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Arizona Game and Fish Department Heritage Fund 2024 Report to the Arizona Legislature

Project Year July 1, 2023 to June 30, 2024

Acknowledgments

The assistance of personnel throughout the Arizona Game and Fish Department (Department), and our external cooperators, in preparing this report and conducting the activities reported herein is gratefully acknowledged.

Civil Rights Notification

The Department prohibits discrimination on the basis of race, color, sex, national origin, age, or disability in its programs and activities. If anyone believes they have been discriminated against in any of the Department's programs or activities, including its employment practices, the individual may file a complaint alleging discrimination directly with the Arizona Game and Fish Department, Director's Office, 5000 W. Carefree Highway, Phoenix, Arizona 85086; (623) 236-7290, or U.S. Fish and Wildlife Service, Office of Diversity, Inclusion, and Civil Rights, U.S. Department of the Interior, 1849 C St., NW, Washington, D.C. 20240; (703) 358-1724. If you require this document in an alternative format please contact the Arizona Game and Fish Department, Director's Office as listed above or by calling TTY at 1-800-367-8939.

Project Funding

Title 17, Chapter 2, Article 6. Arizona Game and Fish Commission Heritage Fund

§ 17-296. Definitions

In this article:

1. "Public access" means providing entry to publicly held lands for recreational use where such entry is consistent with the provisions establishing those lands.
2. "Sensitive habitat" means the specific areas within the geographical area historically or currently occupied by a species or community of species in which are found those physical or biological features essential to the establishment or continued existence of the species and which may require special management, conservation or protection considerations.
3. "Endangered species" means a species or subspecies of native Arizona wildlife whose population has been reduced due to any cause whatsoever to such levels that it is in imminent danger of elimination from its range in Arizona, or has been eliminated from its range in Arizona.
4. "Threatened species" means a species or subspecies of native Arizona wildlife that, although not presently in imminent danger of being eliminated from its range in Arizona, is likely to become an endangered species in the foreseeable future.

5. "Candidate species" means a species or subspecies of native Arizona wildlife for which habitat or population threats are known or suspected but for which substantial population declines from historic levels have not been documented.
6. "Urban wildlife" means the wildlife that occurs within the limits of an incorporated area or in close proximity to an urban area that receives significant impact from human use.
7. "Environmental education" means educational programs dealing with basic ecological principles and the effects of natural and man related processes on natural and urban systems and programs to enhance public awareness of the importance of safeguarding natural resources.
8. "Habitat evaluation" means the assessment of the status, condition and ecological value of habitat and subsequent recommendations of management, conservation or other protection measures, or mitigation measures, including but not limited to, recommendation of reasonable alternatives for the proposed projects that might otherwise affect the habitat under assessment.
9. "Habitat protection" means the process of protecting the quality, diversity, abundance, and serviceability of habitats for the purposes of maintaining or recovering populations of Arizona wildlife.

§ 17-297. Arizona Game and Fish Commission Heritage Fund

- A. The Arizona game and fish commission heritage fund is established consisting of monies deposited from the state lottery fund pursuant to section 5-572 and interest earned on those monies.
- B. The fund shall be administered by the Arizona game and fish commission and is not subject to appropriation and expenditures from the fund are not subject to outside approval notwithstanding any provision of section 17-241 or 17-261 or any other statutory provision to the contrary. Monies received pursuant to section 5-572 shall be deposited directly with the Arizona game and fish commission heritage fund. On notice from the Arizona state game and fish commission, the state treasurer shall invest and divest monies in the fund as provided by section 35-313, and monies earned from investment shall be credited to the fund.
- C. All monies in the Arizona game and fish commission heritage fund shall be spent by the Arizona game and fish commission only for the purposes and in the percentages set forth in this article. In no event shall any monies in the fund revert to the state general fund and monies in the fund are exempt from the provisions of section 35-190 relating to lapsing of appropriations.
- D. The commission shall not use its rights of eminent domain to acquire property to be paid for with money from the Arizona game and fish commission heritage fund.

§ 17-298. Expenditures from Fund; Purpose and Amounts; Annual Report

- A. Monies received pursuant to section 5-572 shall be spent as follows:
1. Five percent on public access, including maintenance and operation expenses.
 2. Sixty percent on the identification, inventory, acquisition, protection and management, including maintenance and operations, of property with sensitive habitat. At least twenty percent of the monies available under this paragraph shall be spent to acquire property with sensitive habitat used by endangered, threatened and candidate species. Not more than twenty percent of the monies available under this paragraph may be spent on the operation and maintenance of the acquired property, including the acquired property's infrastructure. The commission may dispose of any lands acquired for use as habitat by an endangered, threatened or candidate species under this paragraph when the species no longer qualifies as an endangered, threatened or candidate species. The Arizona game and fish commission shall dispose of the land in a manner consistent with the preservation of the species of concern. The disposal may include conservation easements and fee simple transfers with associated instruments of protection. The commission shall follow the guidelines established pursuant to section 37-803 relating to the disposition of real property by a state agency. In addition, disposal shall include a written agreement between the commission and the purchaser requiring the purchaser to incorporate management actions to ensure proper maintenance of the species of concern. Management actions may include maintenance of habitat, selective control of nonnative species, maintenance of genetic viability, monitoring of populations and habitat, coordinating conservation activities, funding conservation actions and assessing conservation progress.
 3. Fifteen percent on habitat evaluation or habitat protection.
 4. Fifteen percent on urban wildlife and urban wildlife habitat programs.
 5. Five percent on environmental education.
- B. All monies earned as interest on monies received pursuant to section 5-572 shall be spent only in the percentages and for the purposes described in subsection A of this section or for costs of administering the Arizona game and fish commission heritage fund in such amounts as determined by the Arizona game and fish commission.
- C. On or before December 31, the commission shall submit its annual report to the president of the senate, the speaker of the house of representatives and the chairmen of the senate and house of representatives committees on natural resources and agriculture, or their successor committees, and shall provide a copy of this report to the secretary of state. The annual report shall include information on:

