval, identifying funding, and conducting project-level Tier 2 NEPA studies of the priority corridor segments. It would be during the Tier 2 process that the Selected Corridor Alternative would be narrowed to a 400-foot-wide highway route. Currently there are no plans or funding available to initiate these Tier 2 studies.

Special Note

Congratulations to the South Eastern Arizona Sportsmen Club who the Arizona Game and Fish Commission selected for the Wildlife Conservation Organization of the Year award!

THE ARIZONA WILDLIFE FEDERATION PODCAST, WITH ITS HOST MICHAEL CRAVENS, BRINGS YOU THE STORIES OF WILDLIFE, WILD PLACES, AND THOSE PEOPLE WHO VALUE THEM THE MOST.

FROM HUNTING AND ANGLING TO BIRDING AND GARDENING, WE'LL KEEP YOU INFORMED OF ISSUES, EVENTS, AND ACTIVITIES FROM AROUND THE BEAUTIFUL AND DIVERSE STATE OF ARIZONA. SINCE 1923, ARIZONA WILDLIFE FEDERATION HAS UNITED ARIZONANS AND DECISION MAKERS AROUND SCIENCE-BASED SOLUTIONS TO CONSERVE OUR STATE'S WILDLIFE, WILDLIFE HABITAT, AND PUBLIC LANDS FOR GENERATIONS TO COME.



ARIZONA WILDLIFE FEDERATION

PODCAST

WITH MICHAEL CRAVENS



Region 6 Director's Report

By Amanda Moors, Regional Director

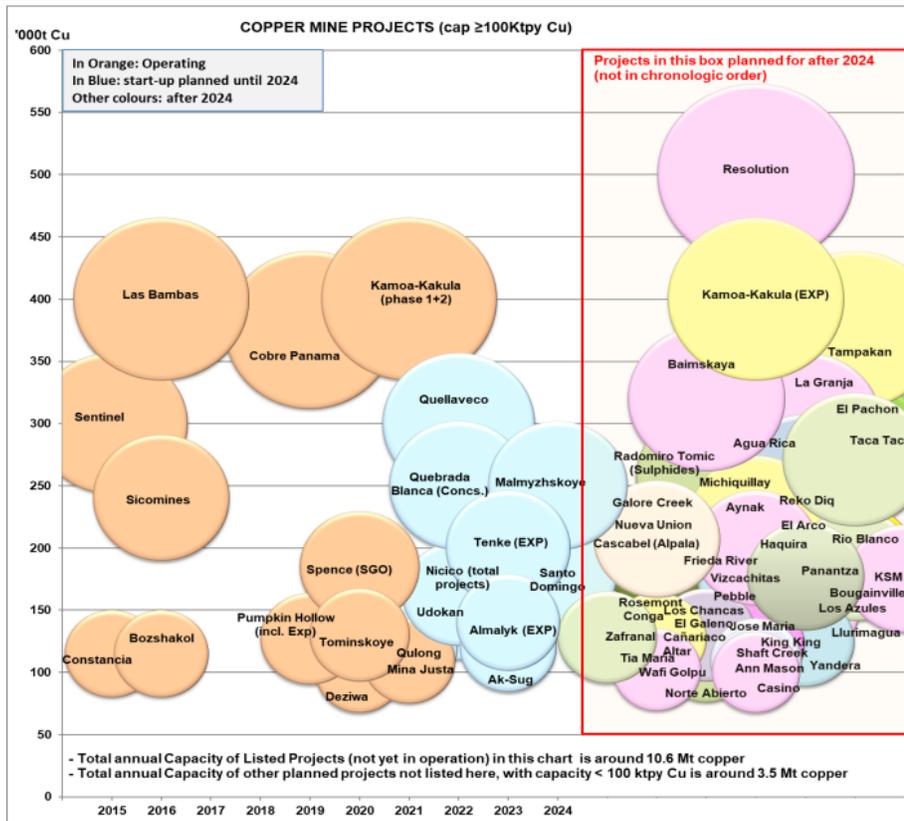
Oak Flat Mine Update

This past quarter I attended several meetings of the Oak Flat Mine Community Working Group, which is a group of volunteers interested in learning the facts and issues related to the proposed mine at Oak Flat. Currently the mine project is on hold because the Forest Service withdrew the Final Environmental Impact Statement (FEIS). At the last meeting of the Community Working Group, we were told that the Department of Interior is expected to re-release the FEIS in the Spring of 2022, with a 60 day notice being given to tribes prior to its release. Thus far, the Oak Flat bill has not been successfully attached to any other legislation in Congress, indicating that it may not have the traction it needs to be passed.

At the last Community Working Group meeting, Mayor Besich stated that the Town of Superior submitted a request to the federal government in October to purchase some of the land exchange parcels. This land exchange purchase will be supported by Resolution Copper, who is expected to present the town with an agreement to provide funding toward the purchase.

