

ARIZONA WILDLIFE

SUMMER 2019



NEWS



VOLUME 61 - ISSUE 2

OFFICIAL PUBLICATION OF THE ARIZONA WILDLIFE FEDERATION - CONSERVING ARIZONA'S WILDLIFE AND HABITAT

ARIZONA WILDLIFE NEWS

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In This Issue

Page 3	Message from the President
Page 4	Regional Roundup
Page 10	Conservation Corner
Page 12	Taking Aim at the Same Things
Page 14	Outdoor Recreation Along Arizona Waterways
Page 16	AWF Honored
Page 17	Ranger Rick
Page 18	BOW Happenings
Page 19	Spotlight on Affiliates
Page 20	After the Hunt

AWF MISSION STATEMENT

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

FRONT COVER:

Our cover photo this issue was the 2nd place winner of last years AWF photo contest. The photo is of a barn owl and was taken by Tanya Mitchell.

BACK COVER: Pictures of our Becoming an Outdoors Woman event by Ryan Kreuzer. Please join us for an upcoming event. Visit www.azwildlife.org/BOW for more information.

Special thanks to Ryan Kreuzer for the cover design & layout

If you have a photo you would like to submit for our cover, please contact Trica at trica@azwildlife.org

ARIZONA WILDLIFE NEWS * VOLUME 61* SUMMER 2019

published by the ARIZONA WILDLIFE FEDERATION

An Affiliate of the National Wildlife Federation

PO Box 1182, Mesa, AZ 85211-1182 - Phone-480-487-4663

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. AWF is Arizona's oldest conservation organization. The editorials and commentaries in this publication do not necessarily reflect the mission or position of the Arizona Wildlife Federation. AWF is an equal opportunity provider.

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Message from the President

By Brad Powell

As summer continues to bake Arizona, my attention is focused on our nations capitol. No, I'm not watching Twitter fights; I'm focused on

3 pieces of legislation winding their way slowly through the labyrinth processes. Passage of these Bills would be the culmination of years of work by the Arizona Wildlife Federation (AWF). The Land and Water Conservation Fund Reauthorization Act (LWCF), The Grand Canyon Centennial Protection Act, and the Recovering America's Wildlife Act all deserve our attention and support. Each of these Bills will significantly impact wildlife and their habitats. Please join me in contacting your Representative and Senator to let them know we need their support to pass these Bills.

The LWCF has delivered on-the-ground conservation achievements to virtually every community in Arizona. In our state, the LWCF has provided over \$235 million for outdoor recreation. The LWCF is America's most successful conservation program. It was permanently reauthorized in 2019 as part of the bipartisan John D. Dingell, Jr. Conservation, Management and Recreation Act. This was a great accomplishment, but the job isn't finished; without a defined budget, this important program is still subject to annual fights over funding. When the LWCF was passed in 1965, it authorized a budget cap of \$900 million annually to be funded from offshore oil and gas revenues, but this has been achieved only twice in the last 54 years. Representatives Drew (NJ), Chair Grijalva (AZ) and a bipartisan group of Congressional lawmakers recently introduced The Land and Water Conservation Fund (LWCF) Permanent Funding Act (HR3195). The bill fully funds LWCF at its authorized level of \$900 million annually. Senator Joe Manchin (D-WV), ranking member of the Senate Energy and Natural Resources Committee, introduced S1081, the Senate companion bill.

We have been working for over a decade to protect the watersheds adjacent to the Grand Canyon from Uranium mining. In 2012, Secretary of the Interior Salazar placed a 20-year mineral moratorium on nearly 1 million acres of public lands adjacent to the Grand Canyon. The intent of this moratorium was to protect downstream communities, wildlife habitats and the recreation economy in Northern Arizona from the impacts of Uranium mining. The previous uranium mining boom in the west left a legacy of pollution and mounting cleanup costs exceeding 3 billion dollars across the west, with the majority of the cleanup being paid for by U.S. taxpayers. In the last few years the mining industry, some individuals in the current Administration, and a few congressional leaders have led a concerted effort to remove this moratorium. We have worked aggressively to defend this moratorium, and have worked closely with members of the Arizona Congressional delegation to introduce the Grand Canyon

Centennial Protection Act (HR1373) that will make the 20-year mineral withdrawal permanent. Currently there is no companion bill in the Senate.

America's wildlife populations are in peril. While many species are doing well and even thriving, over one third of U.S wildlife species are imperiled or vulnerable. Over one million species worldwide are at risk of extinction. Habitat loss, climate change, invasive species, disease, and severe weather have all taken a severe toll on birds, mammals, fish, amphibians, reptiles, butterflies, and bees. A diverse group of conservation and industry leaders (the Association of Fish and Wildlife Agencies' Blue Ribbon Panel on Sustaining America's Diverse Fish & Wildlife Resources) developed a series of recommendations on ways to avert this approaching disaster for many wildlife species. The Recovering America's Wildlife Act (HR3472) was introduced in 2019 to provide States, Territories, and Tribes with the funding to develop proactive, collaborative, on-the-ground efforts to restore essential habitat and implement key conservation strategies. This legislation is a common sense investment that will provide the resources to States to help keep species off of the endangered species list. This upfront investment will save money over the long term and will help each State do essential wildlife work that is currently unfunded.

Information about these Bills and other work that the Arizona Wildlife Federation is engaged can be found on our website at www.azwildlife.org. Please take the time to contact your Congressman/woman and Senators to express your support for these important pieces of legislation.

Letters to the Editor

Keep your communications short and to the point. All must be signed. If you send us questions, we will seek answers and print them here. There may be times mail volume may prevent us from publishing every letter we receive, but we will do our best to print as many as possible.

Send your 'snail mail' to:

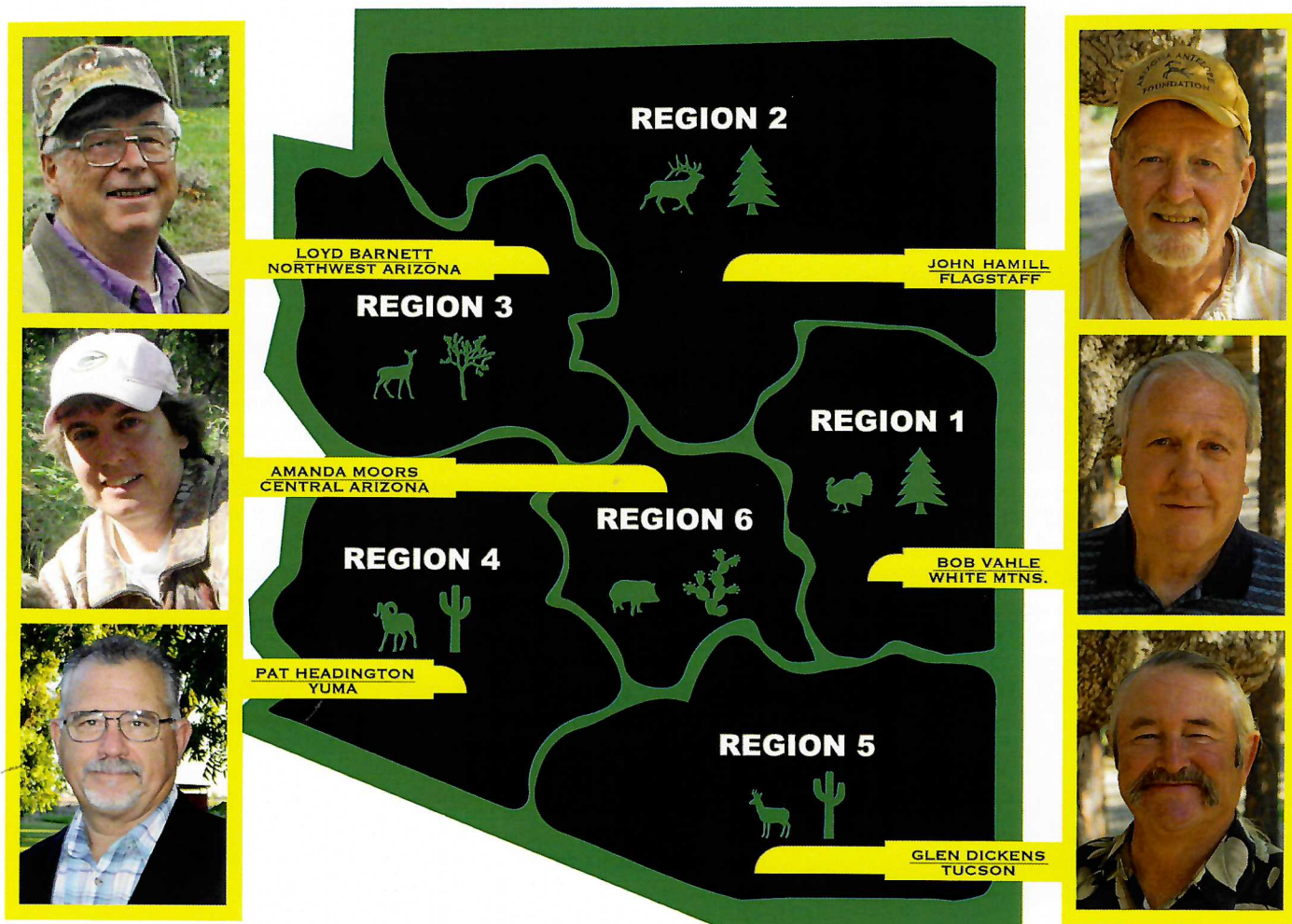
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Regional Roundup

Highlights from AWF's Regional Directors



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! In this column, we present a few of last season's activity highlights from selected regions. For their full and complete reports, visit our website at www.azwildlife.org

This past season, our Regional Directors have really shone! You can see from their reports just how active and involved our AWF board is during the year. We want to extend a special thank you to our board members for their dedication to wildlife, wildlife habitat, and conservation.