1. The amount of monies spent or encumbered in the fund during the preceding fiscal year and a summary of the projects, activities and expenditures relating to:
 - (a) Property acquisition, operation and maintenance.
 - (b) Identification, inventory, protection and management of sensitive habitat.
 - (c) Habitat evaluation and protection.
 - (d) Urban wildlife.
 - (e) Environmental education.
 - (f) Public access.
2. The number and location of parcels of property acquired during the preceding fiscal year.
3. For personal and real properties acquired with fund monies during the preceding fiscal year, the amount of property tax revenue paid to each taxing jurisdiction during the last full tax year prior to acquisition.
4. The amount of money spent from the fund during the preceding fiscal year for employee personal services.
5. The number of full-time employees employed in the preceding fiscal year in connection with property acquisition, including survey, appraisal and other related activities.
6. The total number of full-time employees employed in the preceding fiscal year for the programs listed in subsection A of this section.
7. A list of the grants awarded during the preceding fiscal year, including information on the recipients, purposes and amounts.

Reporting Requirement

This Heritage Program Report to the Arizona Legislature is required under, and submitted in compliance with, Arizona Revised Statute § 17-298(C).

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HERITAGE ACQUISITION

The Arizona Game and Fish Commission did not purchase any properties or conservation easements using Heritage acquisition funds during Fiscal Year (FY) 24.

HERITAGE IDENTIFICATION, INVENTORY, ACQUISITION, PROTECTION AND MANAGEMENT OF SENSITIVE SPECIES

Heritage Identification, Inventory, Acquisition, Protection and Management (IIAPM) funds are combined with other funding sources, such as State Wildlife Grants (SWG) and Federal Pittman-Robertson Funds, to implement a wide variety of projects identified in Arizona's Wildlife Conservation Strategy (AWCS) the Department's version of the State Wildlife Action Plan (SWAP). This leveraging of funds magnifies the return on investment by accomplishing critical conservation work throughout Arizona. In most cases, IIAPM funds provide a fiscal foundation that enables or entices other sources to contribute to making a conservation concept a reality. The projects below are just a few examples of hundreds of projects enabled by IIAPM funds thus far in Arizona.

New Mexico Meadow Jumping Mouse Management

The New Mexico Meadow Jumping Mouse was listed as endangered under the Endangered Species Act (ESA) in 2014. Since its listing, research has been focused on the gaps in life history of the mouse in order to better understand the needs of the species, and to manage for recovery. Currently, Heritage IIAPM funds research to collect data on suitable protocols for translocations. The Department also monitors known locations, investigates new streams for their presence, and documents habitat conditions at all survey sites. The past year, the Department worked with United States Fish and Wildlife Service (USFWS) and other partners to establish

a Recovery Plan and set goals for downlisting and delisting which is possible in Arizona in the very near future.

Arizona Important Bird Areas - Citizen Science

Heritage IIAPM funding facilitates the support of Arizona's Important Bird Areas (IBA) program. IBA launched in 2001, implemented by Audubon Southwest (with collaboration of local Audubon chapters) and in coordination with the Arizona Bird Conservation Initiative IBA identifies the most important sites for priority bird species and habitats, coordinates citizen-science bird inventory and monitoring, and promotes on-the-ground habitat projects. The IBA program is closely tied to the



Department's SWAP's strategies for conserving priority birds and helping to keep common species common, by pursuing conservation actions to address stressors to habitats and to Species of Greatest Conservation Need (SGCN). To date 48 IBAs have been identified in Arizona and include riparian and wetland habitats, southeastern "sky island" mountains, and grasslands. Sixteen of these IBAs are considered of global significance.

Pinaleno Land Snail Conservation

This year marked the eighth year of implementing the Pinaleno Land Snail Conservation Agreement with Coronado National Forest and USFWS. This voluntary agreement covers four native talussnail species and a mountain snail species only found in the Pinaleno Mountains of eastern Arizona. The Department works with federal partners in conserving and managing the Wet Canyon talussnail (one of the five snail species in this mountain range) since 1999 under a previous conservation agreement. Since 2017, Department-led surveys have documented over three dozen new populations of land snails in the Pinaleno Mountains. The Department works closely with land managers and private landowners to manage rare populations of land snails and springsnails under voluntary conservation agreements.