We also received a presentation about water quality testing that is ongoing in several areas of the proposed mine and at the proposed tailings site. The Community Working Group hired an independent water quality testing company to collect and analyze samples to help collect baseline water quality data prior to the mine project starting. We asked that company to start checking for PFAS (a class of chemicals known to be dangerous to human health) because there was concern that all the aerial dropping of fire retardant during the wildfires this summer would have increased contamination. Although PFAS chemicals have been phased out in the US, it is possible that older fire retardant was used to fight the fire. The water company did indeed find PFAS chemicals in all the water samples, but did not exceed health safety standards. In addition, the Gallery Well on Boyce Thompson Arboretum

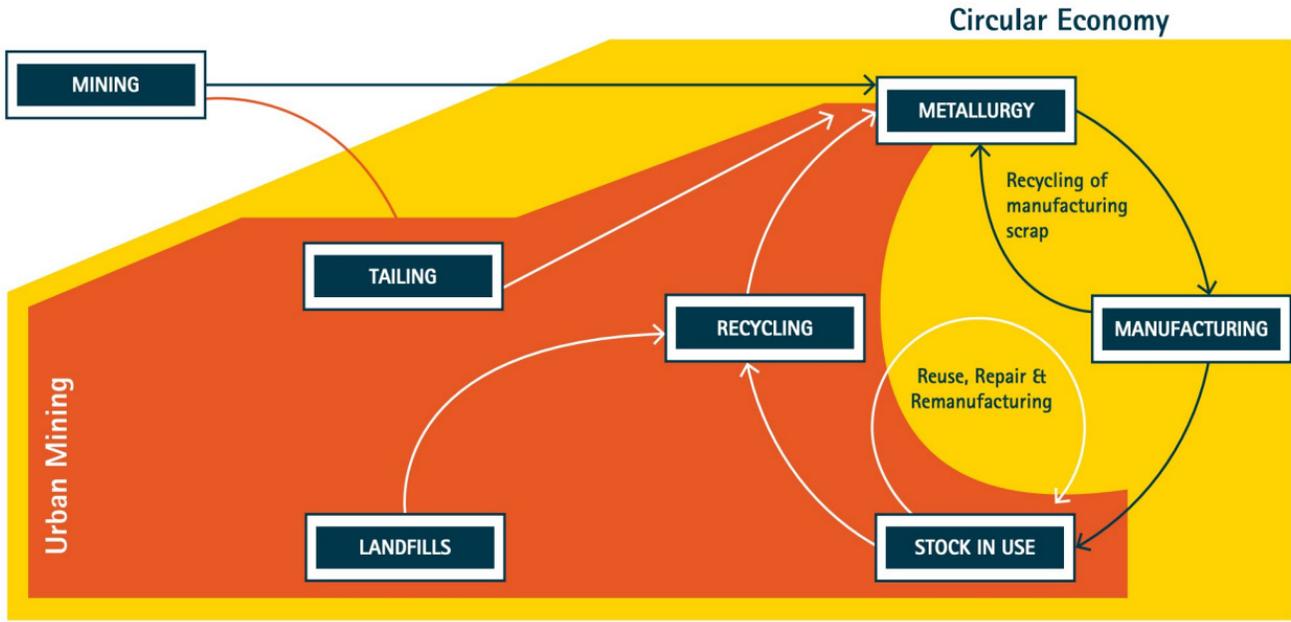
Source: ICSG



had an elevated level of arsenic for an unknown reason, perhaps due to all the runoff from the heavy summer rains we had. For those that are interested in seeing all the locations where the water samples were taken and reviewing all the data, you can find the presentation for this quarter and all prior quarters on the Community Working Group website: <https://superiorazcwg.org/resources/water-quality-monitoring/>

In addition to discussing the

water quality results, we received a presentation about the worldwide copper market. This was a fascinating presentation which described how the demand of copper is predicted to increase due to the move toward greener energy sources (wind turbines, electric vehicles, etc). There are very few metals that can take the place of copper, and one of the factors of those metals replacing copper is their price. One of the most interesting slides in the presentation was one that shows the amount of copper projected to come from all the mines across the world, including the proposed mines like the one at Oak Flat (refer to the graphic labeled "Resolution" in the pink circle on graph). You can see that the Resolution Copper Mine would be one of the largest sources of copper in the world.



Tercero Espinoza et al. (2020): The promise and limits of Urban Mining. Karlsruhe: Fraunhofer ISI

Another point of discussion was whether or not recycling the amount of copper that has already been mined would provide enough copper to meet the worldwide demand. The answer to that question, based on the projected worldwide demand for copper and the current amount of copper already available, was that there was no way the demand for copper could be met by just recycling what has already been produced. You can see some very detailed charts below showing the worldwide copper supply and cycle of use. You may also view them in the presentation found on the Community Working Group website at this link: <https://superiora-zcwg.org/resources/meeting-presentations/>. There are also many other interesting presentations found on that website.



View of the affected area of the proposed mine at Oak Flat.

This Land is Your Land

By Brad Powell, Arizona Wildlife Federation President



BOW fly fishing instructors Skip Tallon and Donna Walkuski fish the Grand Mesa National Forest. Photo courtesy of Donna Walkuski

If you are a hunter, angler, camper, hiker, wildlife watcher, or live anywhere in rural Arizona, you are well acquainted with the treasure of Federal public lands in our State. It's almost a certainty that one of your favorite places is located on these public lands. It is also very likely that you have been confused at some point by land designations (e.g., National Conservation Area, National Park, Areas of Critical Concern, National Monuments, National Forest, National Recreation Areas, Wilderness, National Historic Site, and many more).

As a conservation organization, the Arizona Wildlife Federation supports multi-use of our public lands. However, we do not support all uses in all places. Mining, grazing, and OHV use are examples of public land uses that in some cases are allowed, and in other cases limited or prohibited. The land designation AND the specific management plan for each area determine what is considered appropriate use for that specific area. This is particularly relevant when it comes to policy decisions and advocacy. We're often asked, "does AWF support more national monuments?" or "does AWF support 30x30?" Quite honestly, the answer is "it depends." We determine our position on each proposed designation and management plan independently based on the conservation value of that specific land and the best known science about the impacts and mitigation of multiple use.



Just where did these different designations come from and what are the rules that apply to them? To begin this discussion let's step back to the beginning and get a better understanding of Federal land management, where it began, and how it has evolved.