REGION 1

Bob Vahle, Regional Director

Heber Wild Horse Territory (HWHT)

After serving on the Heber Wild Horse Territory Working Group (HWHT) in 2018, Bob continues to track the status of the Heber wild horses. This includes the development of a management plan for the HWHT by staff of the Apache-Sitgreaves National Forest (ASNF) and the controversial issues related to this project. Bob spoke with ASNF Forest Supervisor to discuss the

project and its status to provide AWF with an update. The ASNF has developed a "draft management plan" which is currently being reviewed by staff of the U.S. Forest Service, Region 3 Headquarters in Albuquerque, NM, and their legal council. Due to events that occurred near and within the HWHT between October 2018 and April 2019, the management plan is still in the works. Those events include 19 confirmed cases of deceased horses, 11 of which

have evidence of gunshot wounds. The deaths are still under investigation. It is a crime to harm any wild horse or burro. The 16 U.S. Code § 1338 criminal provisions state "Any person who maliciously causes the death or harassment of any wild free-roaming horse or burro shall be subject to a fine of not more than \$2,000, or imprisonment for not more than one year, or both." The ASNF is waiting on legal guidance and an official opinion on how to proceed with the development of the management plan and the NEPA public process in relation to the highly controversial incidences that have occurred. Consequently, the delay in completing a management plan precludes the ASNF from taking any actions to control the horse population as it continues to grow, until a management plan is completed and implemented.



Photo by Laura Singleton/The Independent

Four Forests Restoration Initiative (4FRI)

Bob also continues to track the progress of 4FRI forest restoration treatment activities ongoing and planned in Region 1. Currently, there are six active and near completed forest thinning treatment projects (Billy, Turkey, Mesa, Apprentice, Telephone, and Timber Knoll) on the Sitgreaves portion of the ASNF in and around Show Low and Pinetop-Lakeside, AZ which are concentrated within the "Wildland Urban Interface" (WUI) to reduce potential fire risk. There are also four ongoing and near completed projects (Saint Peters/Burnt Mill, Milligan Valley, Luna Lake, and Pace Creek) on the Apache portion of the ASNF.

The utilization of the large volumes of biomass residue

(e.g., branches, limbs, needles) that is created through the 4FRI forest restoration thinning landscape treatments has been a major concern and a key project objective since planning and implementation of the 4 FRI project. One of the objectives identified during the 4FRI project was to evaluate the potential and cost effectiveness of using this material for the generation of electric power. Recently, the Arizona Public Service (APS) concluded its evaluation of the feasibility and potential cost of converting one of its power generating units (Cholla Unit #1) at the Cholla Power Plant near Joseph City, AZ to burn forest biomass created through the 4FRI project to generate power. A summary of the APS evaluation study findings are listed below which are very encouraging in light of helping to meet the landscape forest treatment objectives of the 4FRI project.

It is feasible to convert Cholla #1 to burn dried, sized woody biomass

- The converted unit could provide approximately 83 MW of net output to the grid
- The conversion could be completed as early as 2022
- Capital cost of the conversion is \$205 million
- The amount of fuel available to the plant will be determined through the Forest Service RFP
- The cost of collecting and delivering biomass fuel to the plant will be determined through an APS fuel RFP
- APS assumed enough fuel would be available to run the plant at 75% capacity factor, resulting in a levelized busbar cost of \$115/MWH
- Conversion of Cholla #1 would provide positive economic impacts to the region including jobs (construction, plant operations, biomass collection and transportation, and indirect jobs) and property taxes.

Additional Region 1 Updates and Activities:

Bob was also busy this past quarter reviewing and providing feedback on a variety of AWF/NWF documents including an AWF proposed resolution, "Protecting Habitat, Wildlife, and Water Resources around the Grand Canyon from Uranium Mining" which was approved and adopted by National Wildlife Federation at their Annual Meeting in June and, together with NWF staff, comments on proposed legislation including the National Wildlife Corridors Act.

REGION 3

Loyd Barnett, Regional Director

BLM Travel Management Plan

The Bureau of Land Management (BLM) in Kingman recently completed a proposed travel management plan for the area managed by the Kingman Field Office. This area in north-west Arizona comprises about 2.5 million acres of BLM land interspersed within an overall boundary of 5.7 million acres. It includes the Black Mountains, Cerbats, Hualapai Mountains, Arrastras, much of the Big Sandy, as well as areas near Bagdad and Goodwin Mesa.

Existing statewide BLM direction on travel is an overriding guideline and a few of the directions include:

- Vehicles are allowed to pull 100 feet off of either side of designated routes. Where pulling off a vehicle 100 feet from a route's centerline is allowed, impacts to natural

and cultural resources shall be monitored on a continuing basis as staffing permits.

- There are no posted speed limits on BLM roads, primitive roads or trails.
- Use of motorized or mechanized vehicles off of the designated route for the purpose of working livestock is prohibited.
- No motorized access to harvested game cross-country or off of a route designated open to the public, although use of a mechanized game carrier off of an open route is permitted outside of designated wilderness areas. Note - On National Forests in Arizona motorized cross-country game retrieval is only authorized for elk

and, on the North Kaibab, for bison.

The planning process included a detailed site inventory and evaluation of about 5,500 miles of existing routes. Many existing routes are in desert washes. Often times these are the least impacted by vehicular travel, as there is no surface vegetation and the sand-gravel surface is rearranged by occasional flash floods following monsoon storms. The plan resulted in proposing the closing about 30 percent of existing on the ground routes, most often due to resource impacts, including many miles within desert bighorn sheep habitat. The travel management planning process is documented in an environmental analysis that can be accessed by searching for "Kingman BLM travel management."

Public comment on the environmental analysis concluded on Nov. 30, 2018. Currently the travel management plan is "in discussions between the state office and the Washington office" and with congressional staff. A review of BLM top management (at the Washington level as well as state directors) indicates that

many of them were appointed under the current administration and several previously worked for western members of Congress. Those with previous BLM experience include a number with oil and gas or mining experience.

Verde Watershed Restoration Coalition

The Verde Watershed Restoration Coalition continues in developing and implementing a detailed restoration plan for streams and associated riparian areas in the Verde River basin. Loyd represents the AWF as one of the many participants in the Coalition.

Big Chino Hydroelectric

The Big Chino pumped storage hydroelectric generation and transmission proposed project continues to go through the detailed analysis process. A great deal of stakeholder input has been received. The primary issue is the effect of the initial groundwater withdrawal to fill the two reservoirs.

REGION 4

Pat Headington, Regional Director

Youth Fishing & Outdoor Clinic

The Yuma Valley Rod & Gun Club (YVRGC) held its annual Youth Fishing & Outdoor Clinic on March 23, 2019 at Mittry Lake. This year, some 864 youth and their family registered the morning of the event exceeding last years attendance by over 250 youth. While the Arizona Game and Fish Department (AZGFD) set up tanks that were stocked with catfish and bluegill, others tried their luck from the dock or scattered along the Mittry Lake shoreline. Several local groups attended and supported this event with different activities including:

- Yuma Police Department - inflatable BB gun range
- Southwest Bowhunters - archery range
- Arizona Predator Callers - calling demonstration
- Sportsman's Hideaway - glassing
- BOW - information booth

Additional activities included a jump house and face painting. Lunch was served and included hotdogs and snow cones. Funding for the event was provided by grants from Arizona Sportsman for Wildlife Conservation and Southwest Wildlife Foundation along with over 90 other sponsors and manufacturers that helped make this event possible. Club members and volunteers provide countless hours preparing, staffing, teardown, and clean up after the event.

Rocky Mountain Elk Foundation Banquet (RMEF)

The local chapter of RMEF held its annual banquet in Yuma with approximately 150 people attending. This local chapter has



\$6,500 pledged to local youth and veteran events scheduled for this fall in the Yuma area (pending funding).