Huachuca Springsnail Translocation



In July 2024, Department staff found several tiny Huachuca springsnails at the "Scotia03" site in the Huachuca Mountains following a translocation effort for these snails in 2023. This was the first evidence of successful overwintering and survival of captive-raised springsnails at a translocation site. A captive population of these snails is maintained at the Phoenix Zoo Conservation Center under a collaborative effort with the Department, USFWS, U.S. Forest Service, and Fort Huachuca U.S. Army

Garrison. The Huachuca springsnail is a SGCN in Arizona, and is managed and monitored under a voluntary conservation agreement among the agency partners. This is the first new population of Huachuca springsnails established through translocation efforts. A follow-up translocation of additional springsnails is scheduled for late September 2024. Arizona Heritage Funds and State Wildlife Grant funds support mollusk monitoring and management activities in Arizona.

Wildlife Inventory in northern Sonora



The Department, in collaboration with partners in Mexico, Commission of Environment and Sustainable Development of Sonora (CEDES, by its Spanish acronym), continued conducting wildlife inventories in northern Sonora, including private properties and federal wildlife refuges. This project gathers important information regarding the Department's SGCN that helps guide and inform species occurrence from this part of Sonora and presence in Arizona.

2024 Wetlands Training Course and World Wetlands Day in Mexico

On February 2, 2024 the Department celebrated World Wetlands Day in collaboration with Mexico's National Commission of Protected Areas, the Government of the State of San Luis



Potosi, Mexico, and Organizacion Vida Silvestre A.C. (OVIS, a local conservation organization). The ceremony and training course took place in the City of San Luis Potosir, Mexico. On February 6 - 23 the Department implemented the 2024 Wetlands Training Course focused on the wetlands of the State of San Luis Potosi, Central Mexico. The Wetlands Training Course trained twenty-eight students from local state and federal agencies, nongovernmental organizations focused on conservation, and universities in the definition, classification, delineation, evaluation, legislation, conservation, and management of

wetlands in North America, with emphasis on Mexican wetlands. The State of San Luis Potosi houses internationally important wetlands directly connected with arid wetlands in the Southwestern United States that serve as important wintering grounds of many species of shorebirds, waterbirds, and waterfowl. The Wetlands Training Program in Mexico supports the Mission of the North American Waterfowl Management Plan, Partners in Flight, and Arizona Bird Conservation Plan.

Relict Leopard Frog Conservation

Relict leopard frog is a SGCN in the AWCS, and the subject of a multi-partner Conservation Agreement. This frog historically occurred in far northwestern Arizona along the Virgin River and other tributaries to the Colorado River. For nearly 10 years, the Department led a concerted and successful effort to remove invasive



bullfrogs from Pakoon Springs, a remote site on the Arizona Strip, to provide habitat for relict leopard frogs. Working with partners at the University of Nevada Las Vegas to obtain captive-bred relict leopard frogs, the Department instigated the first translocation in 2022. In spring 2024, the Department and several partners performed three more relict leopard frog releases at Pakoon Springs. To date, this partnership successfully released over 1600 relict leopard frog tadpoles and juvenile frogs at Pakoon Springs. The Department has documented successful breeding for the second year, with the ultimate goal of a self-sustaining population in sight. Heritage IIAPM and SWG funding enables implementation of these conservation efforts in Arizona.

Yellow Mud Turtle Conservation

The Department works to conserve the yellow mud turtle, a SGCN in the AWCS. This species only occurs only in far southeastern Arizona, and very little is known about its ecology or distribution. In 2024, the Department conducted over 75 visual surveys and trapping sessions in the San Simon and Sulphur Springs valleys, using data-driven methods to target key habitats. This summer, the Department captured, measured, and marked over 100 individuals at more than two dozen newly identified sites. Additionally, the Department fitted eleven turtles with VHF radio transmitters to track their habitat use and seasonal movements. Our efforts provide important data on yellow mud turtle distribution, population structure, and habitat preferences, supporting informed management decisions. The project also fosters collaborative habitat management, and strengthens partnerships with agencies like the Bureau of Land Management. Heritage IIAPM and SWG funds enable the Department to continue these important monitoring efforts, ensuring there is the best scientific data to guide conservation actions.



Narrow-headed Gartersnake Recovery

The narrow-headed gartersnake is listed as threatened under the Endangered Species Act. Throughout its Arizona distribution along the Mogollon Rim and foothills, the species faces threats from habitat loss, nonnative species (including fish and crayfish), and factors that affect stream conditions such as drought and wildfires. Since 2009, the Department has been working with the USFWS and Phoenix Zoo's Arizona Center for Nature Conservation to establish a captive propagation program to augment existing populations and reestablish extirpated populations. The Department and the Cooperative Fish and Wildlife Research Unit at the University of Arizona



monitor the snake's populations. In 2024, the Department (supported by Heritage IIAPM and SWG funds) and partners released 19 snakes at Canyon Creek in the Tonto National Forest; all were snakes born at the Phoenix Zoo. In the last three years, the Department has released a total of 67 snakes, and all were given a unique mark to identify individuals if and when captured during monitoring. Over the course of this year's monitoring, the Department continues to release snakes to be recaptured, and provide evidence that this multi-partner program facilitates species' recovery.

