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ARIZONA WILDLIFE NEWS

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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: This edition's front cover photo of a mockingbird is the 1st place winner of AWF's photo contest which was held last year. Congratulation Santos Yescas!

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

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Message from the President

By Brad Powell

Winter brought much needed rain and snow and our spring has been one to remember. While we are a long way from breaking the drought cycle, it is a welcome respite and the glorious green desert colored with poppies and lupines has been a joy to all of us.

We are beginning preparations for our 96th annual meeting. Preparing for this meeting had me thinking about many of the issues that are affecting our State and its wildlife including uranium mining near the Grand Canyon, bad public land bills, reduced budgets for land management agencies, and warming/drought issues.

The disconnect between the views of our elected officials and the citizens of the State on public lands is disconcerting and hard to understand. The Arizona legislature continues its assault on Federal public lands. This year, like most every year, legislation or memorials designed to either seize public lands or to assume management control of these lands have been introduced and passed. This year the legislation is a little more opaque and the process even more convoluted and deceiving.

House Bills H2547 and H2557 have drawn lots of our attention and staff time. These bills have passed the house (31-29) on a party line vote and are working their way through the Senate. We have conducted numerous meetings with our elected officials and testified at multiple hearings expressing our concern about these bad bills. Collectively these bills set up a new public lands management department with a Director and staff and allocate up to \$1,000,000 to appraise all of the Federal lands in the State. I won't bore you with the political shenanigans at the legislature but it's safe to say few bills have ever taken the path that these bills took to be combined in the Senate.

From my perspective, bills such as these continue to make Arizona look silly, waste taxpayers money, and produce no benefits to the lands, its management or the citizens of the State. In addition, in 2012 the voters of the State rejected Proposition 120 over a 2 to 1 margin, which called for the State to take over the Federal Public lands. In fact, this proposition failed in every voting district in the State. In 2016, a State of the Rockies poll looking at Western Rocky Mountain states showed that Arizona had the highest percentage of any of those States opposed to the concept of the State taking over management of Public lands (65%). These disconnects with the voter's will and what our elected State

officials continue to espouse is troubling to me.

Now don't get me wrong; I'm not arguing that the State's Federal public lands are managed well, or that there are not issues that need to be resolved to improve the health of our public lands, particularly as it relates to large, damaging wildfires. Most Western States (with the exception of Utah) have begun to move away from these unpopular takeover ideas. Hopefully Arizona will decide to help fix the problems by engaging with the Federal agencies and better represent the will of its people.

On a bright note, the National Wildlife Federation (NWF) chose the Arizona Wildlife Federation (AWF) as the State Affiliate of the Year. This award recognizes the work of the AWF on public lands, the Grand Canyon, LWCF and many other key issues. The award will be presented at the NWF national meeting in St. Louis in June. The AWF board and staff are extremely proud of this recognition and are looking forward to continued growth as we work to give wildlife and wildlife habitat a voice in our State.

I hope you get a chance to get outdoors and enjoy this beautiful spring weather.

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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8571 S Terrace Rd
Tempe, AZ 85284

Send your e-mail to:

editor@azwildlife.org

Regional Roundup

Highlights from AWF's Regional Directors

The map shows six regions of Arizona, each with a representative icon: Region 1 (turkey, tree), Region 2 (deer, tree), Region 3 (deer, tree), Region 4 (goat, cactus), Region 5 (deer, cactus), and Region 6 (bear, cactus). The regional directors are:

- Region 1:** Bob Vahle, White Mtns.
- Region 2:** Tom Mackin, Flagstaff
- Region 3:** Loyd Barnett, Northwest Arizona
- Region 4:** Chris Mitchell, Yuma
- Region 5:** Glen Dickens, Tucson
- Region 6:** Amanda Moors, Central Arizona

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

REGION 1

Bob Vahle, Regional Director

Region 1 Director, Bob Vahle, has been participating in the Heber Wild Horse Territory (HWHT) Working Group on behalf of AWF and the National Wildlife Federation (NWF). The HWHT Work Group ended in December 2018 after a lengthy study and development of management recommendations. According to Bob, the Apache-Sitgreaves National Forest staff are currently working on developing a management plan for the HWHT and will

hopefully utilize some of the management recommendations that were developed for their consideration.

Other news out of Region 1 include the recent update on the Mexican Gray Wolf program following their winter survey results. According to the Arizona Game and Fish Department:

"The recent count indicates that the population of Mexican Gray Wolves has increased by 12% since last year, raising the total

number of wolves in the wild to a minimum of 131 animals.

That number is among the findings of the Mexican Wolf Interagency Field Team (IFT), a task force comprising federal, state and international partners. From November 2018 through January 2019, the team conducted ground counts in Arizona and New Mexico that concluded with aerial counts of Mexican wolves in February.

Among the IFT's findings: 131 wolves are nearly evenly distributed – 64 wolves in Arizona and 67 in New Mexico. Last year, the team documented 117 wolves.

"The survey results indicate the Mexican wolf program is helping save an endangered subspecies," said Amy Lueders, Regional Director of the U.S. Fish and Wildlife Service's Southwest Region. *"The Mexican wolf has come back from the brink of extinction, thanks to scientific management and the dedicated work of a lot of partners. With continued support and research, we can continue to make progress in Mexican wolf recovery."*

"The numbers highlight the wolf's progress in the wild," said Jim deVos, Assistant Director of Wildlife Management for the Arizona Game and Fish Department. *"The results of this census are very important as they reflect the great progress being made in the recovery of the Mexican wolf in the United States. The increase of about 12 percent in the Mexican wolf population is not an isolated year, but rather a continuum of increases over the last 10 years."*

This year's findings confirmed:

There are a minimum of 32 packs of wolves (two or more animals), plus seven individuals.

A minimum of 18 packs had pups; 16 of these packs had pups that survived to the end of the year.

A minimum of 81 pups were born in 2018, and at least 47 survived to the end of the year. That's a 58 percent survival rate.

The population growth occurred despite 21 documented mortalities last year.

Eleven wolves were captured during the aerial operations.

Seventy-nine wolves—60% of the population—wore functioning radio collars. The collars help researchers manage and monitor the population and are vital to collecting scientific information.

The Mexican wolf (*Canis lupus baileyi*) is the rarest subspecies of gray wolf in North America. It is listed as endangered under the federal Endangered Species Act. Once common throughout portions of the southwestern United States and Mexico, it was all but eliminated from the wild by the 1970s.*

Special thanks to the Arizona Game and Fish Department for this wolf update, originally published on April 8, 2019.



REGION 3

Loyd Barnett, Regional Director

According to Loyd Barnett, Region 3 Director, the Prescott National Forest is continuing to analyze large areas for landscape restoration, of which a major part is restoring fire as a natural part of the landscape. Recently they have analyzed nearly 500 thousand acres in the Chino Landscape Restoration project and more than 200 thousand acres in the Hassayampa area. Areas to be treated with prescribed fire, mechanical or hand thinning, mastication (crushing with heavy equipment to nearly ground level), or other treatments or combinations are identified and analyzed in an environmental assessment. Information on soils, vegetation, wildlife habitat, and other relevant inventories is considered in developing the planned treatments. In effort to consider the needs of wildlife, the project coordinated with the Arizona Game and Fish Department. In the Chino project, this included treatment of increasing juniper density in corridors the AGFD identified as important to pronghorn. AWF provided input to this project.