Water for Wildlife

In coordination with AZGFD Region 4 staff, YVRGC members constructed two water hole projects in Game Management Unit (GMU) 41 and 43B. The project in GMU 41 was located in the

Eagletail Mountain Wilderness Area and has a capacity of approximately 18,000 gallons. The 43B project was located in the Chocolate Mountains and has a capacity of approximately 7,500 gallons. Each project included 12-14 club members working for 12+ hours alongside Region 4 staff.

Club members and volunteers began checking water levels at various sites in all the GMU's within the region and hauling water to some temporary water sites in May. Water levels were in good condition heading into summer.



Land and Travel Management

Bureau of Land Management (BLM)

BLM has completed the Imperial Hills Travel Management

REGION 5

Glen Dickens, Regional Director

Arizona Game and Fish Commission

Glen represented the AWF at the Arizona Game and Fish Commission meeting held last March in Bisbee and presented AWF's position statement on the AGFD Education Funding update.

Glen's comments are presented in their entirety below:

"Director Grey, Commission Chair Zieler and fellow Commissioners, I am Glen Dickens, Vice President of Operations and Conservation Policy for the Arizona Wildlife Federation. My comments today represent the AWF's formal comments regarding the Alternative Education Funding presentation currently under consideration by the Commission;

The Arizona Wildlife Federation (AWF), a 501(c)3 non-profit corporation was founded in 1923 to take politics out of Arizona's Game and Fish Management and to promote the management of Arizona's wildlife and natural resources based on the principles of "Sound Science". The AWF got its start as the Arizona Game Protection Association and celebrated 95 years of Arizona conservation activity in 2018.

Since our beginning in 1923, the AWF has fought for a strong Commission system that focused on science and not politics. In 2014, we worked at the Legislature and supported securing additional flexibility for the Commission to simplify its license structure. In 2018, we stood shoulder to shoulder with the Commission and Department to secure permanent License Simplification legislation and in the 2019 session we have supported all of the Departments Bills.

plan and posted a final map for the area on their website. This small strip of land between Yuma Proving Ground and the Colorado River has seen a dramatic increase in off-highway vehicle travel. Damage from OHV use was significant prompting BLM to take action. This area is home to many wildlife species including desert bighorn sheep and mule deer, and occasionally a population of wild horses and burros will range through the area.

Kofa National Wildlife Refuge (KNWR)

KNWR has released a draft Environmental Assessment (EA) for the construction of an alternate route around private property holdings located within the refuge. Access across current roads was closed to the public where the road enters private land due to increases in traffic and speed primarily from OHV users. In September 2018, KNWR staff, AZGFD staff, and others worked to reopen the road temporarily while the U.S. Fish & Wildlife Service (FWS) developed alternatives to avoid travel through private lands. YVRGC has drafted a letter supporting Alternative B within the EA.

Arizona Game and Fish Commission

The YVRGC Board of Directors signed on to a letter supporting the proposed rulemaking related to contest hunting. While the Board recognizes there is no biological reason to make changes to the current rule, we also recognize the need for this proposal to remain at the commission level and avoid possible legislative actions.

Additional Region 4 Updates and Activities

Farm Bill Wildlife Biologist Megan McWard introduced herself at April club meeting. Ms. McWard is on contract for two years with the department and is focused on landowner relations within the region. Her position is partially grant funded from

We also share the Commission's interest in education related to the importance of wildlife management. We commend the Commission for its work to resolve the funding needed to expand this program. We recommend the Commission fully assert its expanded authorities and not touch the slippery slope of asking the 2020 State legislature for a Resolution of Support. Providing opportunities for the legislature to engage in this issue could lead to an erosion of authority for the Commission on Wildlife issues in the future and will delay action needed on public wildlife education now.

Thank you for this opportunity to continue to participate in an open and transparent process."

Vekol Valley - Bureau of Land Management Fence Removal Project for Sonoran Pronghorn

Glen also attended the Arizona Antelope Foundation (AAF) fence removal project in the Vekol Valley southwest of Casa Grande. His article below was originally published in AAF's Pronghorn magazine and revised for this publication.

On Saturday, March 16th, 2019, the AAF held the first of many planned fence removal projects in the Vekol Valley, approximately 30 miles southwest of Casa Grande. This was in cooperation with the Phoenix District Office of the Bureau of Land Management and their efforts to make this zone more pronghorn friendly for a planned Sonoran Pronghorn supplemental release. The Sonoran Pronghorn subspecies is not hunted, is currently federally listed

as Endangered and its restoration is being co-managed by the U.S. Fish and Wildlife Service and the Arizona Game and Fish Department.



This was only the second “winter project” AAF has held, the first being the Ajo waterhole fence construction project in January of 2018. Going forward in addition to AAF’s usual fence projects held in April, June, August, and September, this is intended to be the 5th project each winter, weather and government shutdowns notwithstanding. For this project, there were 30 volunteers, who enjoyed bluebirds, lovely daytime winter temps, and evenings cool enough to enjoy gathering around the fire.

For this first project, Glen and his co-volunteers removed four miles of existing fence and a wire corral three miles west of the Vekol Valley road and three miles south of Interstate 8. All wire was rolled and removed and, to the degree possible, old wooden fence posts were removed as well. For the Friday afternoon project, early arrivals helped brush out the road from camp to the work site and then having time on their hands, they removed an entire wire corral and metal fence posts.

As stated previously, this effort is in direct support of the Endangered Pronghorn re-establishment efforts. These projects will help ensure that future pronghorn and resident mule deer can safely utilize open desert and grassland corridors without interference due to fence line obstructions. After this project, this zone now has 50 more miles of fence to be removed. It is AAF’s goal to take out the highest priority 20 miles over the next several project years.

Gould’s Turkey

In April, Glen and his spouse Betty attended the annual

AZGFD Tucson Regional Gould’s turkey surveys in the Huachuca Mountains. Glen noted near record numbers recorded for the weekend. The reintroduced species is doing very well across all of southeastern Arizona and providing significant spring turkey hunt opportunities (which Betty thoroughly enjoyed – see the accompanying photo). Glen and Betty are prepared for Thanksgiving



Additional Region 5 Updates and Activities:

Glen also attended the Arizona Antelope Foundation fence removal project in the Bonita Grasslands northwest of Wilcox. As per his usual quarterly tasks, Glen also participated in AWF Executive Staff phone meetings and multiple National Wildlife Federation Caucus calls.

REGION 6

Amanda Moors, Regional Director

Salt River Horses Update

As you likely know, the Salt River wild horses are now protected by State law. They are no longer considered feral and it is illegal to kill or harass them. The USFS has worked with the State Department of Agriculture to come up with the best way to humanely manage the herd. They are working to mitigate danger to the public by fencing the horses into areas away from the roads and camping and picnic areas.

Last summer a non-profit group called the Salt River Wild Horse Management Group was awarded a contract with the State of Arizona to officially manage the Salt River wild horses in the

Tonto National Forest. Below is an overview of the group’s management objectives from their website:

<https://saltriverwildhorsemanagementgroup.org/>.

Our humane management plan includes the following components:

- A humane birth control program to stabilize and reduce population growth in the Salt River wild horse herd.
- Emergency programs such as the Feed protocol and diversionary watering.
- Maintenance of fences and gates to keep wild horses off roadways.

- Work to implement safety features to reduce the chances of horse-vehicle collisions;
- Monitor the health of the herd and each individual in it.
- Capture and rescue of fatally injured wild horses to prevent needless suffering.
- Give care and sanctuary to rescued Salt River wild horses.

Humane birth control (from their website)

“We use PZP (Porcine Zona Pelucida) immuno-contraception. It can be darted in the field without capturing wild horses. It is the only acceptable form of birth control for wild horses, as it does not harm nor influence their hormones and therefore does not harm or influence their reproductive behaviors and herd dynamics. Any other form of birth control, such as geldings or ovariectomies, are cruel, expensive, and will influence their hormones, which is why we do not support those forms of birth control for wild horses.”

Birth control is important, because the herd is fenced in by civilization on all sides and their resources are limited; therefore they cannot grow exponentially. The PZP program will give the older mares a break from having babies and give the younger mares more time to mature before having a foal. All mares will still be given a chance to contribute their DNA to the herd. The goal of this program is for each horse born in the wild, to be able to live out its life in the wild.”

Amanda’s research at the beginning of the summer revealed that around 70 mares had so far been darted with the drug. The drug they are using to prevent pregnancy does not affect any young already developing in the mare. A video on the website states that 37 foals were born this year and there have been no problems with birth defects when pregnant mares have been darted while pregnant. Their ultimate goal is to reduce the

population growth to zero, with births per year equaling deaths. Several horses died last year from colic after they ate mesquite beans that were suspected of being toxic after getting wet in the monsoons.