Sonoran Desert Tortoise Monitoring

For over 30 years, the Department has surveyed and monitored Sonoran desert tortoises in Arizona, and since 1987 the Department has monitored tortoises on 17 permanent long-term



monitoring plots. The data the Department collects allows us to estimate abundance, density, annual survival, and other life history parameters providing a better understanding of the Sonoran desert tortoise's population status across its geographic range. Monitoring the desert tortoises also allows us to identify any population changes. The Department's long-term monitoring program provided data to the USFWS during the Species Status Assessment for the Sonoran desert tortoise. The Department's ability to provide pivotal, current, accurate information resulted in a 2022

decision to not list the species under the ESA. The Department continues to use dedicated Heritage IIAPM funds to survey up to four long-term monitoring plots, and collect the information necessary to accurately identify trends in Arizona's Sonoran desert tortoise populations and provide the best scientific data available.

Topminnow and Pupfish Safe Harbor Agreement Progress

By enrolling in a Safe Harbor Agreement (SHA), ranchers, private landowners, and local governments help to recover some of Arizona's endangered fishes. SWG and Heritage IIAPM funds enable the Department to oversee and monitor landowner-enrolled sites under the SHA for Gila and Yaqui topminnow and desert and Sonoyta pupfish. There are currently 32 landowners enrolled in the SHA with a total of 70 refuge waters stocked for conservation to date. In addition, the Department will evaluate several other properties for potential enrollment in the coming year. Loss and degradation of natural habitat, competition and predation by non-native fish, disease and parasites have impacted these fishes in the wild. SHA enrolled sites help further recovery goals for these fish and provide a ready source of fish for future stocking and repatriation efforts. Pinal and Pima County are



enrolled because these fish also provide a native solution to mosquito control in local and rural neighborhoods; research demonstrates that topminnow are just as effective as nonnative mosquitofish in preying on mosquito larvae.

Arizona Five Species of Native Fish Conservation Plan

Under the Department's leadership, the Arizona Five Species of Native Fish Conservation Plan was finalized in August 2021. This plan outlines conservation actions and priorities for roundtail chub, flannelmouth sucker, Little Colorado River sucker, bluehead sucker, and Zuni bluehead sucker. Since 2006, federal, state, tribal, and nongovernmental organization partners have worked together to implement conservation actions identified in the original Six Species Conservation Agreement and Strategy. Arizona is one of the signatory member states to the 2006 Three Species Range-wide Conservation Agreement and Strategy for roundtail chub, flannelmouth sucker, and bluehead sucker. Arizona Heritage IIAPM funds help to plan and implement many of the state-led actions improving the status and distribution of roundtail chub, bluehead sucker, and Little Colorado River sucker. Specific projects implemented in FY24 under this conservation plan included surveys, stockings, and nonnative fish removal efforts.



Apache Trout Recovery

Apache Trout are one of two native trout species to Arizona, listed as threatened under the ESA, and recognized as Arizona's state fish. The Department works with partners including the White Mountain Apache Tribe, USFWS Apache Sitgreaves

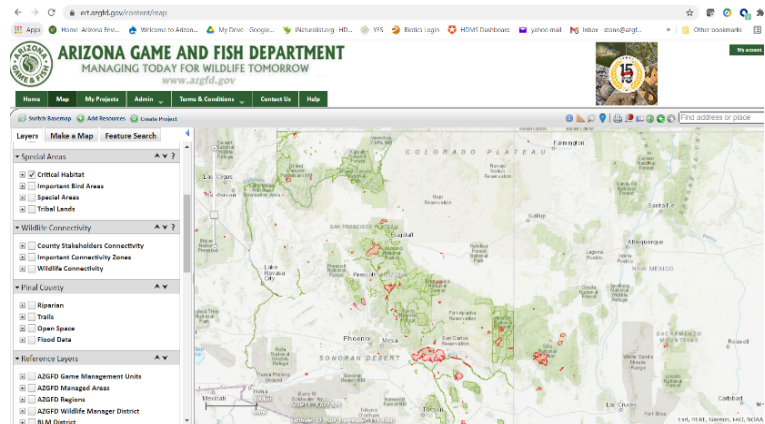


National Forest, and Trout Unlimited since the 1960s to recover Apache Trout. In December 2021, the Department signed onto the Apache Trout Cooperative Management Plan which outlines the management actions needed to achieve recovery and provide for long term management if and when the Apache Trout are removed from the federal list of Endangered and Threatened Wildlife. In August 2022, the USFWS published a Species Status Assessment (SSA) document detailing the current status of Apache Trout. The Department collected data crucial to providing current, and accurate information for the development of the SSA document. In August 2023, the USFWS published a proposed rule to delist Apache Trout from the federal list of Endangered and Threatened Wildlife. The Department anticipates that the USFWS will announce the formal delisting of Apache Trout from the federal List of Endangered and

Threatened Wildlife in FY25. The Department implemented specific projects for Apache Trout recovery in FY24 including: translocations of Apache Trout to Conklin Creek and the East Fork Little Colorado River, population estimate surveys, and nonnative species removal efforts.