The concept of wild lands and wildlife as public resources began in America in the 19th Century. In 1864, President Lincoln protected Yosemite Valley and the Mariposa Grove of giant sequoias. Yellowstone was designated as America's first National Park in 1872. The Yellowstone Park Timber Land Reserve was designated in 1891 and it became the Bridger-Teton, Custer, Shoshone, and Caribou Targhee National Forests under President Roosevelt. Today our system of public lands covers approximately 640 million acres, which is nearly 28% of our nation's lands. We are fortunate in Arizona to have over 30 million acres of Federal public lands. Four Federal land management agencies are responsible for administration of the bulk of our nation's Federal lands. These four Federal Agencies were established by Congress and have differing management responsibilities and goals. These include:

- Bureau of Land Management (BLM), in the Department of Interior, is responsible for the management of 244 million acres of public lands. In Arizona the BLM manages 12,203,495 acres.
- Forest Service (FS), in the Department of Agriculture, is responsible for the management of 193 million acres of public lands (National Forest System). In Arizona the FS manages 11,264,619 acres.
- U.S Fish and Wildlife Service (FWS), in the Department of Interior, is responsible for the management of 89 million acres of public lands (National Wildlife Refuges). In Arizona the FWS manages 1,683,269 acres.
- National Park Service (NPS), in the Department of Interior, is responsible for the management of 80 million acres of public lands (National Park System). In Arizona the NPS manages 2,618,735 acres.

Also, often overlooked are lands administered by the Department of Defense (DoD). These military lands are a significant land and public access resource in our state. Approximately 2.9 million acres of the DoD's national total of 26 million acres are in Arizona. Technically, military lands are considered to be federal lands, and not public lands per se. However, much of the stewardship and public access guidelines apply. In DoD's case, the authority is delineated in the Sikes Act, which directs the military to manage natural resources for the public trust, collaborate its management with the US Fish and Wildlife Service and the state wildlife agency, as well as provide public access for hunting and similar public recreation as is consistent with its military mission. More information on DoD's natural resources management is summarized in a factsheet available at www.denix.osd.mil/nr/. Public access to the three largest DoD installations in Arizona - Goldwater Range, Yuma Proving Ground, and Fort Huachuca - is administered at <https://isportsman.net/>.

Some land designations are the same across these Federal Agencies while others are specific to one or more organizations. Special land designations can come from the President, Congress, or the land management Agency. This web of managers, land management objectives, and varying land designation authorities has led to complexities in the current system. The tables below clarify most land designations, who has the authority to authorize them, and the intent of the designations.

America's Federal public lands contain many unique areas in need of special management attention. The authorities vested in the President, Congress, and the Agency administrators have been used to identify and develop management plans for these areas with strong engagement of the public. It's important to remember that these are your lands!

During your visits to Arizona's public lands, it's always wise to check the maps or talk with local Agency personnel to ensure that you understand the location and management guidance associated with each of these management areas. So get out and enjoy your public lands!



Your Land, Cont'd.

Multiple Agencies with the Same Designations			
Designation	Authority	Agency	Purpose / Characteristics / Notes
Wilderness	Congress	NPS, FS, BLM, FWS	Wilderness areas are “untrammeled by man,” motorized use prohibited (few exceptions by statute), highest protections under law.
National Recreation Area	Congress	NPS, FS, BLM	Includes important recreation areas, often near Bureau of Reclamation reservoirs.
National Monuments	Congress, President	NPS, BLM, FS, FWS	Includes areas of natural, cultural, historical, archeological significance. Presidential proclaimed areas have historic landmarks, historic/prehistoric structures, or other objects of historic or scientific interest. Permitted uses depend on management plans.
National Scenic Trail, National Historic Trail, National Recreation Trail	Congress, Sec. of Interior or Agriculture	NPS, FS, BLM	National scenic trails access significant scenic, historic, cultural areas. National historic trails protect routes of historic importance. National recreation trails often cross state, local, or private lands and provide for outdoor recreation.
Wilderness Study Area	Congress, Sec. of Interior or Agriculture	BLM, FS, FWS	BLM wilderness study areas are managed as wilderness until Congress designates or releases them. Most FS and FWS wilderness study areas are designated and managed according to individual statutes.
Wild and Scenic Rivers	Congress, Sec. of Interior	FS, NPS, BLM, FWS	Wild rivers have no impoundments and are generally accessible by trail only. Scenic rivers have no impoundments and are accessible by road. Recreational rivers are accessible by road, often have development along the shore and may have had past impoundments.

United States Forest Service (FS) Designations		
Designation	Authority	Purpose/Characteristics
National Scenic Area, National Scenic Research Area, National Scenic Recreation Area, National Scenic and Wildlife Area	Congress	Congress has designated 11 scenic areas on the National Forests. The management Direction for each is contained in the legislation. Generally, the lands contain outstanding scenic, recreation and geologic resources.
National Volcanic Monument	Congress	Congress has designated two National Volcanic monuments.
Special Management Area	Congress	Congress has designated more than 50 special management areas. The Statutes detail the purposes.
Inventoried Roadless Area	FS	Inventoried Roadless areas were areas that exceeded 5000 acres in size, met minimum criteria for Wilderness consideration and were inventoried during the FS Roadless Area Review and Evaluation or Forest land management planning. Timber harvest and road building are prohibited in most cases.

Bureau of Land Management (BLM) Designations		
Designation	Authority	Purpose/Characteristics
National Conservation Area	Congress	Contain significant natural, scientific, cultural, ecological, scenic, historic, or recreation values. The management emphasis is provided in the establishment statutes.
Area of Critical Environmental Concern (ACEC)	BLM	The public and the BLM nominate areas that require “special management attention, to protect and prevent damage to important cultural, scenic, fish and wildlife resources or other natural systems or processes. Areas are designated through the BLM resource management.