One herd, called the Butcher Jones herd, was moved from the Butcher Jones Recreation Area to the Salt River. The USFS wanted the horses from Butcher Jones Recreation Area on Saguaro Lake removed because so many people recreate there. However, it was the only place the horses could get water. The Salt River Wild Horse Management Group, which has a contract with the State Agriculture Department to manage the horses, moved the horses to the river and away from Butcher Jones by luring them with water trucks that they moved a little farther every day. Fencing was put in place that will hopefully keep the horses contained at the Salt River.

Discover Gila County Website Launched

Gila County has launched a new website that is actively promoting just about everything going on in the county including fishing, hunting, camping, hiking, biking, birding, boating, etc. They have a calendar of events and are actively seeking submissions. <https://www.discovergilacounty.com/>

Resolution Copper Mine update

In March the USFS presented some of the alternatives they are evaluating in the draft EIS. A link to that presentation and all the alternatives can be found at

<https://www.resolutionmineeis.us/sites/default/files/deis/usfs-tonto-eis-status-update-20190314.pdf>

The USFS is still working on the draft EIS. The final EIS is expected to be released in summer of 2020. The Project Summary, additional information, and the proposed EIS timeline can be found at: <https://www.resolutionmineeis.us/>.

Trophy Book 2020

As a member of the Trophy Book committee, Amanda attended the Trophy Book committee meeting at the Roosevelt Lake Visitor’s Center to work on an outline and articles for the upcoming 2020 edition of the Trophy Book, and to discuss the 2018 entries to the Trophy Book (deadline for those entries was May 2019). A deadline for articles for the Trophy Book is September, 2019. The deadline for entries to the 2020 Trophy Book is May, 2020. After completion of those submissions, the committee can complete all the tables that will go into the 2020 book. The Book will likely be submitted to the printer in the fall of 2020 (possibly sooner). Publication of the book is intended to be in time for people to give as Christmas gifts in 2020.

The committee also worked on term dates for committee members and after the meeting, Amanda measured two bighorn sheep and one bear.

Amanda also spent seven days hunting in 24a in May and finally got her Merriam’s turkey. It’s a very small turkey population in 24a, and while it has been growing, last year’s drought and snow depths seem to have reduced the population. (See Amanda’s article on page 20-21 about processing and preparing her turkey.)




Arizona Wildlife Trophies Committee Members
Mike Matthiesen, Roger Cook, Johnathan O’Dell, Mike Golightly, Eric Hunt, Amanda Moors

Conservation Corner:

Five Wild and Natural Climate Solutions You May Have Seen in Your Travels

By Lauren Anderson, NWF

A photograph showing two brown bears on a rocky, pebbly beach. One bear is in the foreground, looking towards the camera, while another is slightly behind and to the left. The background shows a body of water and distant hills.

Natural infrastructure and natural solutions to climate change are everywhere. Natural features and ecosystems like forests, wetlands, and prairies absorb carbon pollution and boost protections against extreme weather. As you travel, keep an eye out for some of these important natural resources that naturally help reduce the impacts of climate change and also provide habitat for wildlife!

Forests


In Alaska, the Tongass National Forest is the largest National Forest in the United States. The forest supports eagles, bears, and spawning salmon, but it also functions as an important natural climate solution—a massive carbon sink. Forests on the Tongass

The Tongass National Forest is home to bald eagles, bears and a natural climate solution. Photo by Don MacDougall.

store more than 650 million tons of carbon—the most of any national forest. This massive stock of carbon makes the Tongass one of America's most important tools in fighting greenhouse gas pollution and climate change.

The North Woods in Maine are even larger than the Great Lakes, the Adirondacks, or the Everglades—totaling 3.5 million acres of forest that absorb several million metric tons of climate-driving carbon each year. The North Woods also support the largest populations of moose in the lower 48 states. It is critical that this forest be managed in a sustainable manner that preserves its role in providing natural climate benefits, clean and abundant water, and important wildlife habitat.

Beaches and Barrier Islands

A photograph of a loggerhead sea turtle swimming underwater. The turtle is the central focus, with its head and front flippers visible. The background shows a coral reef and some green seaweed.

Hurricane Harvey decimated large areas along the Texas coast. However, one area along the coast was better able to withstand the impact of the hurricane due to a coastal restoration project. The project was located at McFaddin National Wildlife Refuge in Texas, and involved the restoration of a three-mile stretch of sand dunes. These important beaches and dunes help buffer the coastline from storm surge and maintain healthy levels of salinity in local salt marshes. They also provide important habitat for nesting sea turtles and other wildlife.

In South Carolina, barrier islands help protect the state from the impacts of hurricanes and severe storms, and provide important habitat for wildlife like migrating birds and sea turtles. By managing tidal flows, managers have been able to lessen the risk of flooding and restore wildlife-rich wetland habitat. Scientists are also experimenting with artificial “oyster castles” made of concrete and limestone which can help reestablish damaged oyster reefs. These important reefs help buffer the coasts from sea-level rise and storm surge, and create important wildlife habitat.

Loggerhead sea turtles rely on storm-buffering beaches along our coasts. Photo by Carl Salonen.

Waterways

Beaver dams and the riparian habitat they create in places like Colorado's Rocky Mountain National Park can help ease drought conditions and give wildfires a natural break. Surprisingly, studies are showing that "beaver meadows"—sediment-rich wetlands resulting from beaver dams—are also sequestering climate-driving greenhouse gases from the atmosphere. In West Virginia, the Muddy Creek Watershed Restoration Project represents one of the State's many success stories in restoring healthy waterways. This restoration project helped restore ecological connectivity and clean water to the area, which in turn will help support more resilient waterways and forests that can help boost protections against increased flooding. This restored habitat will also be able to support freshwater fish like the brook trout, a species that is struggling due to rising water temperatures.



Scientists are finding a link between the presence of beavers and healthy ecosystems, clean water, and climate benefits.
Photo by Becky Matsubara



Snowy egrets will benefit from restoration efforts on Assateague Island that will serve to help protect the island from climate impacts.
Photo by Ken Chan



Ruddy ducks breed in wetlands on agricultural lands that can help control flooding.
Photo by John Gerlach

Marshes

In Virginia and Maryland, natural resource managers are working to restore the saltmarsh on Assateague Island. This popular island destination is also located along the Atlantic Flyway, and over 200 species of birds have been sighted on it, including piping plover. The work to restore the marshes will improve wildlife habitat and help protect the island from the impacts of sea-level rise. Studies have shown that sea levels in this region are rising at about twice the global average due to the combined effects of global warming and local factors such as land subsidence.

Prairies

If you happen to pass through the prairies of Iowa and agricultural areas in the Midwest, you may see innovative natural solutions implemented by farmers to help confront the impacts of climate change. These practices include cover crops, which help improve soil and store carbon, and restored natural water features like wetlands and ponds, which help control flooding. Both of these practices also improve wildlife habitat—a win-win natural climate solution.

Taking Aim at the Same Things:

The economic impact of hunting, angling, and conservation in the Grand Canyon region

By Scott Garlid, Conservation Director, AWF

"We abuse land because we see it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect." –Aldo Leopold

The Grand Canyon inspires shock and awe in most first-time visitors, and for those who think of the Canyon more like a long-time friend, the awe endures. Unfortunately, the shock abruptly returns, in a completely different manner, when the wonder of the Canyon is reduced to economic justifications for things like the Grand Canyon Escalade tramway development and uranium mining in the Grand Canyon watershed. As lovers of the Canyon and the area around it, we tend to describe and value it in qualitative terms, but hunters and anglers, tourists, rafters, and outdoor recreationists have a tremendous impact on the region's economy as well.

Just as most visitors to the Grand Canyon don't get more than a few feet from the paved trails at the South Rim and thus miss out on the wonders below the rim, most have no idea that the origins of Grand Canyon National Park have deep roots in hunting and wildlife conservation. In 1906, more than 10 years before the Grand Canyon became a National Park, Theodore Roosevelt set aside over 600,000 acres, designating the "Grand Canyon Game Reserve" for "the protection of game animals and birds" and described the area's mule deer as "the finest deer herd in America." As an avid outdoorsman and hunter, Roosevelt recognized the value of conservation as much as he enjoyed hunting and fishing, and he had the foresight to take action to ensure both wildlife and America's hunting and fishing heritage would live on for generations to come.

Today, most sportsmen continue to believe and invest in conservation and in Theodore Roosevelt's vision of pristine wild places and hunting and fishing for future generations. They share a love for the outdoors and a long-term perspective on the importance of clean air, clean water, and healthy wildlife habitat to make that vision real, and they take actions both on the ground and by influencing policies that affect the outdoors and wildlife. But it seems like it's no longer enough to have a vision and share a passion for conservation and the outdoors. When the hypothetical scenarios that describe potential economic benefits of uranium mining or a tramway become dominant arguments in decision-making, we need to stand together as outdoor enthusiasts in making the economic impact argument for our passions as well.