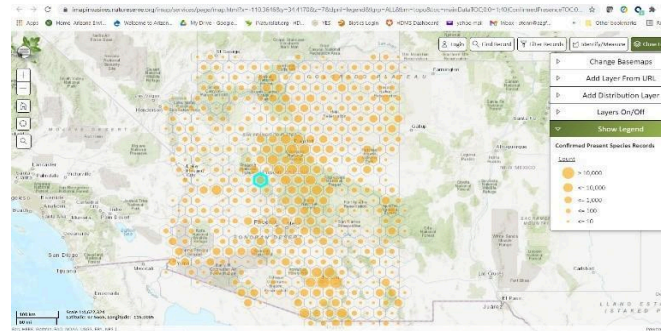
IIAPM Heritage Data Management System (HDMS)

HDMS is part of a network of more than 60 Natural Heritage Programs and Conservation Data Centers in the western hemisphere. HDMS amasses, assesses, and disseminates information on wildlife and other resources to help Arizonans make prudent decisions weighing future development, economic growth, conservation, and environmental integrity.



During FY24, Department staff entered 113 new records and updated an additional 526 records within the HDMS Biotics database. In addition, Department staff wrote or updated five species abstracts. The Department staff provided occurrence and status information to 69 requests related to research, conservation actions, and development projects.

The Online Environmental Review Tool (ERT; <https://ert.azgfd.gov>) is the primary tool used for planning and environmental compliance for conservation, education, or development actions. The tool contains Department data and other resources, such as wildland fire data and county parcels. Users can view these resources, create maps, and generate reports that include lists of sensitive or special status species or sensitive areas documented in a geographic area. More than 2,700 projects were submitted to the ERT during FY24 for environmental compliance.

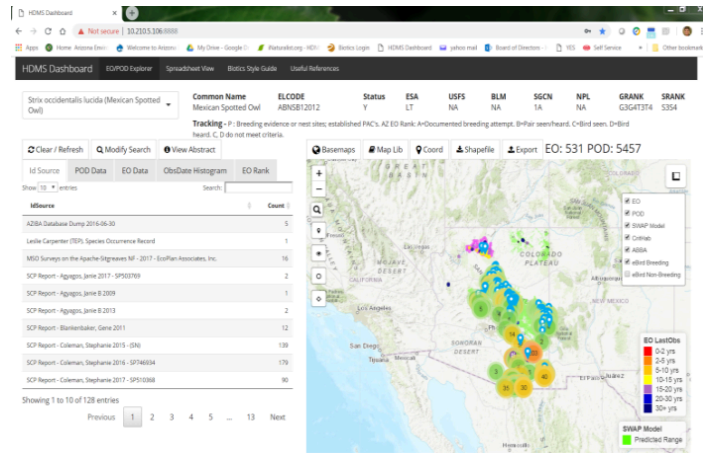


The iMapInvasives website (<https://imapinvasives.natureserve.org>) for tracking invasive species continues to attract users and accumulate more accurate data. Department staff uploads datasets and enters other records to the database. The Department is also working with the Western Governors' Association on invasive data management.

The Department explores citizen science efforts with the iNaturalist HDMS Point Observation Database project (<https://www.inaturalist.org/projects/hdms-point-observation-database>), which has 116,500 records, and the Arizona iMapInvasives project (<https://www.inaturalist.org/projects/arizona-imapinvasives>), which has 71,610 records. All

entries in the iNaturalist projects are submitted by volunteers.

Department staff continues to add data to the internal HDMS Point Observation Database and ensures that Scientific Activity License data submissions are added to the database. The database now has more than 977,500 point observations to help guide research and management decisions. Department staff continue to increase other data sets to ensure the most current science is used in decision making. Department staff work on the HDMS Dashboard, an internal application that allows biologists to view multiple data sources at once, including from online sources, to make sound scientific decisions on research, environmental compliance, and species management.



Built on the same technology as the Dashboard, Department staff built a web application (<https://hdms.azgfd.com/submit-data>) for submitting data collected through Scientific Activity Licenses (SAL). The tool was opened to all Licensees in FY22. The majority of SAL data was submitted through the tool in FY24. The application displays the licensee's data on a map and performs some quality control checks to ensure the best quality data are submitted.

Heritage Property Operations and Maintenance

As defined in Title 17, not more than twenty percent of the Heritage IIAPM funds may be spent on the operation and maintenance of Heritage Fund acquired property, including the acquired property's infrastructure. In FY24, the Department allocated \$924,800 for operation and maintenance activities and operational enhancement projects on Heritage-acquired properties, as authorized by *Laws, 2016 Chapter 224*.

Horseshoe Ranch Solar System Expansion

In FY24 the Department completed the third phase of the Horseshoe Ranch Solar expansion.



This phase added an additional 25kW of solar panels on the barn as well as more inverters into the solar house. This expansion doubled the ranch's solar production capabilities as well as reducing diesel fuel consumption, lowering the overall operations and maintenance cost for the property. The original budget allocation for this project was \$35,000 dollars. However, with rising supply costs, the total cost for this project was \$80,000. The Department obtained

the remaining funds from other sources to complete this project on time. The completion of this project improved the Horseshoe Ranch property.