U.S. Fish and Wildlife Service (FWS) Designations		
Designation	Authority	Purpose/Characteristics
National Wildlife Refuges, Marine National Monuments, Wetland Management Districts, Waterfowl Production Areas, Wildlife Coordination Areas, National Fish Hatcheries	Secretary of Interior, FWS, Congress	Wildlife conservation drives everything on national wildlife refuges. Each refuge is established to serve a statutory purpose that targets the conservation of native species dependent on those lands and waters.

National Park Service (NPS) Designations		
Designation	Authority	Purpose/Characteristics
National Historic Sites and Landmarks, National Memorials, National Battlefields, National Historic Parks, National Heritage Areas	Congress, Sec. of the Interior	The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. Management goals each designation differ and are provided in the legislation of each site.

Conservation Corner

Great Legislation: Now and Then

By Lew Carpenter, Director of Conservation Partnerships for the National Wildlife Federation Rocky Mountain Region

In a world of never-ending federal legislation, the past year or two has shown some great bi-partisan successes for wildlife and the sporting world. From America's Conservation Act to the landmark, Great American Outdoors Act, it seems Americans can come together and do great things.

More recently, the Infrastructure Investment and Jobs Act passed through Congress and paved the way for a host of benefits to wildlife and people. "This bipartisan legislation includes the largest federal investment in wildlife crossings in our nation's history, and provides critical resources for other programs like the Forest Service Legacy Roads and Trail Remediation Program to help support healthy habitats and connectivity for fish and wildlife on public lands and water," said Mike Leahy, director of wildlife and hunting and fishing policy at the National Wildlife Federation. "The construction of wildlife crossings will reduce wildlife-vehicle collisions and is a key conservation strategy to help wildlife survive impacts from climate change and development."



Photos courtesy of Lew Carpenter and Michael Cravens

Top-line elements of the bill include:

- More than \$3 billion in investments for coastal restoration and regional watershed restoration efforts
- \$8 billion for wildfire risk reduction and management
- \$5 billion for FEMA hazard mitigation programs to build resilience in communities
- \$21 billion to remediate and reclaim abandoned coal mines, orphaned oil and gas wells, and Superfund sites
- \$3.3 billion to improve forest conditions, lessen the impacts of wildland fire, and better protect communities.
- \$2.1 billion for ecosystem restoration on public and private land
- Investing in responsible carbon capture, use, and storage, and direct air capture, and the infrastructure needed to move CO2 from where it is captured to where it will be stored or used in products like concrete
- \$1.4 billion toward a new PROTECT grant program, which will make U.S. surface transportation more resilient to extreme weather, including through natural infrastructure
- \$350 million and other support for wildlife crossings to improve habitat connectivity and reduce wildlife-vehicle collisions, including expanded eligibility within existing highway programs to include wildlife crossing, and natural infrastructure projects.



Here in Arizona, the Arizona Game and Fish Department – arguably one of the best state game and fish agencies in the country – has already designated its top connectivity projects to be funded by the new law.

I-17 – Woods Canyon to Flagstaff (MP 316-338)

Project Number 86960, from SR 169 to I-40 went through Environmental Assessment and Design Concept Report Phases before being shelved due to lack of funding. This stretch of road is dangerous to motorists (20 deer and 80 elk collisions/year) and bisects a historic elk migration corridor. This area is identified in Arizona's SO 3362 State Action Plan as the Interstate 17 Corridor (<https://www.nfwf.org/sites/default/files/2020-09/Arizona2020SAP.pdf>). ADOT, AZGFD, and US Forest Service have sought collaborative efforts to address this stretch of road, including upgrade of an experimental fence project that extended right-of-way fence to link existing structures and initially reduced elk-vehicle collisions by 97%. An ADOT 2021 Statewide Wildlife-Vehicle Conflict Study identifies the area from Woods Canyon to I-40 as a hotspot and recommends overpasses and fencing to address the issue. (https://azdot.gov/sites/default/files/media/2021/08/WVC_Final_Report_July30_2021.pdf) The ADOT report breaks the project up into three smaller projects of \$1.2 million (fence upgrade, shovel-ready), \$6.4 million, and \$6.6 million which could be done in phases or as a whole. Although NEPA was completed for the overpass locations during the initial design process, it needs to be updated. ADOT North Central District has the overpasses as priority numbers 2 and 4 in their Planning to Programming (P2P) process in case funding becomes available.



I-40 – Oak Hill Overpass and Fencing

Interstate 40 from Williams to Flagstaff is both a motorist safety concern and a major barrier to wildlife movements. To address this issue, ADOT funded a study to evaluate elk movements and wildlife-vehicle collisions, and to provide recommendations for mitigation to include in a future highway upgrade for which funding is not currently available. One specific overpass location (MP 174.3 with approximately 3 road miles of funnel-fencing) is essential for the connection of historic pronghorn migration corridors bisected by I-40. This would allow pronghorn to migrate >100 miles and will benefit connectivity for multiple species, including elk and deer. This location is also one of the highest elk and deer-vehicle collision spots on I-40. This migration path is part of the Grand Canyon to Prescott Corridor outlined in the Arizona SO 3362 State Action Plan (<https://www.nfwf.org/sites/default/files/2020-09/Arizona2020SAP.pdf>). In anticipation for a future overpass at this location, USDA Forest Service has implemented grassland restoration efforts through the Four Forest Initiative (4-FRI) and is committed to beginning the planning process as resources become available.