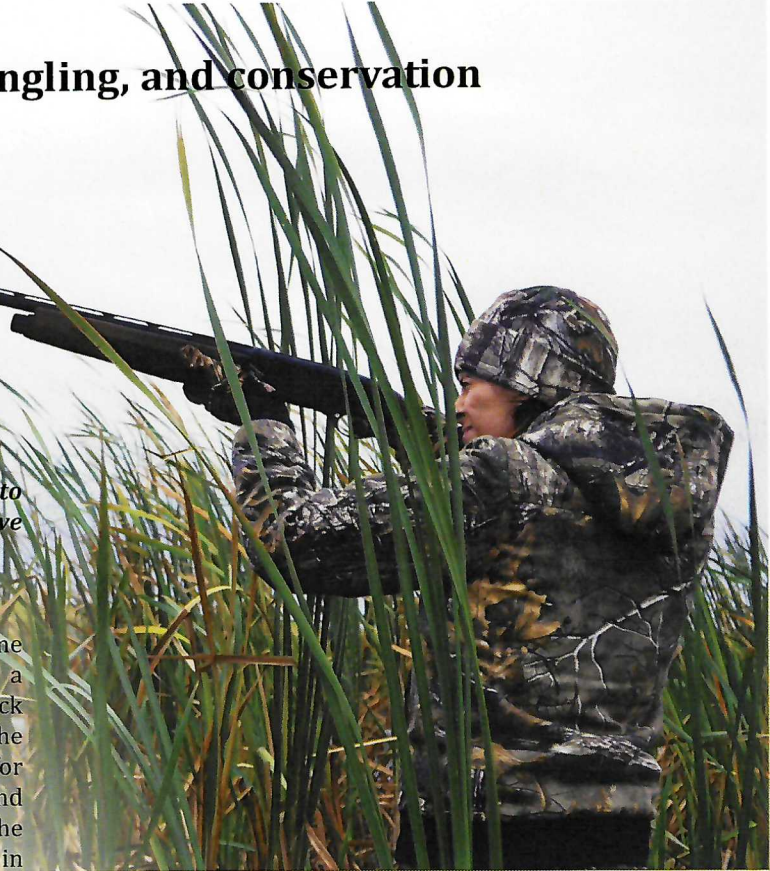


Photo by Tina Shaw, USFWS

To get a sense of the economic impact of Grand Canyon National Park you really only need to listen to the many languages spoken in the gift shop, or count the different license plates in the parking lot. Grand Canyon National Park boasts of being the second most visited park in the National Park Service with over 6.3 million visitors per year spending over \$947 million dollars to see Arizona's very own wonder of the world.

But travel just beyond the boundaries of the Park and in a much less visible manner, hunting and fishing become a critical driver of the economic engine of outdoor recreation in northern Arizona. In fact, according to an Arizona Game and Fish Department survey, in Coconino County alone, sportsmen and women spent over \$100 million and supported 1,860 jobs. That's not bad, considering there are only about 300,000 licensed hunters and anglers in the state. On a dollar-per-participant scale, the sporting community has always played an outsized role in contributions to the outdoor recreation economy. For every angler who takes advantage of an Arizona Game and Fish Department "free fishing day" at a local park with a Zebco 202 and a box of worms, scores of other sportsmen and women plan multi-day trips where they choose to spend their hard-earned discretionary income on equipment, licenses, gas, food, lodging, guides, and even separate scouting trips.

From a wildlife and conservation standpoint, there's a strong argument to be made that a dollar spent by a sportsman or sports-woman is even more valuable. The Pittman-Robertson Act for hunters and the Dingell-Johnson Act for anglers, enacted by forward-thinking and conservation-minded politicians back in the 1930s and 1950s respectively, apply a roughly 10 percent

excise tax on money spent on hunting and fishing equipment. Those funds, completely additive and independent of state sales tax revenues, go back to the states to manage wildlife, wildlife habitat, and fisheries. For the Arizona Game and Fish Department, these funds are significant, contributing about \$30 million to their \$130 million annual budget with all that money ultimately going toward wildlife and habitat in Arizona.

Hunters and anglers are more than willing to pay a 10 percent tax on their gear knowing it goes back to wildlife and habitat management, and they recognize that their spending is an investment in the future. Their desire to contribute to habitat conservation in Arizona doesn't stop with the convenience of their spending at the sporting goods store either. Arizona's Habitat Partnership Committee, consisting primarily of leaders from Arizona's non-profit sporting organizations, relies on the fundraising efforts of those groups to generate over \$2.7 million annually and then works with them to determine how to apply those funds in the most impactful way to benefit wildlife and habitat. In all cases, Habitat Partnership Committee dollars require matching funds, and the Arizona sportsmen's groups lead the way here as well. They fundraise, provide volunteer labor for projects, and educate their members and others on the importance of conservation.

As a volunteer army dedicated to conservation, it's hard to match the impact of Arizona's sportsmen and sportswomen. From wildlife friendly fencing for pronghorn, to improving riparian areas, to building water catchments or hauling water to remote areas on our public lands, to citizen science tracking water temperatures on streams for native trout, hunters and anglers spend countless hours improving habitat for Arizona's wildlife. Perhaps because they spend so much time observing the habits of



Photo by Max Wilson, LesserPlaces.com

animals and trends from season to season, sportsmen tend to understand the interdependencies of species and the impact of things like climate change on fires, drought, and ultimately wildlife. They know how fragile the ecosystem is on the Kaibab Plateau and that all wildlife, from mule deer to Abert's squirrels, will drink any available water to survive, with no way of understanding which seeps, springs, or puddles might contain uranium contamination.

The love of the outdoors and a vision to protect it for generations to come is common ground with all individuals who are drawn to conservation. Whether your argument is the the inherent importance of wildlife, public lands, and getting outdoors, or the economic impact of hunting, fishing, and outdoor recreation, the conclusion should be the same—taking care of our wild places, and the area around the Grand Canyon in particular, should be as high a priority now as it was when Roosevelt designated the Grand Canyon Game Reserve and then Grand Canyon National Monument over a hundred years ago. Let's work together to keep the "shock" from ever destroying the "awe".



Correction!

In the Spring edition of the Arizona Wildlife News in the BOW Happenings column, Linda named the wrong club. It was the Arizona Predator Callers that

had a booth at the YVRGC youth fishing tournament. We apologize for that error.

2020 BOW Dates

BOW DELUXE
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TRADITIONAL BOW EVENTS

April 17-19
September 11-13

Be sure to join us for the fun!!

Outdoor Recreation Along Arizona's Waterways is a \$13.5 Billion Industry

By Joey Kahn, Arizona Audubon



Verde River at Clarkdale, Photo by Doug Von Gausig, Verde River Institute

Arizona's waterways, enjoyed by more than 1.5 million residents each year, contribute \$13.5 billion to the state's economy and support 114,000 jobs, according to a recent report released by Audubon Arizona. The study was completed with guidance from business, civic, governmental, outdoor recreation, conservation and tourism representatives and conducted by economics research firm Southwick Associates.

Water-based outdoor recreation as an industry ranks above mining and golf in terms of total economic output to the state. The industry contributes \$7.1 billion to Arizona's GDP, provides \$4.5 billion in household income and generates \$1.8 billion in tax revenues.

"The rivers, lakes and streams of Arizona are an economic powerhouse for our state—these results prove that," said Audubon Arizona's Policy Manager, Haley Paul. "The fate of birds and people are deeply connected. Our waterways need to be protected, not only for the vital bird, fish and wildlife habitat they provide, but also to sustain Arizona's economy today and into the future."

Expenditures across waterway recreation can include fuel, food, admission fees, guides, lodging, equipment purchases, supplies, permits, apparel accessories and other related expenses

Measuring the participation in water-based outdoor recreation and its associated spending is a way to evaluate the economic activity generated from having water in rivers, lakes, reservoirs and streams. Without water, much of the economic activity would be lost.

"Arizona's iconic rivers—the Colorado, the San Pedro, the Verde and others—bring in visitors from all over the world who seek the one-of-a-kind recreational opportunities they provide," said Colleen Floyd, Director of Research for the Arizona Office of Tourism. "This creates significant tourism revenue for our communities and an economic incentive to preserve our waterways."

The report will serve as a resource for local and state officials to better understand the economic contributions of waterways in their area and how they support their communities.

"We have always known that the Verde River is the economic backbone of the Verde Valley," said Clarkdale Mayor Doug Von

Gausig. "Now we can quantify that the waterways of Yavapai County contribute \$1 billion in economic output and support 9,400 jobs and that protecting these special places helps our local economies and communities. I am grateful our community has this data—it will be invaluable to many across the state."

Water in the arid West allows for large metropolitan areas, millions of acres of agricultural production and myriad industries. What has been less studied is the economic significance of water in rivers, lakes, reservoirs and streams to state and local economies. This report builds off a 2012 analysis conducted by Southwick Associates that examined the economic contribution of outdoor recreation along the Colorado River and its tributaries in Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming.