The Verde Watershed Restoration Coalition continued field

work to reduce or eliminate major invasive plants in the riparian zones. These included tamarisk, Russian olive, tree of heaven, and giant reed along the Verde River and major tributaries.



Three, eight person crews worked for nearly six months this past season. Following the initial treatment, monitoring of the results is done and follow up maintenance is frequently required. Tree of heaven is particularly resilient and sometimes requires multiple maintenance treatments. Treatment has been done on National Forests, National Monuments, State Parks and private land, with about 200 landowners participating. This year another treatment was started with fountain grass on the lower Verde, downstream from Childs. Fountain grass is closely related to buffelgrass, which has become a bane in the Sonoran desert, but is more cold tolerant. It spreads by seeds and is a fire hazard, threatening native desert vegetation.



REGION 5

Glen Dickens, Regional Director

Glen Dickens, Region 5 Director, attended the National Wildlife Federation (NWF) Affiliate's meeting in Nashville, Tennessee this past January. The objective of the meeting was to make connections, and to get ideas from others to take home and apply in one's own state. Thirty-seven states were represented at the meeting, which included executive directors, staff, chapter officers, and NWF staff. Glen attended several informative meetings including "Innovative Events" which presented activities and events held by other state Federations. Examples included Mississippi's large and successful trade show and Delaware's native plant sale, farm to fork dinner, and moon festival. Other meetings attended by Glen included Board development, staff management, and cultivating donors. Stating that NWF is aiming

to work more toward inter-chapter involvement over the next 12 months, the primary message from NWF's CEO, Collin O'Mara was "***We are one Federation.***" Other key themes of the meeting were: "*there is no competition in conservation*" and "*conservation is bi-partisan.*"

Wearing his hats as both Director of Region 5 for AWF and Vice President of the Arizona Antelope Foundation (AAF), Glen also took part in a historic capture and translocation of Pronghorn Antelope from the Prescott Valley area to several locations in Southern Arizona. You can read more about this event in the "Spotlight on Affiliates" section (page 14) of this issue of AWN.

Glen also attended "Camo-at-the-Capital" as a representative of AWF and AAF. An article on that event can be found on page 7.

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)



Camo-at-the-Capitol



Photo by Mary Jo Brooks

On Tuesday February 26th, 2019, Arizona sportsmen and women gathered on the lawn of the Arizona Senate Building to celebrate AWF's first annual "Camo-at-the-Capitol" event. Sponsored and organized by the Arizona Wildlife Federation, the event was attended by numerous Affiliates and other sportsmen's groups. The long-term goal of the event is to assure state laws and policies benefit Arizona's wildlife and our state's sporting heritage of hunting and fishing activities.

Events included:

- Wild game tasting
- Fly-casting demonstrations and games
- How-to-guides and discussions about how to be an effective wildlife and sportsman's heritage advocate
- Sportsman groups with information tables/booths on the lawn
- Arizona Game and Fish Department legislative update
- Current issues briefing and legislator perspectives
- Legislator visits to Sportsman groups' set-ups and informal chats
- Press visits with Sportsman groups and individuals on the lawn

The Capital lawn was scattered with numerous booths and tables staffed by volunteers from various state sporting and species groups. Groups included the Arizona Antelope Foundation,

the Yuma Rod and Gun Club, Arizona Elk Foundation, Arizona Mule Deer Foundation, Mesa Varmint Callers, Backcountry Hunters and Anglers, Trout Unlimited, Becoming an Outdoors-Woman, and the Arizona Wildlife Federation. The AWF thanks each and every one of you for giving of your group's time and energy!

It is expected that Camo-at-the-Capitol will become a yearly event with next year's activities expanding to include advocacy training and meetings with state lawmakers. Through the event, AWF is helping cultivate a strong conservation voice for Arizona's hunters and anglers emphasizing the positive economic impact those activities bring to both the rural and urban Arizona communities.

2019/2020 BOW Dates

September 6-8

January 24-26

April 17-19

Be sure to join us for the fun!!

Conservation Corner:

Notes from the National Wildlife Federation

Collaboration in Conservation: A Common Agenda for Wildlife

By Lew Carpenter & NWF Staff

Lew Carpenter is National Wildlife Federation's Director of Conservation Partnerships in the Rocky Mountain region. Lew works directly with NWF affiliates in Colorado, New Mexico, Arizona and Nebraska.



The big hairy goals of modern conservation won't succeed without collaboration. And, neither will the local, on-the-ground conservation efforts that are so significant to wildlife and habitat.

The National Wildlife Federation (NWF) is built on this premise, working continually with NWF affiliates (its first partners in state and region), federal and state government agencies, other conservation organizations, education partners, volunteers, media, the hunting and fishing industries, and so many more.

NWF's strategic plan states: "We must inspire and mobilize tens of millions of people to act for wildlife at a time when Americans are less and less connected with nature and spend more time in the indoors, on technology, and in cities."

Case for Support: America's Wildlife Crisis

State fish and wildlife agencies have identified roughly 12,000 species in need of proactive conservation efforts in the United States, and the number of species petitioned for listing under the Endangered Species Act has increased by 1,000 percent in less than a decade.

Birds — One third of bird species in North America are in need of urgent conservation action.



Fish — More than 40 percent of freshwater fish species are at risk in North America.

Amphibians — Approximately 42 percent of amphibian species (frogs, toads, and salamanders) are threatened or declining in the United States.

Reptiles — In the United States, 33 percent of turtles are threatened and 5 percent of other reptiles are threatened.

Butterflies — Of the roughly 800 butterfly species in the United States, 17 percent are known to be at risk of extinction—but that's likely just the tip of the iceberg, since there isn't enough information on many native butterfly species.



Kenneth Dwain Harrelson, Wikimedia Commons

Bumblebees — More than one-quarter of North American bumblebee species are facing some degree of extinction risk.

Bats — An estimated 18 percent of bat species are at risk of extinction, with an additional 13 percent potentially at risk. This places bats among the most threatened groups of North American vertebrates.

Freshwater Mussels — Overall, 70 percent of freshwater mussels in North America are already extinct or imperiled.

Unless our nation makes a change in the way we fund conservation, the numbers of species on the brink of extinction will grow significantly. The current levels of funding are less than 5 percent of what is necessary.



So, what does collaborative conservation look like four years from now?



Charles J Sharp

The dramatic decline of so many species of wildlife and the habitats they depend on threatens Americans' quality of life, as well as our outdoor economy. Today the outdoor recreation industry contributes \$887 billion to our national economy annually, creates 7.6 million direct jobs, and generates \$124.5 billion in federal, state, and local tax revenue, according to the Outdoor Industry Association. It is critical that we come up with a solution that matches the scope of the challenge.