State Route 260 Lion Springs Wildlife Crossings

State Route 260 from Payson to the Mogollon Rim has been under a phased construction since 2000 and has incorporated multiple wildlife crossings throughout the process. The Lion Springs Section (Project # F0139) is the final section needed to complete this project and is in final design stages with an anticipated bid date in 2022, if funding is available. The initial recommendations

Conservation Corner, Cont'd.



made over 20 years ago in the original Design Concept Report (DCR) included only one culvert for wildlife. Research by AZGFD and ADOT since these recommendations were made indicate that the number, design, and location of wildlife crossings was insufficient to promote highway permeability for elk, the primary species of motorist safety concern in this area. AZGFD and USDA Tonto National Forest requested the addition of one overpass and two underpasses to the project designed for elk to provide opportunity for elk, and other wildlife to continue their daily and seasonal migrations in this area and to match efforts elsewhere along SR 260. These crossings will be connected with wildlife exclusionary fencing already planned for the project to guide all wildlife to these structures. ADOT approved

the addition of these newly recommended wildlife crossings to the current plans however project funding is TBD. Based on the Bridge Selection Reports, these additional crossings cost approximately \$7 million.

Still left to get across the finish line is the Recovering America's Wildlife Act (RAWA). RAWA is poised to be one of the most impactful conservation funding bills in a generation. It will fortify state wildlife agencies with a staggering amount of funding to support state wildlife management. Healthy wildlife populations are an inextricable part of our nation's \$887 billion dollar outdoor economy. Interaction with and sightings of fish and wildlife enhance the experiences of the hundreds of millions of Americans who enjoy our unrivaled lands, forests, and waters, especially at a time when more and more people have utilized the outdoors for solace and physical well-being during the Covid-19 pandemic. But, our nation's wildlife is in crisis with an estimated one-third of all wildlife species – more than 12,000 in total – in need of conservation attention.

Sponsored by Representatives Dingell (D-MI) and Fortenberry (R-NE), RAWA addresses this crisis by annually dedicating \$1.3 billion for state level conservation and \$97.5 million to tribal nations to restore wildlife populations and prevent fish and wildlife from becoming endangered. The legislation allows wildlife experts to implement science-based strategies and on-the-ground projects for recovering and restoring the species that need the most intervention, as outlined in the congressionally mandated State Wildlife Actions Plans. Development of these plans was led by state fish and wildlife agencies in coordination with a wide array of public and private partners, including the Arizona Wildlife Federation. However, current funding levels for the implementation of these plans is less than five percent of what is needed. This legislation will enable state fish and wildlife agencies to fully execute these plans for the first time in the more than 20 years since their development.

“The good news is that is not too late to save America's wildlife, but there is no time to waste. By passing the Recovering America's Wildlife Act and investing in this ounce of prevention, we can ensure that our children and grandchildren can enjoy the full diversity of wildlife — because the simple truth is that when we save wildlife, we save ourselves,” said Collin O'Mara, president and CEO of the National Wildlife Federation. “The Recovering America's Wildlife Act is bold and bipartisan, collaborative and proactive. It will have an immediate impact from the backcountry to backyards all across America.”

Coming into its 100th year, the Arizona Wildlife Federation – with your support – has been a key advocate for pretty much every piece of successful federal legislation that positively impacts Arizona's wildlife, habitat, air and water. It is a magnificent track record, and one that conservation-minded hunters and anglers can share as legacy.

AWWE-some Wildlife!

By Nikki Julien, AWF Outreach Director



the Peaks Tour

tion Center, Coconino County, and Coconino National Forest.

AWWE offers several ways to find wildlife. First, visit the website with information for over 30 watchable wildlife sites including directions and what habitats and critters can be seen. While visiting the website, listen to one of the audio tours which highlight several of the locations and wildlife. On your way to a site, rent one of the Watching Backpacks complete with guide books, maps, and binoculars at Peace Surplus. Some of the sites have signage that inform visitors of what wildlife can be seen and tips for success and safety. And for the past several summers, in person and virtual programming has helped local families and visitors alike to connect with wildlife up close and personal. This year's line-up of in-person events include a Gardening



Birders say their favorite part of birding is seeing the first migrant of the season. Visitors traveling in the state are thrilled by the iconic roadrunner or coyote. And what child isn't mesmerized by the vivid colors of a butterfly. Even the chance of seeing that fleeting glimpse of wildlife makes our outdoor adventures that much more adventuresome knowing that we are sharing that moment, that place, with a creature of mystery.

Enjoying the outdoors specifically for wildlife takes knowing where to go within good habitat. It also takes patience and knowledge of wildlife behaviors. The Arizona Watchable Wildlife Experience (AWWE) based in Flagstaff is dedicated to setting wildlife viewers up for success. Since its formation in 2008, the program's capacity has been due to the collaborative efforts of several local advocates for wildlife including the Arizona Game and Fish Department, City of Flagstaff, the Arizona Wildlife Federation, Willow Bend Environmental Education Center, Coconino County, and Coconino National Forest.

Arizona's Watchable Wildlife Experience offers recreational opportunities for the public to view wildlife among a system of trails and public lands. Join us in experiencing wildlife and their habitats in ways that are truly AWWEsome!

www.azwatchwildlife.com

for Wildlife workshop by Arizona Wildlife Federation hosted at Willow Bend Environmental Education Center, both elk and prairie dog viewing with Game and Fish, and a local and exotic insect education event with the City of Flagstaff.