Quigley-Achee Wildlife Area Tacna Marsh Operational Enhancement - Start of Phase 2

Tacna Marsh was created by a historic oxbow of the Gila River and was once an 18 acre wetland known to be the easternmost breeding location of the endangered Yuma Ridgway's Rail. Tacna Marsh also provided habitat for a number of other sensitive wildlife species, as well as fishing and waterfowl hunting opportunities. Prior to restoration activities starting in FY23, Tacna Marsh had been reduced to less than 1.1 acres of wetland overrun by invasive saltcedar. Now, after completion of Phase 1, an ~1.5 acre open water pond has been established, and in FY24, the



Department kicked off Phase 2 of the Restoration of Tacna Marsh project. The Department broke ground on an additional ~3 acre open water pond, finalizing the subgrade to install the synthetic liner in FY25. The construction of ~4.5 acres of open water as well as ~2 acres of wetland/marsh habitat will enhance habitat for a variety of wildlife such as waterfowl, quail, marsh birds, etc. Even a mule deer has been seen already taking advantage of the water available, and there are hopes that threatened and endangered species such as Yuma Ridgway's rail, Southwestern Willow flycatcher, and Yellow-billed cuckoos will return to the marsh. Additionally, the restoration of Tacna Marsh will improve recreational opportunities for the public such as waterfowl hunting, fishing, and wildlife viewing in an area where such opportunities are rare.



Cold Springs Ranch Operations and Maintenance

In FY24, the following efforts were taken to enhance the safety, cultural preservation, and environmental health of the property.

The installation of 5,280 linear feet of wildlife-friendly perimeter fencing secures the property as well as protects and benefits native wildlife by allowing them to move safely and freely.

To protect cultural resources on-site, AZTEC Engineering LLC oversaw careful monitoring and documentation as part of the improvements to imperative access routes. The lower two-track road was stabilized to ensure better access for future use while minimizing environmental disturbance, while the upper two-track was closed off and rehabilitated to prevent erosion and



encourage the natural regrowth of native vegetation, preserving the landscape.

Continued maintenance of the historic Stone Cabin ensures the longevity and usability of these facilities, contributing to both staff safety and historical preservation.

Fire prevention and vegetation management are also key priorities. The Arizona Department of Forestry and Fire Management began strategic clearing of dense vegetation to reduce wildfire risk. This work will protect the property and enhance the overall health of the local ecosystem greatly benefiting wildlife.

Ongoing maintenance of the access road, FR-420, by Department heavy equipment operators and continued maintenance of culverts by Department staff has improved accessibility and reduced the risk of water damage, ensuring safe and reliable access for both visitors and staff.



Rudd Creek Habitat Restoration Operational Enhancement – Sipe Wildlife Area

In FY24 the Rudd Creek stream and riparian habitat improvement project was completed. Placing rock structures strategically throughout the creek to reduce head cutting, simultaneously lifting the water table to saturate soils, and allowing for increased perennial water to persist in the stream greatly improved riparian habitat for the New Mexico



Meadow Jumping Mouse, while simultaneously improving stream habitat for native fish species, including the Threatened Little Colorado Spinedace. Following the construction activities, two acres of marsh habitat, 11.2 acres of riparian habitat, and five acres of uplands habitat were planted or seeded with over 20 different native plant species. The Department constructed exclusion fencing around a subset of sections in the native planting zone to help plants become established.



HABITAT EVALUATION AND PROTECTION

As defined in Title 17, Heritage Evaluation and Protection (HEP) funds shall be spent on programs that provide assessment of the status, condition and ecological value of habitat and subsequent recommendations of management, conservation, mitigation or other protection measures, including but not limited to; recommendation of reasonable alternatives for the proposed projects that might otherwise affect the habitat under assessment; in addition to protecting the quality, diversity, abundance, and serviceability of habitats for the purposes of maintaining or recovering population of Arizona wildlife.

For FY24, Department staff conducted the following Heritage-associated activities:

Arizona Online Environmental Review Tool (ERT)

The Department used HEP funds to maintain the ERT, facilitating access to Department data, creating maps, and receiving lists of species documented in a geographic area related to conservation, education, or development actions. Project reports generated by the ERT provide best management practices for Arizona's wildlife and their habitats; in FY24, these reports were updated to clearly indicate whether further coordination with the Department is needed for the project. A total of 2,738 projects were submitted to the ERT during FY24.

Monarch and Pollinator Habitat Conservation

HEP funding supports monarch butterfly and pollinator habitat conservation throughout the state. The Department actively participates in the Western Association of Fish and Wildlife Agencies' (WAFWA's) Western Monarch and Native Insect Pollinator Working Group, to continue the planning and implementation of conservation actions described in the [Western Monarch Butterfly Conservation Plan](#) that benefits pollinators, birds, and other species. These conservation actions and strategies are then promoted within the state by the Department as a participant in the [Arizona Monarch Collaborative](#) and its Steering Committee. The Department is incorporating milkweed and nectar plants for pollinator species into habitat restoration projects as opportunities arise, and continues to promote pollinator conservation through presentations and collaboration.