Here are five metrics of our success:

Ensure a majority of Americans and policymakers, from diverse segments of society, are aware of our nation's wildlife crisis by activating 11 million people from all backgrounds and joining forces with 2,500 partner organizations as part of America's conservation army;

Put 25 percent of America's at-risk wildlife species on a path to recovery by securing at least \$2 billion in additional annual conservation funding and actively restoring, connecting, or improving the resilience of 25 million acres of terrestrial and aquatic habitat;

Rebuild America's conservation ethic by engaging 25 million young people across 20,000 schools and 1,000 communities in environmental education and recurring outdoor experiences;

Increase the relevance of wildlife conservation nationwide by partnering on local water, wildlife habitat, and environmental justice or community-based projects in 1,000 diverse urban and rural communities; and

Defend America's democratic public trust resources (public lands, waterways, and wildlife) for current and future generations from threats of divestiture, reduced access, or privatization.

To achieve these milestones in the next four years, we cannot merely continue business as usual. We must anticipate change and become much more strategic in our conservation. We must realign our organizations around our defined goals and embrace a culture of continuous improvement to achieve them. We must be more collaborative and ambitious than any time in our history, and we must leverage the full collaborative power of our united organizations.



Jim Clark, Wikimedia Commons

NWF's plan is not limited to science-based solutions. It places equal focus on people, with the goal of inspiring, empowering, and mobilizing conservationists of all ages and backgrounds. While NWF is ever mindful of the current political realities and entrenched interests, its plan is built upon the Federation's belief that collaboration among the full diversity of nature, conservation, and outdoor enthusiasts representing every corner of our nation is the best opportunity to make progress for wildlife.



Collaborative Management of the Colorado Below Glen Canyon Dam

By John F. Hamill

John Hamill was Chief of the USGS Grand Canyon Monitoring and Research Center from 2005 to 2011. He currently represents recreational fishing interests on the Glen Canyon Dam Adaptive Management Work Group and serves as member of and secretary for the Arizona Wildlife Federation Board of Directors.



The Colorado River and the Grand Canyon Protection Act

The Colorado River provides water for more than 27 million people in the United States. The river not only provides water for human communities, it also supports wildlife (particularly unique assemblages of native fishes), agriculture, hydropower production, industries, water storage, sportfishing, and other forms of outdoor recreation. There are 22 major storage reservoirs in the Colorado River Basin, including Lake Powell, which is formed by Glen Canyon Dam (GCD), approximately 16 miles upstream of Grand Canyon National Park (Figure 1). The dam operates eight hydroelectric generators that produce power that is sold to approximately 200 wholesale customers, who then deliver it to various communities. The Secretary of the Interior (Secretary) is responsible for management of the Colorado River, including the operation of GCD, in accordance with a complex series of laws, Supreme Court rulings, and operating principles collectively referred to as the “*Law of the River*.” The Law of the River provides for the distribution and sharing of water among the seven Colorado River Basin states—Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming.

Glen Canyon Dam has dramatically changed the seasonal flow, sediment supply, and temperature of the Colorado River. Today, because most of the sediment load of the river is deposited in Lake Powell, very little of that sediment reaches the river below the dam. Tributaries below the dam provide the Grand Canyon with only about 16% of its pre-dam sand supply. Water released from the dam is also colder than pre-dam river temperatures and has little seasonal fluctuation, averaging around 50°F year-around. Dam-induced changes have also resulted in narrowing river rapids, erosion of camping beaches and cultural sites, invasion of nonnative riparian

vegetation, development of a tailwater rainbow trout fishery, and losses of native fishes.

The international prominence of Grand Canyon National Park and public concern about the impacts of Glen Canyon Dam, resulted in passage of the Grand Canyon Protection Act (GCPA) in 1992. The GCPA dictates that the dam should be operated in a manner that protects, mitigate adverse impacts to, and improve values for which Grand Canyon National Park and Glen Canyon National Recreation Area were established. These values include, but not limited to, natural and cultural resources and visitor use. Additionally, the law provides for long-term monitoring of key natural and cultural resources, and requires consultation with Federal and State agencies, Native American Tribes, the general public, and affected stakeholders. At the same time, Congress specified that the act be implemented in a manner fully consistent with existing laws that govern water allocation and development in the Colorado River Basin. Given the potential conflicts that could arise from this diversity of users of Colorado River water, collaborative adaptive management is imperative.

The Glen Canyon Dam Adaptive Management Program

Beginning in the early 1990s, “adaptive management” emerged as a strategy for managing natural resources such as wildlife, forests, and major U.S. river systems. Generally described as ‘learning by doing,’ the adaptive management approach recognizes that managed natural resources are always changing and that scientific understanding is constantly improving. As well, because natural resource managers should use the best available information to make decisions, adaptive management allows for management decisions and strategies to change in response to environmental changes and new information. Adaptive management encourages scientists and managers to work collaboratively to use the best scientific information to make informed management decisions.

In this context, collaborative adaptive management was selected by the Secretary of the Interior to address the mandates of Grand Canyon Protection Act. In 1997, the Secretary formally established the Glen Canyon Dam Adaptive Management Program (GCDAMP) to “initiate a process of adaptive management whereby the effects of dam operations on downstream resources would be assessed and the results of those resource assessments would form the basis for future modifications of dam operations.”

Figure 1. The Colorado River below Glen Canyon Dam and adjacent lands that are the focus of the Glen Canyon Dam Adaptive Management Program

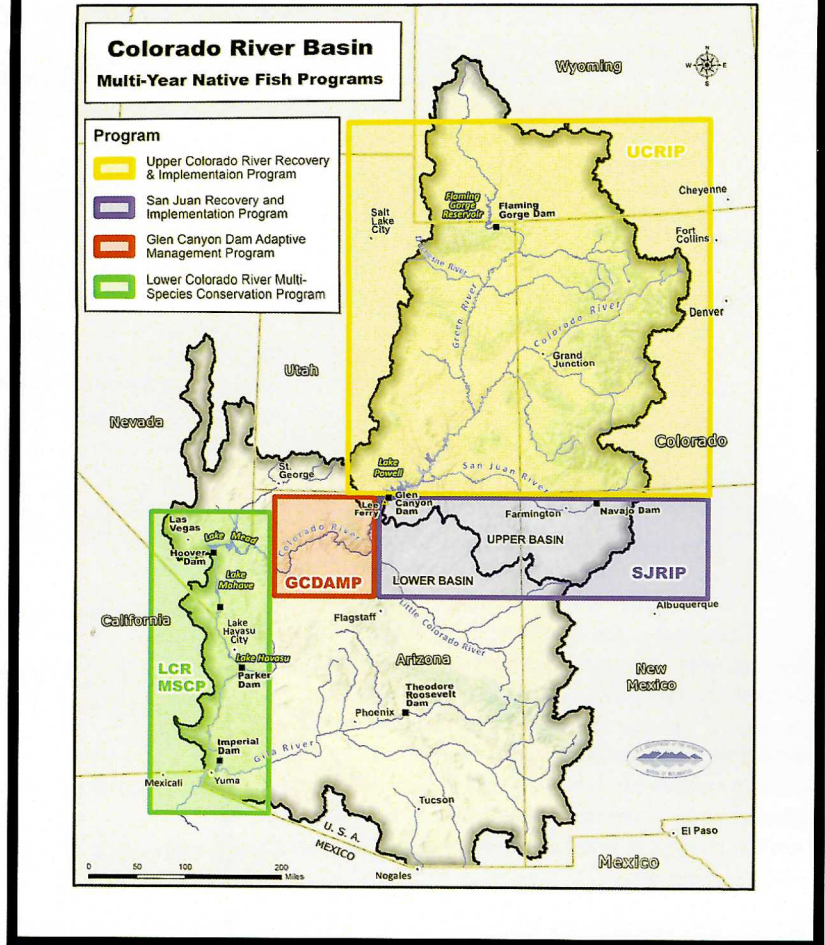


Table 1. Participants in the Glen Canyon Dam Adaptive Management Work Group (AMWG). The AMWG is appointed by the Secretary of Interior and chaired by a designee of the Secretary of the Interior.