From the vibrant flash of the western flycatcher to the playful antics of the Abert's squirrel to the majesty of the elk, we love looking at wildlife. With the warm weather just around the corner, you might be thinking of heading to the Flagstaff area for the mountain wildflowers, the cool pines, and the fall colors. Check out the Arizona Watchable Wildlife Experience for your best chance to see wildlife and maybe you will see more than just a fleeting glimpse!

New Year, New Venue

By Linda Dightmon, BOW Coordinator



Linda Dightmon, photo courtesy of Mark Hullinger.

Our January BOW workshop was held at the YMCA Triangle Y Ranch Camp and Retreat Center in the foothills of the Catalina Mountains in Oracle, Arizona. The camp can accommodate a full size (100 participant) workshop but we opted for a smaller group for our inaugural event. Our goal was 50 ladies and when registration first opened, we quickly filled up, with 15 on a wait list! Sadly, by the first of the year, virus concerns elevated and even with the wait list, we ended up with only 39 participants. On the up side, half of the participants were new to BOW.

This venue offers some great advantages and unique opportunities. The camp has several gold claims so participants were able to pan for gold; all found a little bit of 'flour gold' to take home. Other unique classes included a giant climbing tower with a zipline, axe throwing, and spelunking. The spelunking class went to nearby Peppersauce Cave and the participating cavers all squeezed through the "rabbit hole." The rifle, handgun, and archery ranges are all on-site, and there are miles of hills to glass for wildlife or look for plants. The site was a plant nerds dream! AWF Board member, Val Morrill, was delighted to point out that three different life zones transition at this site. To make it even better, the Triangle Y staff, led by Andy (aka "Oak Tree") was spot on perfect and a joy to work with. The food delicious and the panoramic views of the Galiuro Mountains from the dining hall make meal times especially lovely.

Weather is always the wild card when planning and executing outdoor events, and for the most part it cooperated. Fortunately the light rain showers on Saturday afternoon let up when classes

went outside. The predator calling and navigation workshops both fit in their outdoor portions when the rains let up.

The evenings were cool but historic Hawkins Hall was super cozy with a wonderful indoor fireplace. On Friday night we had the traditional wine and game taste with prickly pear margaritas ice breaker. We served bear meatballs, sweet and sour elk sweet, and crayfish ceviche. Later, our guest speaker talked about the colorful history of the region.

On Saturday, night we tried something a little different. We asked the ladies to break up into teams with people they didn't previously know. Then, we played BOW trivia



The happy ladies of Handgun class. Photo courtesy of Val Morrill.

with questions from specific BOW classes and general outdoor knowledge. The women were all engaged and had a good time. Only one question could not be answered by any of the teams: “what does UTM stand for?” Do you know? If not, you’ll just have to look it up!

As always, these workshop could not happen without the volunteer instructors. Cliff Saylor taught a class in every session and led an evening event! Marcy Harris, John Davis, and Amanda Moors drove in for just one day to instruct. Mark Hullinger taught 2 classes and Stan and Danette Schepers spent their Saturday with 5 ladies who wanted to learn predator hunting. Kathy Greene taught 2 classes in addition to coordinating the event. Don Greene took over the archery class. I was there helping with evening activities and teaching 3 classes.

Special thanks to Cheryl Reuss and Val Morrill. Cheryl came in at the last minute to teach the photography class, which was one of the most popular classes of the day. Val helped set up Hawkins Hall, served during the game taste, provided insight and guidance during trivia, and taught the Gardening for Wildlife class. There is no better team of instructors anywhere!

We really like this location for the winter workshop. It showcases the diversity that IS Southeast Arizona. It offers some unique learning opportunities and has an excellent staff and good food.



Stan and Danette Schepers. Photo courtesy of BOW coordinator Kathy Greene



Spelunking in Peppersauce Cave. Photo by Kathy Greene.



Zipline and climbing tower at Triangle Y Ranch.

Sonoran Pronghorn Return...

With a Little Help From Us All

By Glen Dickens and Trica Oshant Hawkins

When 22 endangered Sonoran pronghorn were released on the Sonoran Desert National Monument last January 14th, it was indeed an historic event. Several AWF staff and board members were fortunate to be present to help with the release. The pronghorn had been translocated to the site from the Cabeza Prieta National Wildlife Refuge (Cabeza Prieta NWR) captive breeding pen several weeks earlier as part of a joint reintroduction effort by the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service. AWF's Vice President, Glen Dickens, along with Betty Dickens (photographer and Glen's spouse), had participated in the translocation as Glen has been a long-time leader and Vice President with AWF Affiliate organization, the Arizona Antelope Foundation. AWF Volunteers for Wildlife also played a role in this effort by building capture and holding pens, and removing barbed wire fencing in the release area. The captive breeding, translocation, and release were all realizations of a dream, manifested through careful planning and actions over the past several decades. To provide some context, let's take a step back and look at the history of the Sonoran pronghorn.

The Sonoran pronghorn (*Antilocapra americana sonoriensis*) is currently listed as endangered throughout its range (without designated critical habitat) under the 1973 Endangered Species Act (ESA). It is also listed as an endangered species in Mexico by the Mexican Ministry of Environment and Natural Resources (SEMARNAT).

The Sonoran pronghorn is one of four extant subspecies of pronghorn, which are endemic to western North America. The first Sonoran Pronghorn Recovery Plan was completed in 1982. Following several revisions, the latest Recovery Plan revision was issued in 2015. The species' current recovery priority number is 3, indicating the subspecies has a high degree of threat and a high potential for recovery.

In the summer of 2002, the U.S. population of Sonoran pronghorn was very nearly extirpated (dropping to just 19 known animals) due to the most severe drought on record in southern Arizona. The previous 20 years, the U.S. population had averaged around 140 animals.