"Many visitors come to Yuma for the unique birding opportunities, water sports, and to picnic along the Colorado River," said



Exploring Tonto Creek (Photo by Jim Stroger)

Lowell Perry, Executive Director of the Yuma Crossing National Heritage Area. "The community's efforts to embrace the river are paying off. The rivers of Yuma County generate \$372 million annually and support upwards of 3,000 jobs for the state. It is gratifying to see how the waterways of Yuma County contribute to the overall statewide picture."

For this study, Southwick Associates conducted a representative survey of Arizona residents in 2018 to learn where in the state people engage in outdoor recreation and how much of each activity occurs on or along water bodies. The number of nonresidents who visit Arizona for outdoor recreation as well as the total spending attributable to outdoor recreation comes from a 2016 survey of outdoor recreation across all 50 states conducted by Southwick for the Outdoor Industry Association. The survey was used to identify what proportion of outdoor recreation participation and spending occurs on or along the water in 2018 and where this occurs within the state.

The study evaluated outdoor recreation along water as defined by nine activities: bicycling, camping, fishing, hunting/shooting, picnicking/relaxing, snow sports, trail sports, water sports and wildlife watching. The spending estimates provided the basis for estimating economic contributions. For the full report and executive summary, visit Audubon.org/AZRivers.

The study's advisory committee included the following representatives: Arizona Game and Fish Department, Anza Trail Coalition of Arizona, Arizona Forward, Arizona Office of Tourism, Arizona Sportsmen for Wildlife Conservation, Arizona Trout Unlimited, Arizona Wildlife Federation, Business for Water Stewardship, City of Page, Cottonwood Chamber of Commerce, Friends of the Bill Williams River and Havasu National Wildlife Refuges, Friends of the San Pedro River, Friends of the Santa Cruz River, Friends of the Verde River, Graham County Chamber of Commerce, Greater Yuma Economic Development Corporation, Lake Havasu City Convention and Visitors Bureau, Nogales-Santa Cruz County Chamber of Commerce, Northern Arizona Audubon Society, Santa Cruz County, Sedona Chamber of Commerce, The Nature Conservancy, Town of Camp Verde, Town of Clarkdale, Tucson Audubon Society, University of Arizona Cooperative Extension, Yuma Visitors Bureau, and Yuma Crossing National Heritage Area.

The National Audubon Society protects birds and the places



Birding on the Santa Cruz River (Photo by Connie Williams)

they need, today and tomorrow. Audubon works throughout the Americas using, science, advocacy, education and on-the-ground conservation. State programs, nature centers, chapters and partners give Audubon an unparalleled wingspan that reaches millions of people each year to inform, inspire and unite diverse communities in conservation action. A nonprofit conservation organization since 1905, Audubon believes in a world in which people and wildlife thrive. You can learn more about Audubon at audubon.org.

Audubon's Western Water Initiative is a multi-state effort to protect the Colorado River and the West's network of Saline Lakes. Some 65,000 members strong and growing, the network advocates for science-based, non-partisan water policies and management that benefit rivers and lakes for the birds, wildlife, habitats, cities and economies they support. To learn more, visit: audubon.org/westernwater.

Social Media

Want to stay in touch with AWF between newsletters? Like us on Facebook! Follow us on Twitter and Instagram! Following us on these Social Media sites will keep you up to date on AWF activities and events. We also post Affiliate happenings, BOW workshop information, important dates, and other regular postings about AWF and Arizona wildlife.

Find us on Facebook at:

www.facebook.com/azwildlife (Arizona Wildlife Federation)

www.facebook.com/Arizona-Becoming-an-Outdoors-Woman

(Arizona Becoming an Outdoors Woman)

On Twitter at: [AWF@AZWildlifeFed](https://twitter.com/AWF@AZWildlifeFed)

On Instagram at: [AZWildlifeFederation](https://www.instagram.com/AZWildlifeFederation)



Arizona Wildlife Federation Strengthens Relationship with the National Wildlife Federation and is Honored as NWF's Affiliate of the Year



Brad Powell, AWF Board President, along with AWF Staff and Board Members, Scott Garlid, Glen Dickens, and Bob Vahle accept the Affiliate of the Year Award for AWF. Also in the photo from NWF are Collin O'Mara, President and CEO, Lew Carpenter, Regional Representative, Kent Salazar, Board of Directors, Vice Chair Western Region, and Kathy Hadley, Board of Directors, Immediate Past Chair.

The National Wildlife Federation honored the Arizona Wildlife Federation for its unparalleled work to protect Arizona's wildlife heritage and natural resources for future generations. The Arizona Wildlife Federation, which marks its 96th year of conservation leadership this year, has set an example for conservation organizations in the Grand Canyon State and beyond for building broad support for wildlife and environmental issues.

"The Arizona Wildlife Federation has long been a champion of conservation — working to protect wildlife, natural resources, and the right of Arizonans to enjoy the outdoors. Its work to shape public policy on conservation issues and protect access to public lands and water serves as an inspiration to others," said Collin O'Mara, president and CEO of the National Wildlife Federation. *"The Arizona Wildlife Federation's sustained and successful history as the collective voice for Arizona's conservationists, outdoor enthusiasts, hunters, and anglers, as well as its important work to further the stewardship of natural places and engage people in conservation, lend strength and power to the Federation."*

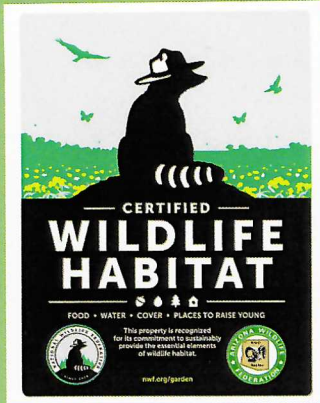
A delegation of AWF Board members and staff attended the annual meeting in St. Louis, MO to receive the award and to attend the many informative sessions at the meeting. Other highlights of the meeting included:

- The opportunities to connect and build relationships with other sportsmen-centric Affiliates;
- Learning practical strategies on fundraising and corporate sponsorships;
- Participating in lively discussions on key topics including "climate-smart" energy, full funding for LWCF, and a new version of RAWA that is coming out soon; and
- The passage of the AWF resolution on permanent protection from uranium mining at the Grand Canyon.

According to Scott Garlid, AWF's Conservation Director, *"An especially valuable outcome of the conference was the strengthening of AWF's relationship with the National Wildlife Federation."* The NWF continues to embrace the "One Federation" approach to their relationships with Affiliates and this was evident at the Annual Meeting. To that end, the AWF has been working more closely with NWF on various campaigns and educational opportunities. These include working together on the uranium mining ban in the Grand Canyon, continued work on Climate Action for Wildlife, Gardening for Wildlife, and more recently, Ranger Rick subscriptions. This strengthened relationship benefits everyone — members, supporters, AWF and NWF. See our sidebars for how you can become involved!

Gardening for Wildlife

The Arizona Wildlife Federation continues to team with the National Wildlife Federation (NWF) to certify your garden as "Wildlife Habitat." With a small amount of planning and effort, you can create a wildlife habitat in your yard, on your balcony, at your school, or along roadsides!



With the NWF's Certified Wildlife Habitat program, folks are encouraged to plant native shrubs, flowers, and trees that will produce berries, seeds, and sap, to create an eco-friendly environment for birds and wildlife.

For more information, visit us online at <http://azwildlife.org/habitat>

Ranger Rick!

Take advantage of AWF's new partnership with NWF and give Ranger Rick as a gift to your young adventurer!

There are several levels of subscriptions available, each targeting specific age ranges: Ranger Rick Cub for ages 0-4; Ranger Rick Jr. for ages 4-7; and Ranger Rick for ages 7+! AFW receives 50% of all proceeds. You can support AWF's conservation efforts while also helping your young adventurers learn more about wildlife!