<p>Interior Secretary’s Designees</p> <p>Tribes Hopi Tribe Hualapai Tribe Navajo Nation Pueblo of Zuni San Juan Southern Paiute Tribe Souther Paiute Consortium</p> <p>State and Federal Cooperating Agencies Arizona Game and Fish Department Bureau of Indian Affairs Bureau of Reclamation National Park Service</p>	<p>US Department of Energy, Western Area Power Administration U.S. Fish and Wildlife Service</p> <p>Colorado River Basin States Arizona: Department of Water Resources California: Colorado River Board of California Colorado: Colorado Water Conservation Board Nevada: Colorado River Commission of Nevada New Mexico: Office of the State Engineer Wyoming: State Engineer’s Office</p>	<p>Non Governmental Groups</p> <p>Environmental: National Parks Conservation Association Grand Canyon Wildlands Council</p> <p>Recreation: Trout Unlimited/Federation of Fly Fishers Grand Canyon River Guides</p> <p>Glen Canyon Dam Energy Contractors: Colorado River Energy Distributors Assc. Utah Associated Municipal Power Systems</p>
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The GCDAMP consists of the following five major components that were designed to integrate agency, tribal, stakeholder and independent science input into the program (Figure 2):

1. **Adaptive Management Work Group (AMWG)** is a 25-member committee (Table 1) that makes recommendations to the Secretary on how to best alter dam operations or conduct other management actions to meet the U.S. Department of the Interior's (Department) obligations under the GCPA and other statutes.
2. The **Secretary's Designee** serves as the chair of the AMWG and provides a direct link between the AMWG and the Secretary. Currently, the Secretary's Designee is Dr. Tim Petty, the Department of the Interior's Assistant Secretary for Water and Science.
3. The **Technical Work Group (TWG)** includes a technical representative from each of the AMWG stakeholder groups; it translates the AMWG's objectives and goals into resource information needs, identifies science questions that serve as the basis for long-term monitoring and research activities, and conveys research results and resource recommendations to AMWG members.
4. The U.S. Geological Survey's (USGS) **Grand Canyon Monitoring and Research Center (GCMRC)** is the program's science provider, assessing the effects of the operation of GCD and related factors on natural, cultural, and recreational resources; it is not a member of the AMWG or TWG.
5. **Independent Review Panels** provide independent review of scientific activities. One of these panels, the GCDAMP Science Advisors, is a standing group of academic experts who provide independent scientific oversight and technical advice to ensure that science activities are efficient, objective, and scientifically sound.

The program is managed by the US Bureau of Reclamation (Reclamation) in accordance with a formal charter and operating principles that are designed to clarify roles and responsibilities, promote collaboration, and achieve consensus among stakeholders on key issues and recommendations to the Secretary. Professional facilitation of AMWG meetings is a key element of the program's effective operation.

Competing Values and Goals

Each of the stakeholders involved in the GCDAMP brings different and sometimes competing sets of values for management of the Colorado River below Glen Canyon. These values are reflected in the goals that were adopted by Reclamation and the National Park Service in the recently completed *Long Term Experimental Management Plan for the Operation of Glen Canyon Dam Environment Impact Statement (LTEMP)* (Table 2). Trout Unlimited and Fly Fishers International are leading a coalition of conservation and sportsmen groups (including the Arizona Wildlife Federation) to represent recreational fishing interests in the GCDAMP.

The 16-mile stretch of Colorado River winding through Glen Canyon between the Glen Canyon Dam and the beginning of Marble Canyon (within Glen Canyon National Recreation Area) is commonly referred to as Lees Ferry. Since the completion of the Glen Canyon Dam in 1964, this unique tailwater has hosted a recreational trout fishery that has grown in importance and reputation locally, regionally, nationally, and internationally. This blue-ribbon recreational sport fishery has also become a financial and economic mainstay for the small community of Marble Canyon and Coconino County, supporting fishing guide services, hotels, restaurants, fishing and outdoor recreation equipment and supplies, and visitor services.

The goals of the recreational fishing representatives on the Adaptive Management Work Group are to: Maintain and enhance a wild (self-sustaining) blue ribbon rainbow trout fishery at Lee's Ferry that does not adversely affect the native aquatic community in Grand Canyon National Park. Provide a dependable, high-quality recreational trout fishery that sustains local businesses and the economy of Coconino County.

In the context of the GCDAMP, achieving these goals requires working collaboratively with Federal and state agencies, Native American Tribes, and other stakeholders to resolve conflicts among competing goals. In general, successful collaborations requires participants to trust and respect each other, be transparent, be engaged, determined and persistence, and be willing to compromise. While improvements are always possible, these elements are evident in the GCDAMP.

Figure 2. Management structure of the Glen Canyon Dam Adaptive Management Program which was established in 1997.

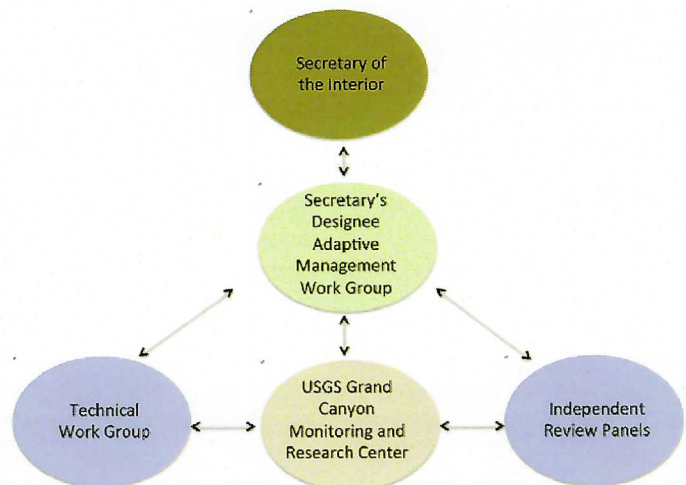


Table 2. Resource goals identified in the *Long-Term Experimental Management Plan for the Operation of Glen Canyon Dam Environment Impact Statement*. The goals were developed by Reclamation and NPS considering public input and desired future conditions (DFCs) previously adopted by the Adaptive Management Work Group (AMWG).

Archaeological and Cultural

Resources. Maintain the integrity of potentially archaeological sites and historic properties.