Pronghorn we carefully transferred to and from the processing station. Photo by Betty Dickens.

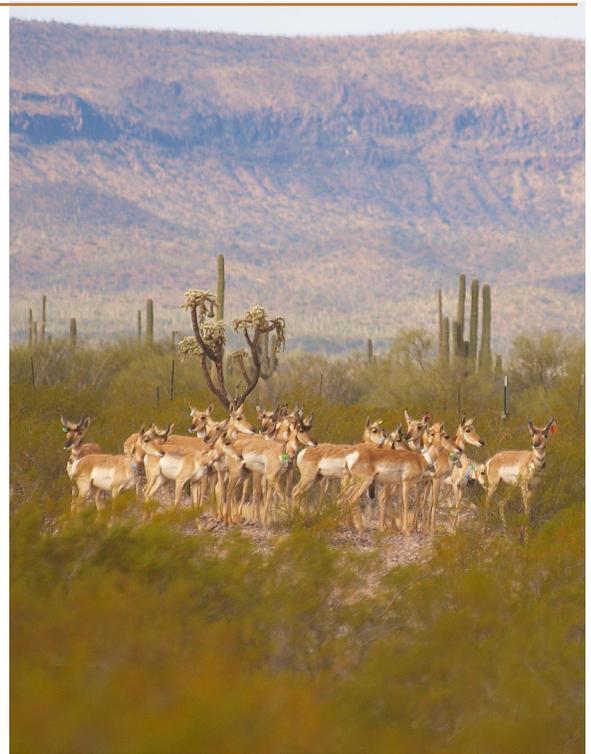


Photo courtesy of Kenneth Cook

Sonoran pronghorn in Mexico did not decline as severely that same year. In response to the near extirpation of the U.S. population, the AGFD, USFWS, and other cooperating agency partners began aggressive conservation actions in the U.S., including: 1) installation of water developments; 2) construction of forage enhancement plots; 3) supplemental feeding, and; 4) a captive breeding program. Management efforts were not implemented in Mexico because populations there had not declined enough to warrant them.

The captive breeding program on the Cabeza Prieta NWR began in 2003, when 7 of the remaining animals were captured and placed in

Pronghorn Return, Cont'd.

a 640 acre, predator proof pen on the Refuge in effort to facilitate captive breeding and re-stocking as the habitat improved. The Cabeza Prieta NWR's program has been quite successful in producing a sufficient number of animals for releases. Subsequently, the Recovery Team established a second nonessential captive experimental population (under section 10(j) of the ESA) on the Kofa NWR using pronghorn from the Cabeza Prieta NWR captive breeding pen. Apart from the breeding program, Sonoran pronghorn continue to occur on the Barry M. Goldwater Range, Organ Pipe Cactus National Monument, Yuma Proving Grounds, and the Tohono O'odham Nation. Two additional subpopulations occur as well in Mexico, primarily within the Pinacate y Gran Desierto de Altar Biosphere Reserve in Sonora.

The U.S. Border Patrol keeps up its necessary work along the international border and has supported essential conservation endeavors underway, such as captive breeding. The Wildlife Restoration (Pittman-Robertson) Act, which is funded by hunters, provided funds to the AGFD to build 18 water catchment systems on the Cabeza Prieta and Kofa NWRs. The structures catch rain, collect it underground, and let the water gravity-feed to a lower point where wildlife can drink it. This has been markedly successful in improving the fate of Sonoran pronghorn. The larger of the catchments can collect enough water during summer monsoons to store and deliver water for pronghorn until they are replenished when rain falls the following summer.

Population monitoring continues on the ground and in the air. In the last week of November 2021, 161 animals were observed from the air, resulting in a minimum population estimate of 232 pronghorn in the wild. Some animals carry radio transmitters to aid in ground monitoring. Captive breeding continues as well, and as of December 8, 2021 (following the translocation) there were 72 pronghorn presently in the two captive rearing pens at Cabeza Prieta NWF and another 26 housed at Kofa.

Meanwhile, back at the Sonoran Desert National Monument, the 22 translocated pronghorn are all presently still alive and continue to explore their new home. Having removed several miles of barbed wire fence in the area, AWF volunteers should feel very proud that their efforts are having immediate, positive effects on the landscape; the pronghorn have now safely crossed several times through areas where the fencing was removed. To successfully return a species to its native landscape is one of the pinnacles of wildlife management. To have played any role in this effort is indeed an honor and a privilege.

If you would like to help in these efforts, you can! You can support our Volunteer for Wildlife program by signing up to volunteer at www.azwildlife.org/volunteer. You can also make a tax deductible contribution to AWF at www.azwildlife.org/donate or by sending a donation in the remittance envelope in this edition of AWN. These important programs would not happen without your support!



Antelope running after being released into the temporary pen at Vekol Valley. Antelope Peak is seen in the background. Photo by Ken Cook.

Can we count on your help?

Visit www.azwildlife.org or call 480-702-1365 to give to AWF.



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If you have supported AWF in the past, thank you! Please continue your commitment to conservation by renewing your support with an annual (or monthly!) contribution.



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Purchase the Records of Arizona Big Game 50th anniversary edition or past editions on our website shop.



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Make AWF your charity every time you shop at www.smile.amazon.com. With no extra work from you, Amazon will give AWF .5% of your eligible purchases.



DONATE STOCKS

Share your investment wealth through the donation of stocks by contacting Board Treasurer Amanda Moors at amoores@cableone.net



LEAVE A LEGACY

By including AWF in your estate planning, you give the gift of long-term conservation.