Wetland Restoration in Sonora, Mexico

The Department continues to provide financial assistance to the restoration of wetlands in Mexico. Heritage funds have been used to implement mangrove restoration at the Estero "El Soldado" (Estuary "The Soldier"), an exceptionally biologically rich lagoon on the coast of the

State of Sonora, Mexico. The Soldado Estuary is an important rest area for many migratory birds that are also found in Arizona.

Despite its small size the estuary contains high biodiversity, earning it the title of "unique among



the estuaries of the Sea of Cortez." The Estuary is representative of a natural coastal wetland of the Mexican Pacific Ocean and stands as a healthy and flourishing example in its distribution in the northern Gulf of California. An initial registration of 408 species: 121 invertebrates, 80 fish, 75 birds, 11 reptiles, 9 amphibians, 9 mammals, and 103 plants. The work in Mexico benefits migratory bird species in Arizona and contributes to the Department's mission.

Land and Water Program

HEP funding supports the Department's realty program which includes land acquisition, disposals, and exchanges; existing property and water rights tracking; land and water use fees associated with Commission-owned property; drafting and execution of land use agreements on Commission-owned properties; drafting and execution of land use agreements with federal, state, local government, and private property owners; project review on Commission-owned property; and maintenance of property and water right information. No property was acquired using Heritage Funds during FY24. There was one full-time employee and one part-time employee working for the Department during FY24 associated with land and water rights evaluations and property protections. The Department completed the following activities as a function of the Land and Water Program.

- Scheduled water deliveries with the Bureau of Reclamation for Lower Colorado River-Multi-Species Conservation Plan leased land at the Cibola Valley Conservation and Wildlife Area.
- Renewed an existing land use agreement on a Heritage Acquisition funded property, Arlington Wildlife Area, to allow Sanders Farm to continue farming activities on 85 acres on the Richardson parcel, while also maintaining 19 acres of crops for wildlife, with the other 66 acres used for grass or grain to be harvested by Sanders Farm.
- Prepared a land use agreement on a Heritage Acquisition funded property, Arlington Wildlife Area, for a short-term Right-of-Entry permit with the Department of Forestry and Fire Management for the purpose of implementing a biomass removal project on 125 acres that included Tamarisk removal, Athel tree removal, and cattail burning.
- Renewed an existing land use agreement on a Heritage Acquisition funded property, including a 5-year renewal of a Right-of-Entry agreement with the Arizona Department of Water Resources (ADWR) to allow access onto the Whitewater Draw Wildlife Area property to monitor static groundwater levels of a monitoring well located on the property.

- Paid administrative fees associated with Commission-owned water rights, including water assessments from the Norviel decree in Apache County, as well as from several canal companies and irrigation districts.

Project Evaluation Program

The Project Evaluation Program (PEP) uses HEP funding to incorporate fish and wildlife resource needs or features in land and water development projects and land and water management planning efforts in Arizona. To accomplish this, PEP biologists collaborate, coordinate, and partner with federal, state, municipal, and other land and water management agencies as well as private landowners and law enforcement authorities, to ensure that the needs of wildlife and wildlife habitats are considered during long and short range planning, and during project implementation.

The Department also uses HEP funding to consider and evaluate the effectiveness of mitigation activities for various land and water development projects and management planning activities in Arizona. PEP biologists evaluate the effects and impacts on fish and wildlife resources associated with land and water development projects and land management planning activities, and various enhancement projects/programs in Arizona. PEP biologists develop plans, recommendations, and guidelines for mitigating losses or for enhancement of fish and wildlife populations and habitat and coordinates the incorporation and implementation of fish and wildlife features in development projects and land management planning activities. PEP biologists also track and/or evaluate the effectiveness of mitigation projects established to offset habitat impacts from ongoing development around the state, where feasible.

The PEP team also administers the Department's Environmental Compliance Program and provides technical guidance and oversight to ensure that Arizona Game and Fish Department activities comply with federal and state laws or other environmental legislation.

HERITAGE URBAN WILDLIFE

Human-Wildlife Conflicts

Department personnel recorded 8,009 calls related to human-wildlife conflicts across the state, of which, more than half (4,026) of the calls continue to be associated with the Phoenix and Tucson metro areas. The number reflects an increase (1,154 calls) of nearly 17% from FY23. In addition, the number of human-bear conflict calls have increased from the previous year. In FY24, the Department responded to 702 bear calls compared to 549 in FY23, which is an increase of nearly 30%. The areas with the largest increase in human-bear conflicts were the Pinetop and Prescott areas, accounting for 493 of the 702 bear calls. The Pinetop area received more than half of the 702 statewide bear calls with 363 calls.



Human-coyote conflicts (1,763 calls) are the most common problem reported to the Department, accounting for 22% of all human-wildlife conflict calls statewide. However, coyote calls account for more than 34% of calls within the metro regions of Phoenix and Tucson. Human-javelina conflicts are the 2nd most common problem statewide, more than 13% of all calls. In Tucson, javelina calls accounted for almost 27% of metro calls (369) in FY24 and equal to coyote-related calls (369). Human-coyote conflicts in the Tucson area increased significantly from FY23 (239 calls) or an increase of 35% year over year. Both of the metro areas in FY24 showed large increases in human-wildlife conflicts with the Phoenix area (2,657 calls) up 20% from FY23 (2,214 calls) and Tucson area (1,369 calls) up 22% from FY23 (1,121 calls).