Natural Processes. Restore, to the extent practicable, ecological patterns and processes within their range of natural variability, including the natural abundance, diversity, and genetic and ecological integrity of the native plant and animal species.

Humpback Chub. Meet the recovery goals for the endangered humpback chub, including maintaining a self-sustaining population, spawning habitat, and aggregations in the Colorado River and its tributaries below GCD.

Hydropower and Energy. Maintain or increase Glen Canyon Dam electric

energy generation, load following consistent with improvement and long-term sustainability of downstream natural and cultural resources.

Other Native Fish. Maintain self-sustaining native fish species populations and their habitats in their natural ranges on the Colorado River and its tributaries.

Recreational Experience. Maintain and improve the quality of recreational experiences for the users of the Colorado River Ecosystem. Recreation includes, but is not limited to, flatwater and whitewater boating, river corridor camping, and angling in Glen Canyon (Lees Ferry).

Sediment. Increase and retain sand bars and camping beaches for ecological, cultural, and recreational purposes.

Tribal Resources. Maintain the diverse

values and resources of traditionally associated Tribes along the Colorado River corridor through Glen, Marble, and Grand Canyons.

Rainbow Trout Fishery. Achieve a healthy high-quality recreational rainbow trout fishery in the GCD tailwater (Lees Ferry) and reduce or eliminate downstream trout migration consistent with NPS fish management plans and ESA compliance.

Nonnative Invasive Species. Minimize or reduce the presence and expansion of aquatic nonnative invasive species.

Riparian Vegetation. Maintain native vegetation and wildlife habitat, in various stages of maturity, such that they are diverse, healthy, productive, self-sustaining, and ecologically appropriate.

Has the program been successful? Most, if not all, stakeholders would acknowledge that all their goals have not been fully achieved. The reality is that in a collaborative multi-objective process like the GCDAMP no one gets everything they want. But at the same time, there is broad recognition that more progress has been achieved than would have been possible by working independently.

There are a number of signs that the program has been successful, including:

For more the 20 years, stakeholders, Federal and state agencies, and Tribes have continued to actively participate in the AWWG and TWG. In addition, Congress and several administrations have continued to authorize full funding for the program since its inception.

Unlike many river systems in the United States, the program has managed to avoid expensive and divisive litigation for over a decade.

An active research and monitoring program continues to provide new insights for how to best manage GCD to achieve the program's resource goals.

Most importantly there has been significant progress at achieving key resource objectives:

Legally required water deliveries from Lake Powell to the lower Colorado River Basin have been fully satisfied.

Clean hydropower is being produced that serves scores of communities in Arizona and the Southwest.

Endangered humpback chub populations have tripled in the past 15 years and expanded their range throughout the Grand Canyon and several tributaries streams. The Fish and Wildlife Service recently recommended that humpback chub be down-listed from an endangered to a threatened species based largely on the strength of the humpback chub population in the Grand Canyon.

Rainbow trout in Lee's Ferry are recovering after a major population crash in 2014 and continues to support a high valued sport fishery.

High flows or controlled floods are now released regularly from GCD whenever sediment supplies are large enough to rebuild sandbars in Marble and Grand Canyons. Sandbars have been used as campsites by river runners and hikers since the first expeditions to the region more than 100 years ago.

"Bug Flows" are being tested to enhance the aquatic food base and improving trout and native fish growth and survival.

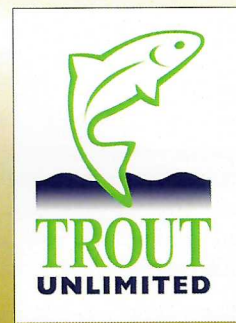
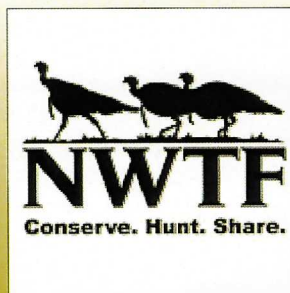
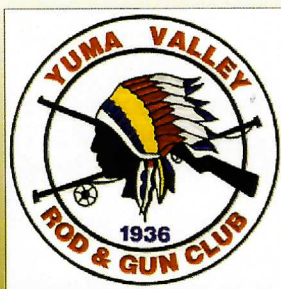
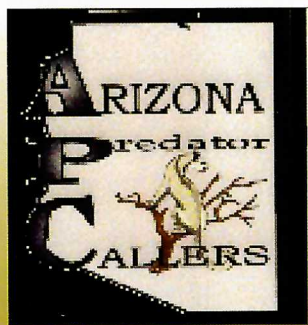
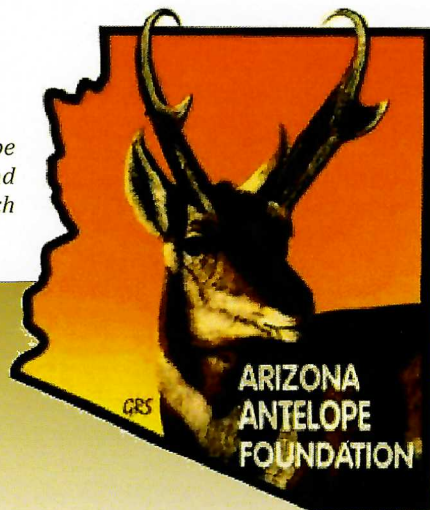
Conclusion

Lynn Scarlett, former Deputy Secretary of the U.S. Department of the Interior suggested in 2013 that *"the nature of conservation and resource management challenges—i.e., uncertainty, complexity, and change—point toward collaborative adaptive management as a potentially useful decision framework."* While far from perfect, the GCDAMP has been generally successful at dealing with uncertainty, complexity, and change within the complex legal, policy, and institutional environment that governs the operation of Glen Canyon Dam. The program has also provided an effective forum for the past 21 years for collaboration among Federal and state agencies, Native American Tribes, and key stakeholder groups that has resulted in progress toward achieving the purpose of the Grand Canyon Protection Act.

Spotlight on Affiliates

The Arizona Antelope Foundation

In this month's issue, AWN focuses the spotlight on long-time affiliate, the Arizona Antelope Foundation. Special thanks to Glen Dickens who serves as the Vice President of Conservation and Operations for AWF and as Vice President of AAF, for his contribution of the following article which was previously published in AAF's newsletter (and revised for this issue of AWN).



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.

On January 24 of this year, the Arizona Antelope Foundation (AAF), the Arizona Game and Fish Department (AGFD) and a crowd of volunteers (including members of AWF's board and staff) gathered in the cold, wee hours of the morning to capture pronghorn from the heavily urbanized Glassford Hill area of Prescott Valley.

The purpose of this capture project was two-fold: first, to "rescue" a sub-population of 75 pronghorn that had become surrounded by 360 degrees of subdivisions and major highways. The herd had decreased in population from 100 animals the year before to the surveyed 75 just prior to capture. The decline was largely due to vehicle collisions. The second purpose of the capture was to transport and release the animals into five pronghorn sub-populations in Southeastern Arizona to bolster herd numbers and genetic diversity in that area.