CERTIFY YOUR GARDEN

Give the gift of habitat to wildlife and when you certify with the National Wildlife Federation, AWF will receive a portion of your certification charge.



GIVE RANGER RICK

For the little ones in your life, give the gift of learning and discovery with Ranger Rick Magazine through our website and AWF receives a portion of your rate.



VOLUNTEER

Join AWF on hands-on conservation projects in the field. We work with our affiliates to offer volunteer opportunities across the state.

Leave Your Legacy with the Arizona Wildlife Federation

Planned giving is an important and effective way that you can support the work and mission of Arizona Wildlife Federation. By including the AWF in your will, trust, or retirement plan, you can have a powerful impact on wildlife conservation in Arizona. Your gift to AWF can be a part of your legacy, one that helps ensure Arizona’s wildlife and public lands are protected for generations to come.

There are several ways that you can leave a lasting gift to AWF.

- An easy and popular way is to include a gift in your will or revocable trust.
- Another easy way is to name AWF as a beneficiary in a bank, investment, insurance, or retirement account.
- If you are 72 or older, you can make a current gift from a retirement account that counts toward your annual required distribution.
- You can also make your annual gift to AWF with appreciated stock or through your donor-advised fund.

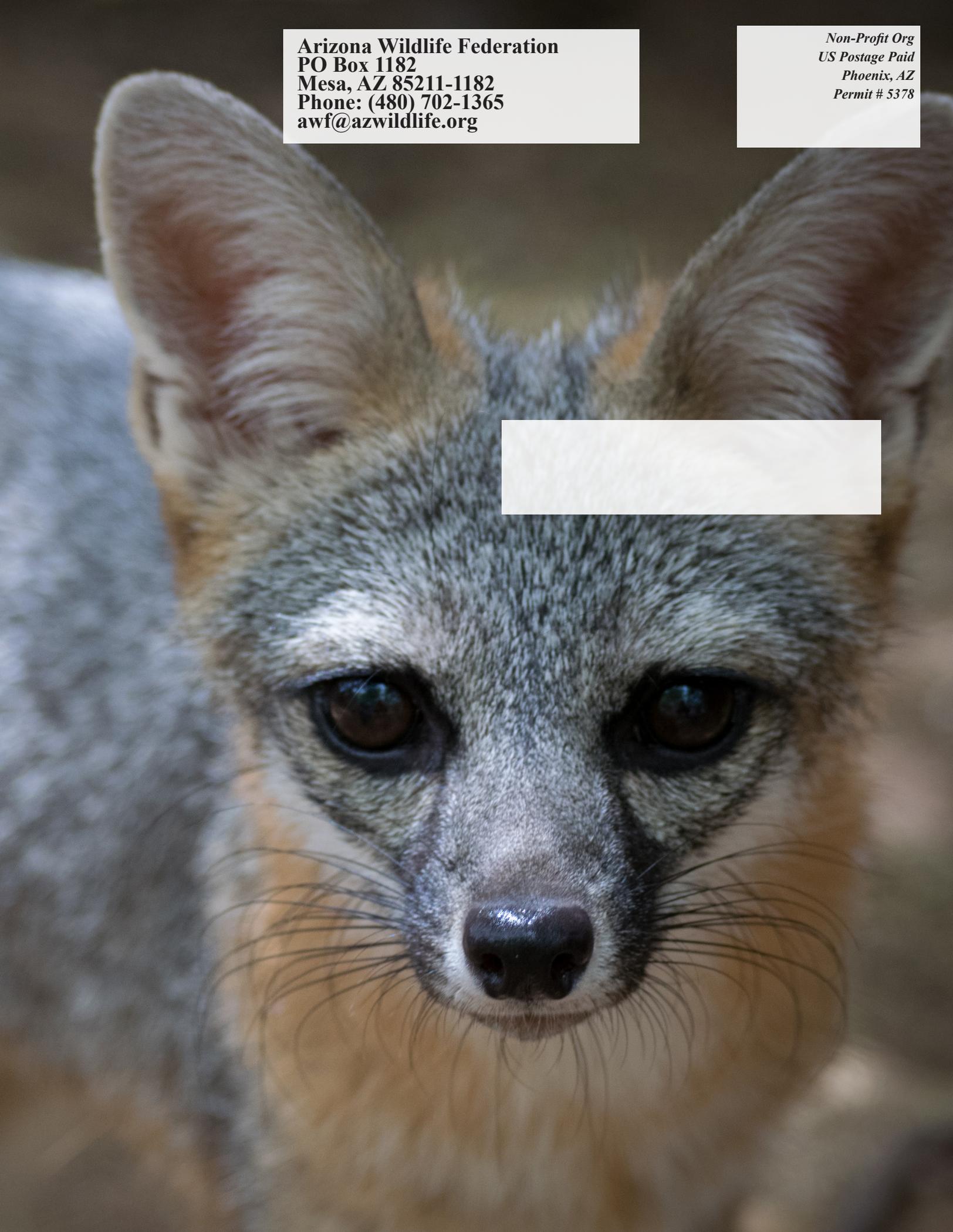
Regardless of your preferred approach, we are honored by the generosity of those of you who leave a gift through your estate. Including the Arizona Wildlife Federation in your estate plan ensures that your values will endure and future generations will benefit from your thoughtful foresight. Your legacy of caring for wildlife will live on through your gift to AWF.

If you have already included AWF in your will or trust, or are interested in more information, please contact Alan Knobloch at alan@azwildlife.org



Thank you to our Lifetime Members!

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Gary Christensen	J David Gibeault	Roy Kormmeyer	Donald Parks Jr	Julie Sever	Robert Witzeman
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