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BOW Happenings

Spotlight on BOW Instructor:



by Linda Dightmon

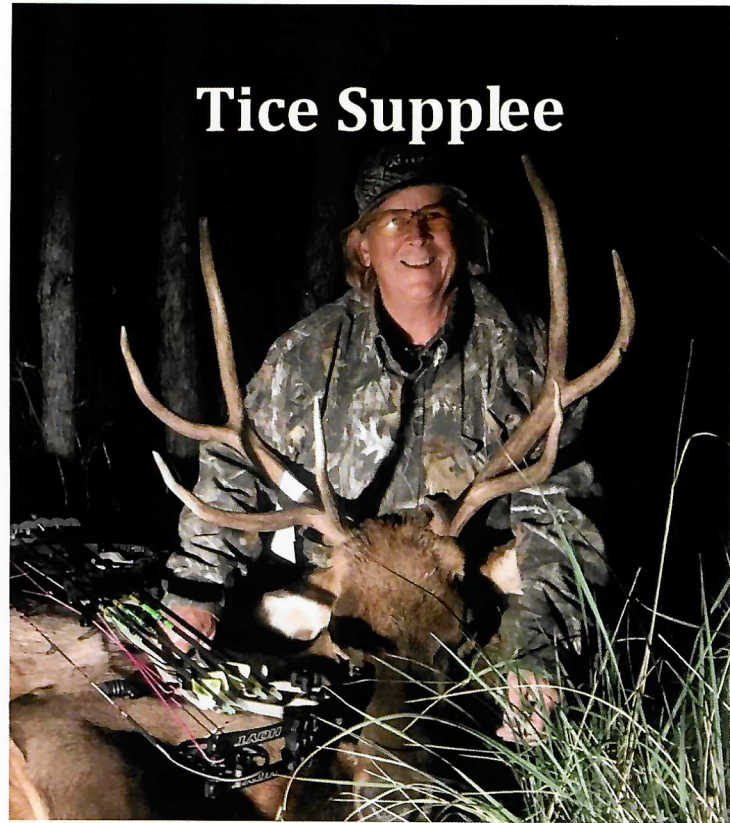
There may be someone out there who has done more for Arizona wildlife than Vashti (Tice) Supplee but you will need to look far and wide. When I started coordinating the BOW workshops in 2000, I was amazed that one of our instructors was *the* Game Management Chief of the AZGFD! She was in charge of managing all game animals, big and small, for the entire state. I was happy to be able to name the big 10. This lady took time from her busy schedule to teach BOW participants about Arizona wildlife and wildlands. It was simply humbling. I am gonna say it again. We have the best and most qualified instructors BAR NONE!

Tice has a B.S. in wildlife from Cornell University and a M.S. in wildlife management from the University of Arizona. In the seventies, she studied javelina with Jerry Day and black bear with Al LeCount (two heavy weights in the history of Arizona wildlife management). Remember, at that time there were very few women in any wildlife careers. She went on in the department to be the Habitat Program Manager in Tucson and then to Game Management Chief, where she stayed for 16 years. I was at a Commissioner's meeting the year that she was retiring when she singled me out to give me her new contact information as she wanted to stay involved with the BOW program. Woohoo... you bet!

Turns out, we just *thought* that Tice was going to retire. Where does one go after a 29-year career with the AZGFD? It would only be logical that the next step would be (wait for it...) Audubon Arizona! Yup, Tice is now a bird lady! Beginning in January 2005, immediately upon leaving the AZGFD, Tice accepted the position of Director of Bird Conservation at Arizona Audubon -state office of the National Audubon Society. (She even did a brief stint as the interim Executive Director of Arizona Audubon in 2015.) She is now in charge of programs to protect and restore bird habitat and numbers. Most notably, Tice is the co-coordinator for the Arizona Important Bird Area (IBA) Program. Under her leadership, the IBA program has expanded to 48 sites, a website (aziba.org), and landowner guides for riparian areas and grasslands. She is also involved in the Upper San Pedro Partnership (2016-present).

Tice also volunteers her time for several conservation groups. She is now past president and past board member of Arizona Antelope Foundation 2005-2018. Arizona Elk Society Founding member and Board Member 2005-2007 and Vice President 2015-present.

A career of government and non-government organizations has molded Tice into a great negotiator. She does not shy away from a challenge. Representing AES, she agreed to be a member of the Heber Wild Horse Territory Collaborative Working Group. You can read a draft of their final report at <https://heberhorsecollaborative.asu.edu>. Look for the drop down list on the "Updates" tab for the report.



Tice Supplee

Photo by Mark Hullinger

Tice is a natural teacher and a good speaker. She has a down-to-earth easy demeanor and fields questions with terms that are easily understood and not condescending. She mentors beginning birders on field trips and is active in citizen science programs like the Christmas Bird Counts. She also teaches Environmental Biology at Phoenix college in her spare time (she has spare time?!). For BOW, Tice teaches Arizona's Vanishing Habitat, Arizona Wildlife Tracking, Big Game Hunting, and Javelina Hunting and she helps out with the birding classes. Every once in a while, she gets roped into doing a special presentation. I have even seen Tice participate in the BOW Follies! This September will mark her 21st anniversary as a BOW instructor.

Not only is Tice an extremely knowledgeable instructor, she is also a role model for all of us. She shares information when she sees opportunities for women, especially in men-dominated fields. In 2016, she was given the Professional Service Award by the Arizona Chapter of the Wildlife Society. They said it best:

Tice has blazed a trail for current and future women of wildlife. She was a pioneer for women in the Arizona Game and Fish Department and continued to prove herself, both as a habitat specialist and as a law enforcement officer. She excelled in a "man's world" doing desert field work, law enforcement, and political scrapping at some of the highest levels in Southern Arizona. During these early years, Tice developed her very direct character and personality. One always knew where and how they stood with her. By the time she was promoted to Game Branch Chief, Tice remained approachable and willing to give her opinion, even though it was sometimes not what you wanted to hear.

I have coordinated the BOW program for almost two decades and one of my favorite perks is getting to know good people like Tice. We took the shotgun class together because we both stink at wing shooting (well, I had to find something that we have in common). We taught the hunting class together and over the years, formed a friendship. I am proud to call Tice my friend.

Tice's Accomplishments

The Wildlife Society Professional Service Award - Arizona Chapter 1985 and 2016
Arizona Wildlife Federation - Wildlife Conservationist, 1987
Arizona Wildlife Federation - Thomas E. McCulbough Award, 2005
National Audubon Society - ACE Award, 2007
U.S. Department of Interior Cooperative Conservation Award, 2008
Arizona Elk Society - President's Award, 2016
The Wildlife Society - Arizona Chapter President, 1981
The Wildlife Society - Southwest Section President, 1983 and 2008
Intermountain West Joint Venture - Managing Board Member, 1993-2004
Arizona Elk Society - Board Member, 2005-2007
Arizona Antelope Foundation - President, 2008-2009 and Board Member, 2005-present
Phoenix Mountains Preservation Council - President, 2007-2008 and Board Member, 2002-present
Upper San Pedro Partnership Advisory Committee - Agency Representative, 2007-2010
National Audubon Society - Fellowship, 2008



Best Accomplishment! Taking a bull elk with her bow - 2018

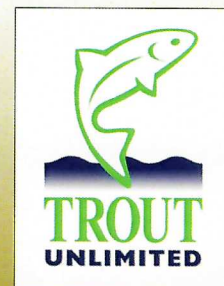
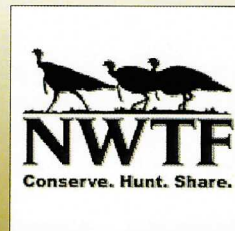
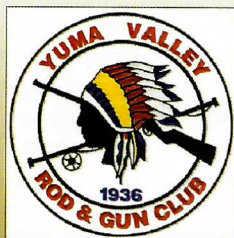
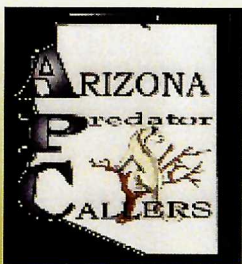
Spotlight on Affiliates

AWF is pleased to welcome two new Affiliate organizations to the fold. The Arizona Elk Society and Arizona Backcountry Hunters and Anglers have both recently become Affiliate members of AWF. As an Affiliate member, organizations may designate a representative that will serve on the AWF Board of Directors as a voting Board member.

You can learn more about our new Affiliates by visiting their websites:

Arizona Backcountry Hunters and Anglers: www.backcountryhunters.org/arizona_bha

Arizona Elk Society: www.arizonaelksociety.org



Working together, the AWF and affiliated organizations are better able to address the various conservation concerns that we have in common. This close association allows our voices to be combined on issues and amplifies our messages, which reach local, national, and state levels.

After the Hunt: Processing and Preparing Wild Turkey

Article and photos by Amanda Moors

Some people shy away from cooking wild turkey because they worry it won't emerge from the oven moist and tender. I'm an avid turkey hunter going on nearly two decades pursuing these magnificent birds here in Arizona. I'm also an eager turkey consumer and I've never tasted a wild turkey off the grill or out of the oven that wasn't more savory, moist and superior to any store-bought bird. I shot a 2019 spring turkey within one hour's drive of our home in Arizona and appreciate the invite in these pages to share how we prepared it.

My husband is an excellent and creative griller/smoker, and we almost always smoke any turkey I get on the classic Weber charcoal grill that we've enjoyed for decades. Over the years we have found that apple wood smoke imparts excellent flavor into poultry like turkey and chicken. Our friend Becky runs a local landscaping business and whenever she prunes an apple tree, she delivers a bag of branch chunks that my husband saves for smoking (and rest assured that Becky earns a standing invite to sample the smoked bird, too!). For my spring 2019 bird my husband chose to smoke the turkey with a mix of pecan chunks, apple wood, and some pecan shells from previously shelled pecans.