This capture exemplified a favorite saying of wildlife biologists: "wildlife management is hours of boredom with occasional moments of sheer excitement." The moments of excitement finally came after much anticipation when an AGFD helicopter herded 55 pronghorn into the "wing trap" and down the alley toward the awaiting enclosure. The enclosure and related fencing, which had been built the two days prior to the capture and during a work day the previous November by AAF volunteers and AGFD personnel, worked perfectly. After a bit of scrambling about and targeted

herding, the alley trap doors were swung shut and the herd was driven into the capture pens. Success!

After an hour "calming down period," the animals next went through the process of classifying, handling, and ear tagging. Several received radio collars and all animals were assigned to one of the five release groups. As each animal finished the process, they were loaded into the various transport cages and trailers for their 350 mile ride south to their respective, designated release sites.

Three of the releases were to be north, east, and west of Wilcox, one release in the San Bernardino Valley northeast of Douglas, and one release in the southern Altar Valley on the Buenos Aires Wildlife Refuge southwest of Tucson.

The data from the collars will be uploaded at least 4 times daily and analyzed by a Geographic Information System (GIS) Game Specialist. The focus will be on learning where resident pronghorn are fawning and breeding, and specifically to identify the key zones they utilize seasonally for foraging.

The first and last time pronghorn were reintroduced to this area in 1944/45 when a total of 46 pronghorn from the Anderson Mesa herd were released. The really great news thus far is that released, collared pronghorn been observed upright and healthy and have already mixed in with groups of resident pronghorn.

You can watch a superb video on the capture at the following YouTube link: <https://youtu.be/Z0dipAZhgXQ>



A successful capture such as this does not happen without an incredible crew such as pictured here. Thanks to everyone for your assistance with this historical wildlife event! Photo by George Andrejko, AZGFD



The pronghorn were rounded-up from the field and herded to the capture site with the aid of a helicopter. Photo by George Andrejko, AZGFD



Pronghorn are released to their new home on the range. Photo by Betty Dickens



This photo speaks for itself. Photo by George Andrejko, AZGFD

Ranger Rick

The National Wildlife Federation's **Ranger Rick** magazine is a wildlife and nature-themed publication that engages every level of childhood development and creates new, fun ways for the whole family to discover and enjoy the great outdoors. Many of you are likely already familiar with **Ranger Rick** magazine as it has been around for decades. We often hear that what influenced an individual to become a wildlife manager, hunter, or nature enthusiast was reading **Ranger Rick** magazines in their youth.

Arizona Wildlife Federation has recently partnered with NWF to offer **Ranger Rick** Magazine subscriptions to AWF members and supporters. The great news is that the AWF receives 50% of subscription proceeds. That means you can support AWF's conservation efforts while also helping your young adventurers learn more about wildlife! Follow our subscription instructions below to ensure your subscription order benefits the AWF.

Ranger Rick publications embody the NWF and AWF's conservation values and expertise and translates it into fun learning opportunities for kids. 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+!

Give **Ranger Rick** as a gift to your young adventurer! They will receive issues year-round and not only learn to appreciate wildlife, but they will also be grateful for the enduring gift.

Any Ranger Rick Subscription—ONLY \$19.95!

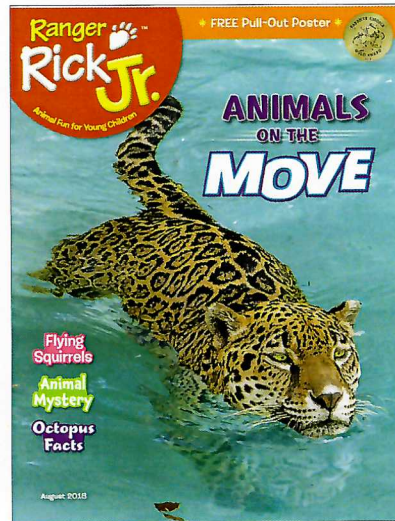
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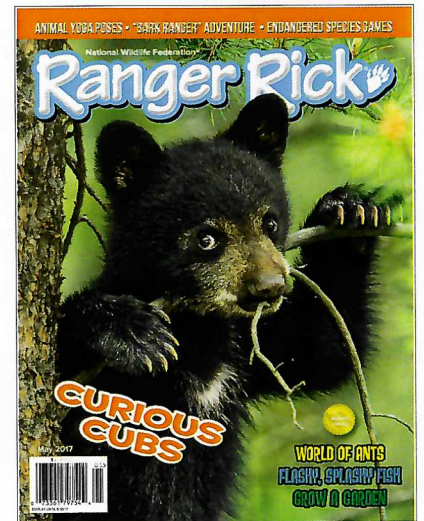
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For gifts delivered outside the U.S., add \$15 for postage. Please add sales tax for orders shipped to CO (2.9%); GA (4%); UT (4.7%); LA (5%); SD (4.5%); NE (6.5%); DC, IA, KY, MD, VT, WV (6%); NV (6.85%); IN, RI (7%). National Wildlife Federation PO Box 420305 Palm Coast, FL 32142-0305



Trophy Book Corner

Become an Official Trophy Book Measurer!


By Mike Golightly

This year the Arizona Wildlife Federation, in conjunction with the Arizona Antelope Foundation, will be holding its annual Trophy Recognition and Fundraiser Banquet on June 22, from 5pm - 9pm, at the Embassy Suites Hotel, 4400 South Rural Road in Tempe, Arizona. The Banquet promises to be an exciting evening and includes fun raffles, volunteer recognitions, member accomplishments, and more. During the day of the Banquet, there will be Pronghorn scoring (bring your horns!) as well as certification clinics for official scorers.

If you are interested in becoming an official scorer, Mike Golightly, will offer a measuring clinic to certify AWF members to

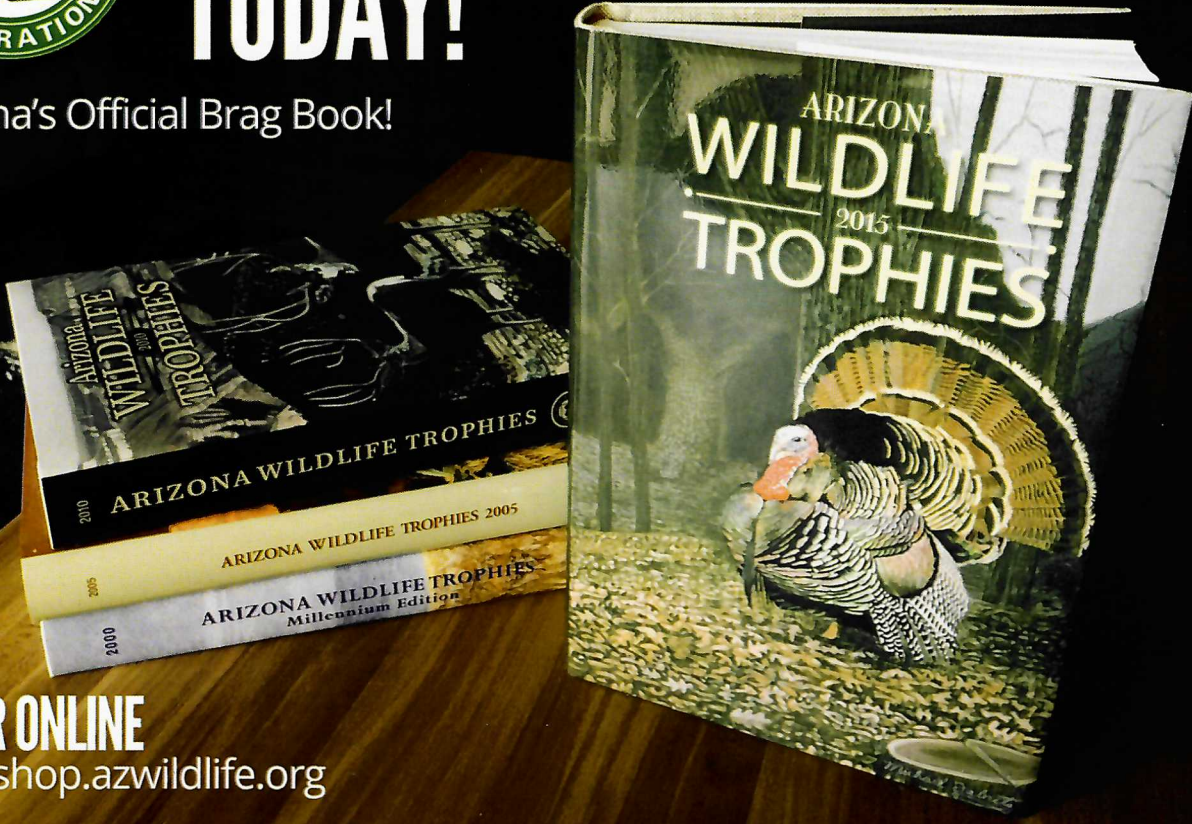
become official measurers for the Arizona record book (provided there is enough interest). Additionally, Marvin Zieser, on behalf of the Bowhunters in Arizona Record Book, will co-host this event to certify archers from his organization to officially score archery taken animals. The clinic will be held from 9:00am to 2:30pm, Saturday, June 22 at the Embassy Suites Hotel.

IMPORTANT: Please contact Mike at mgolight@earthlink.net or 928-853-8405 if you are interested in the measuring clinic. The AWF clinic is dependent upon interest. Please pass the word also should you know of anyone interested in becoming an official state measurer for the AWF.



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www.shop.azwildlife.org

Becoming an Outdoors-Woman (BOW) Happenings

BOW Goes to Yuma



by Linda Dightmon

It all started with an invitation to speak at the October 2018 meeting of the Yuma Valley Rod & Gun Club. Val Morrill, an AWF board member and super BOW champion was the instigator. "Come on down", she

coaxed. "It will be fun!" We were just finishing up the September BOW workshop and both of us were a little giddy from the atmosphere that seems to happen at all BOW workshops... Sooo, I agreed.

For those of you that might need a reminder, Yuma is that little-big town on the banks of the Colorado. With California to the west and Mexico to the south, Yuma is as far as you can go to the southwest and still remain in the country. It had to be a turnaround overnight excursion for me as there was a turkey hunt. The plan was to speak to the club, stay the night at Val's, leave early the following afternoon to be in Heber that night.

The plan worked out perfectly. The most pleasant part of my whirlwind trip was the genuine hospitality that I felt. Not only was I greeted by Val, but also her sister, Deb, and her daughter, Lily. They all went to the hall where I was to give my presentation to an audience of 90% men. (A little moral support.) Val had also reached out to Jean Wilson, the local outdoor writer, and succeeded in putting a blurb in her column of the *Yuma Sun*. This brought a sprinkling of female faces to the crowd. The presentation went well, and afterwards there were several members that came to me offering help. One was David Parrish, who offered up a fishing trip. I snagged it up for a raffle item for the BOW Deluxe.

Thus begins a relationship between Becoming An Outdoors-Woman in Arizona, and the Yuma Valley Rod and Gun Club. We were invited to the Youth Fishing and Outdoor Clinic to set up an informational booth for the moms. This is a FREE event that the club does annually with lots of help from local businesses, agencies and organizations. I counted 93 sponsors on the T-shirt.

On March 22nd, Mark Hullinger (past AWF President) and I took our little camping trailer to a new place, Mittry Lake. It is a 750 acre lake located in the floodplain of the Colorado between Laguna and Imperial Dams. The club was already there and incredibly busy setting up for tomorrow's festivities. They were building a stage. **Yes, A stage.** I learned later that this was for the official weigh-in. Floodlights were being set up, two bounce

houses, a BB Gun range, two water tanks with big channel catfish, and an archery range. Tables and booths for face painting and lure painting were also going up. There was 600 rods and reels all rigged and ready for the first 600 children. There were piles of prizes, and huge trophies for the winning anglers. I could see bicycles, fishing gear, outdoor games, BB guns, float tubes, and soccer balls. Every child will get a prize. WOW!

There was also something wonderful cooking on a giant BBQ grill. Dinner for all of the volunteers. I was once again overwhelmed by the genuine welcome that we were given. This group seemed just delighted to see us and treated us like longtime friends. After a delicious southwestern meal, we settled in for the night, as the event begins early and ends early, 5:30 to 11:00. That would be AM, folks!

Sometime around 0dark:30, headlights reflected inside our little camper. Then another. And another. I looked out the window and it appeared that entire town was descending upon our little lake.

"Looks like opening day at the state fair", Mark quipped.

Sure enough! The word was out. Yuma Valley Rod and Gun Club is having another event. Where they all parked is still a great mystery. But they found a place. I saw babies and toddlers in strollers with moms and dads and grandparents. There were little kids and big kids, lots and lots of excited, happy kids. And all before sunrise. These children were going fishing. I am looking for coffee.



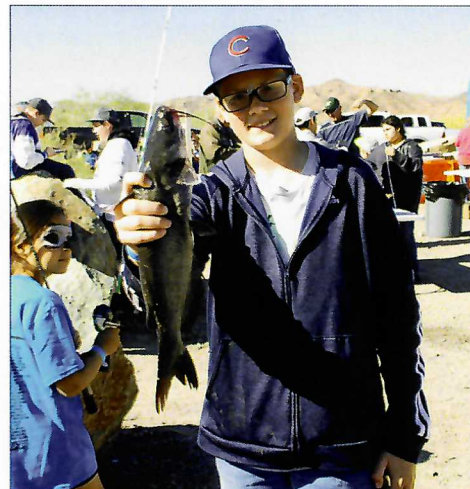
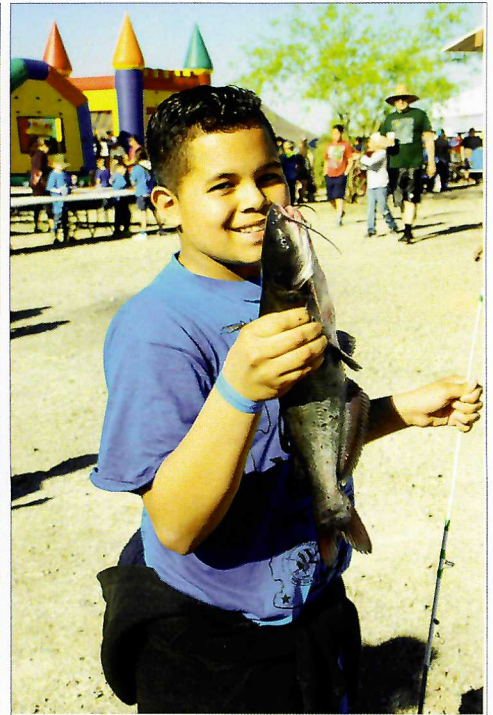
We set up our booth next to the face painting and talked to dozens of moms about the BOW program. One lucky mom won a free weekend at the workshop! The bounce houses were directly behind us and the squeals of small children having fun was infectious. The bounce houses, face painting, and lure painting are pure genius in my humble opinion. In fact, there was a lot of stuff to do other than fishing.