Keeping the skin on the turkey helps retain moisture during cooking, but I did pluck and gut this turkey in the field before bringing it home. I laid the bird on its back on the ground and gutted it. Turkeys are very easy to gut by making a small incision from the vent up to the bottom of the breast bone and reaching inside to pull all the entrails out. You can view videos on YouTube if you need more instruction. I kept the liver, kidneys, gizzard, and heart for our two dogs (both are on their best behavior, and sitting attentively when they know game meat's about to be offered). That said, turkey liver is actually super tasty – so we stole a few bites from the dogs' share. Many people choose not to take the time to pluck the feathers off their turkey and instead just skin the bird and cook it without the skin on. You can choose either way and it will be good. Next I hung the turkey upside down by its leg in a short pinyon pine and proceeded to cut off the tail and wings, which I saved for mounting. Then I started plucking. There have been times in the past when I found this job very tedious, but this time it was remarkably easy. I think it's easiest to pluck a bird shortly after killing it. Perhaps that's what made the difference

here, as I was plucking it within a few hours after killing it. The feathers came out easily with a yank downward, against the angle of the feathers. There are many very small feathers on the skin as well, but those were removed easily by picking at them.

One thing that is unpleasant about handling wild turkeys after they are killed is that they usually have lice. And now that the bird is dead, those lice are looking for a new host and will crawl on you while you work. The good news is these lice do not consider

humans to be a host species and they are easy to feel and brush off when you notice one. I probably only got about 2-3 on me while plucking the bird, but it's still a creepy feeling and something to be aware of. You will see them on the carcass as you are plucking and should brush them off.

After plucking the bird and removing the head I put the carcass into a bag, then stored it on ice in my cooler and headed home. Once home I could rinse the cavity more thoroughly, remove the trachea and anything else that I wasn't able to completely remove in the field.

Pro Tip: make sure you remove the crop, which is a large pouch located under the skin where the neck meets the breast. You might not be able to see it until you cut the skin open at that location. The crop is where the turkey stores food it has eaten



before it moves to the gizzard to be ground up. The crop is a large pouch and generally full of grass seeds, forbs, juniper berries, and sometimes even grasshoppers. I always find it interesting to see what they have been eating. Cutting open the crop for an “in the field autopsy” of the contents is a great way to learn more about turkeys in your area, and foods they prefer.



Cookin' Time!

I decided that I would inject the bird with a mix of oil, butter and spices to add moisture and flavor. A neighbor has rosemary bushes, so I cut a handful of fresh rosemary sprigs and simmered them in the oil mix with turmeric, sage and other spices. Aromatic in the saucepan? Wow – yes! Then I strained that and injected this flavorful fluid into the turkey with a marinade injector before smoking. Straining the oil and spice mix before putting it into injector keeps the needle from clogging. I rubbed lots of the seasoning mix on and under the skin as well.

I took the time to inject the bird with the spice mix – but I am not convinced that step was necessary. Since I used turmeric in the spice blend, I could see after cooking how the injection moved into the meat – easily visible when we carved the bird. Judging by the colorful spice, it appeared to generally just remain near the injection site. Did it help with moisture? Again, probably not, as both the injected sites and non-injected parts seemed equally moist and tender. So while it did add some flavor, if you do not have an injector, don't fret, just rub the seasonings on the outside of the bird and under the skin wherever you can. If you do use the injector, make sure you strain the spice mix so it doesn't clog the needle and inject it in many places throughout the bird.

I used the same spice mix to rub all over the outside of the turkey and pushed as much rosemary as I could under the skin. Meanwhile my husband had prepared the grill by heating it up with charcoal and using some aluminum foil to help create an area of indirect heat where the bird would sit and cook.

Pro tip: you definitely want to place a cast iron pan underneath the grate of the grill to catch the drippings from the turkey. You'll want to save the drippings to make an amazing gravy!

We smoked the bird on the grill at about 300° to 350°F for 3.5 to 4 hours. I must say the smoke smelled amazing – drifting in from the backyard each time we stepped outside to check the grill! My husband used enough apple and pecan wood to create a dense smoke for lots of flavor. He also used pecan shells from pecans a

friend gave us, which we had already eaten, but retained the shells just for producing smoke. However, with all that smoke, the skin of the bird turned dark very quickly. If you don't want it that dark, you can cover the bird with foil to reduce the amount of smoke touching it.

Pro Tip: minimize the number of times you open the grill to check on the bird. Each time you open it you lose a lot of heat, and the coals flare up from that fresh burst of oxygen, burning the wood you are using for smoking. My husband says he let it go for an hour after getting it to temperature and then checked on it about every 45 minutes, adding smoke wood when necessary to keep the smoke going. I used a digital meat thermometer to check doneness periodically and when it reached 165° everywhere in the bird, then it was done. We invited a friend over and served the bird with mashed potatoes and a wonderful casserole with hominy, green chile, corn, and cream cheese.

This turkey was so good! It was perfectly moist and had a deep, rich, smoky flavor. It truly could not have tasted better - and each bite made me want to go turkey hunting again right away! We have cooked several wild turkeys over the years, including a year where we hosted Thanksgiving and smoked a domestic and wild turkey for everyone, side-by-side on a big smoker for comparison. Everyone preferred the wild turkey! That year we brined the wild turkey prior to cooking, but we decided that although the bird came out excellent, the whole brining process seemed unnecessary. The bird didn't seem any better than ones we smoke without brining. So don't feel you have to do anything elaborate to make a wild turkey taste good. Keeping the skin on is my suggestion for the best way to keep your turkey moist while cooking. And while plucking a turkey takes time, for us, it's well worth the effort.

We had enough turkey left over after the first dinner that I made turkey enchiladas, turkey soup, and many open-faced turkey sandwiches topped with that wonderful gravy. Can't wait to get another wild turkey!!

Turkey Enchilada Casserole

In the unlikely event you have leftover smoked wild turkey make a turkey enchilada casserole!

I sautéed mushrooms, red pepper, and red onion. I layered enchilada sauce, the mushroom, pepper, onion, green onion from the garden, corn, and black beans with extra thin corn tortillas, smoked turkey, cream cheese and shredded Mexican cheese. I also put some Mexican crema on top ('crema' is the pourable soft sour cream you've probably tasted in Mexican restaurants). Plus some of the left over hominy green chili dish

I made the night before. I baked it in the oven at 350° for 20 minutes covered with foil and then another 15 minutes uncovered. This was so unbelievably good! I was worried the smoked turkey flavor would be overpowered by the sauce and spices but it really tasted amazing.

Just...Try it!
You'll like it!



Welcome New Members

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Sandy	Anthony	Yuma
Jackie	Baird	Fort Mohave
Tracy	Bazelman	Phoenix
Patti	Bashor	Prescott
Michelle	Benson	Kingman
Geo	Browne	Kingman
Brandi	Butzen	Mesa
Jill	Campbell	Tempe
Donna	Coleman	Tucson
Joyce	Cook	Kingman
Gina	Cooke	Prescott
Lydia	Cox	Tucson
Patty	Demers	Phoenix
Janet	Gagnon	Bullhead City
Sarah	Garone	Mesa
Corinna	Gollubier	Maricopa
Brenda	Griego	Mesa
Diane	Hall	Prescott
Lorraine	Hamaker	Mesa
Tanja	Haverty	Sierra Vista
Jessica	Hayden	San Tan Valley
Kim	Haywood	Bullhead City
Chris	Held	Goodyear
Lydia	Hester	Lake Havasu City
Jennifer	Howard	Goodyear
Sharon	Hyde	Lake Havasu City
Kathy	Kauffman	Prescott
Shevonne	LaCroix	Queen Creek
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Laurie	Lautzenheiser	Tucson
Tasha	Lautzenheiser	Vail
Natalie	Leske	Wickenburg
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Deborah	Marlow	Tucson
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Kelsey	Neese	Sierra Vista
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Stephanie	Parks	Mesa
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Susan	Raynor	Kingman
Danella	Reidhead	Springerville
Laura	Rezac	Chandler
Christi	Roggenbuck	Scottsdale
Ron	Rudduck	Mesa
Melissa	Scott	Prescott
Lelanie	Seyffer	Kingman
Maura	Seyffer	Scottsdale
Kat	Sheehan	Lakeside
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Heather	Stockton	Flagstaff
Allison	Stoff	High Ridge, MO
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Edell	Wulff	Wittmann
Gary	Wulfrum	Show Low

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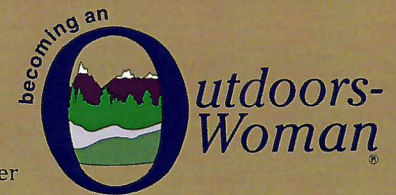
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