I walked around and visited the archery range, the BB gun range, and the photo station. The Phoenix Varmint Callers had a booth set up. There was a place to glass up "critters" strategically placed on the hills above. And then there was a free lunch of hotdogs and all the trimmings served up by Crossroads Mission. And then there were snow cones. A big hit! Many, many, snow cones.

Fishing was still the main event. The 600 free rods were all gone by eight o'clock. Those rods were put to the test. These young people were making it happen! When a fish was caught it was taken to the official weigh in stage where it was logged beside the young angler's information. Then it was released back to the lake or to the tanks. If it was one of the catfish in the tanks it may have been caught multiple times. It was so much fun to see these kids run back and forth with their fish, sporting huge smiles. Catfish was a great choice because they are hearty. After the tournament they were taken to a local urban pond and released.

What does it take to pull off an event like this? Check out these numbers. There are 750 members of the YVRGC. These folks with David Parrish at the helm along with 93 sponsors and who-knows-how-many volunteers registered 853 young anglers. They gave away 600 fishing rods, 700 T-shirts and a prize for all 853 children. Approximately 450 faces were painted, 1300 hot dogs were consumed along with 1200 snow cones and 7 gallons of syrup. Oh, and one more thing. It all happened on one beautiful morning.

What may be more important in my observations as a first timer are the things that I did not see. I did not see a child with his or her face buried in a cell phone. I did not see a temper tantrum or even a tear. In fact, I did not see any type of altercation, be it adult or youth. And there were a lot of folks in a relatively small area. Not to mention a ton of free stuff for temptation. A thousand kudos to this town of under 100,000 people (At least in the summer). Yuma, you rock! The coolest hottest town in Arizona!



It's official! The first Saturday in April is now:

Arizona Public Lands Day!

Thanks to our state legislature for unanimously passing the bill and to Governor Ducey for signing it into law.

Arizona Public Lands Day is official! On May 1st Governor Ducey signed HB2271, officially establishing the first Saturday in April as Arizona Public Lands Day. Just the week before, and a day after Earth Day, the bill had unanimously passed in the Arizona State Senate

The Arizona Public Lands Day Bill (HB 2271) was drafted by a team of conservationists led by Brad Powell, Board President of the Arizona Wildlife Federation (AWF). Among the organizations supporting the bill was AWF Affiliate group, Trout Unlimited. The bill was introduced in the House by Representative Tim Dunn (who is also a member of the Yuma Valley Rod & Gun Club, another AWF Affiliate), and in the Senate, was sponsored by Senator Frank Pratt. The bill passed unanimously in both the House and the Senate. The unanimous vote in favor of the bill's passage (60-0 in the House and 30-0 in the Senate) is unprecedented and demonstrates how bipartisan, uniting, and powerful

public lands and conservation can be!

Arizona is blessed with a diversity of majestic Public Lands including National Parks and Monuments, State Parks, preserves, National Forests, rangelands, wildlife refuges, and wilderness area. **HB 2271** celebrates those lands. The text of the bill points out how these public lands enrich our lives, positively impact our economy, and support and protect our precious natural resources. Declaring and celebrating a Public Lands Day is a positive way for Arizonan's to express their love and support for public lands and outdoor recreation.

Arizona Public Lands Day does not require any state funding or new regulations. While the first Saturday in April will from this time forward be recognized as Arizona Public Lands Day, it is not a legal holiday. None-the-less, Arizonans will be encouraged to get out and enjoy their public lands and it is expected that numerous outdoor-related organizations (including AWF) will host events to help us get out and celebrate Arizona Public Lands Day.

Arizona Wildlife Federation
Annual Meeting
June 1, 2019
Flagstaff, Arizona

Each year the Arizona Wildlife Federation holds its Annual Meeting in the early summer. The Annual Meeting is open to all AWF members and Affiliates. Following the general meeting, there will be social time and a cook out.

This is your opportunity to get to know the AWF Board of Directors and staff — and for them to get to know you. Please consider joining us!

This year's meeting will be held in Flagstaff on June 1st in the Pavilion Tent at the Arizona Nordic Village.

If you are interested in attending, please send an email to trica@azwildlife.org. In the subject line, please write: AWF Annual Meeting. We need to know in advance if you plan on attending. We hope to see you there.



AWF staff and Board of Directors at the 2018 Annual Meeting

May is Gardening for Wildlife Month!

Create a sustainable garden that helps wildlife. By creating a natural garden that provides food, water, cover and places to raise young, you are providing the essential elements of wildlife habitat. When you provide these elements, your garden qualifies to be recognized as a Certified Wildlife Habitat by the National Wildlife Federation and by the Arizona Wildlife Federation. Take advantage of these special wildlife garden discounts now through the end of June:

Garden For Wildlife Month Certification and Sign Discount

Receive 20% off your total when you certify and purchase any Certified Wildlife Habitat sign. This is a limited time offer available online only May 1- June 30 2019.

Certify at <http://www.nwf.org/statesgarden> and enter promo code GARDEN19.

Garden Habitat Helpers Giveaway for GFW Newsletter Sign Up

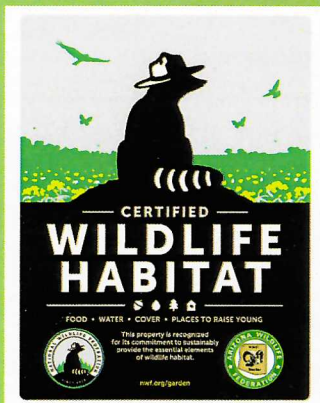
April 1 – May 31, Sign up for the Garden for Wildlife e-Newsletter to be entered to win four “habitat helpers” to enhance your wildlife habitat garden, and the new edition of *Attracting Birds, Butterflies and Other Backyard Wildlife*, signed by its author, NWF Naturalist, David Mizejewski. Sign up at: www.nwf.org/gfwnews.



Garden Habitat Helpers Giveaway



Gardening for Wildlife



The Arizona Wildlife Federation continues to team with 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 NWF's Certified Wildlife Habitat program, folks are encouraged to plant native shrubs, flowers, and trees that 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>



Arizona Wildlife Federation
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Tempe, AZ 85284
(480) 487-4663 awf@azwildlife.org



2019/2020 WORKSHOP DATES:
SEPTEMBER 6 – 8
JANUARY 24 – 26
APRIL 17 – 19



FOR MORE INFORMATION VISIT:
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