Most callers reporting conflicts with wildlife were given information on identifying what is attracting wildlife to their homes or neighborhoods as well as methods for minimizing the conflicts. For communities experiencing chronic issues, Department staff conducted presentations, held discussions with residents on how to resolve conflicts with wildlife, and provided Department personnel to respond to human-wildlife interactions where there was an immediate public safety risk and/or the homeowner was not able to resolve the conflict on their own through self-help measures. For example, in December 2023, Department personnel responded to a North Phoenix neighborhood where five different individuals were attacked by a coyote within a week. Department personnel were staged at a local elementary school during student arrival and release for more than a week to alleviate fears of local parents. Four coyotes were removed from the area and the offending coyote was later identified via DNA evidence. Department personnel were in the area day and night until the aggressive coyote behavior changed. Intentional feeding is suspected in this issue based on the behavior but the offender(s) and location of feeding was not identified.



Arizona's diverse wildlife populations cause varying levels of conflict in different areas of the state. Department personnel have been increasingly responding to wildlife in distress, trapped or confined in some manner, or were responsible for human safety situations. For example, javelina caught on a trailer or elk with garbage can lids, rope, or even Christmas lights stuck on their head, antlers and neck. Of the 8,009 human-wildlife conflict calls only 2% (180 calls) resulted in animals being "handled" by Department personnel. One of those animals "handled" was a bull elk at a golf course that installed fencing to exclude elk. Once the fence was up, the golf course herded 141 elk from the property, but had trouble with one bull elk and a few more cow elk. The worry was that the population would continue to grow. The Department assisted by darting the one bull elk and helped relocate it outside of the fenced area where he now roams without eating freshly cut green golf course grass.



Human-elk interactions continue to rise and in particular the areas of Payson, Pine, and Strawberry. Of the 357 statewide elk calls in FY24 almost 60% (213 calls) were from this area in Unit 22. Compare this with 160 elk calls in FY23 and 110 elk calls in FY22 in this area, the Department is looking at management options to deal with this increasing problem.

Urban Law Enforcement

Intentional feeding of wildlife continues to be a problem in Arizona's urban areas. Statewide, there were 180 calls to the Operation Game Thief Hotline reporting illegal feeding of wildlife. Department personnel continue to send "no feeding" letters or conduct site visits to warn

residents that not only is feeding wildlife unlawful (violation of A.R.S. 13-2927), it can be



detrimental to the wildlife the residents are trying to help. The state law currently applies only to Maricopa, Pinal, and Pima counties, however several counties and local municipalities have “no feed” ordinances. Gila County adopted their “Wildlife Feeding” ordinance on February 7th, 2023 to curtail wildlife becoming a threat to public safety within the county. In Gila County Department personnel have contacted 20 homeowners to provide information and education on the newly illegal feeding of wildlife. Six citations were issued statewide in FY24 for illegal feeding. Regional personnel continue to educate residents

about the dangers of feeding wildlife through individual contacts, community presentations on “Living with Urban Wildlife”, and through all printed and online materials about coexisting with native wildlife.

In addition, Department officers are frequently tasked with investigating reports of violations associated with the unlawful collection, injuring, or killing of wildlife within urban areas. The types of violations vary from individuals unlawfully collecting reptiles from the mountain parks, shooting birds that reside in residential neighborhoods, fishing violations at urban lakes and ponds, to possession of restricted live wildlife.



Urban Wildlife Viewing Opportunities

In FY24, the Heritage Fund has contributed to many in-person and virtual educational outreach programs through the Wildlife Viewing Program’s (WVP) various events.

Department staff was able to implement and deliver both recurring and new education outreach events pertaining to wildlife viewing. Due to the support of the Heritage Fund, the WVP was able to maintain the level of bighorn sheep events (7) in a single season, equaling the number from last season, which was the most since the program's inception. These events proved to be highly sought after and successful experiences for the constituents. Other noteworthy events include birding while kayaking, bat & buzzard viewing, hummingbird viewing, an elk viewing workshop, and multiple bat nettings were all conducted to educate the public on these various species and how to view them responsibly.

The Wildlife Viewing Program continued their work creating a series of virtual wildlife lectures about specific wildlife species and groups, wildlife adaptations, and how to safely and ethically

view wildlife. These virtual lectures provide a great way for the general public to engage with Arizona's wildlife from the comfort of their own home.

Both the in-person and virtual educational experiences allow for the direct involvement of over 3,094 participants to enjoy and learn about Arizona's wildlife species. Additionally, Heritage funding for staff allowed for the installation and maintenance of several streaming wildlife cameras that have reached tens of thousands of constituents from more than 32 U.S. states and 40 countries from around the globe.



HERITAGE ENVIRONMENTAL EDUCATION

As defined in Title 17, Heritage Environmental Education funds shall be spent on educational programs dealing with basic ecological principles and the effects of natural and man related processes on natural and urban systems and programs to enhance public awareness of the importance of safeguarding natural resources.

Professional Educator Development

Department staff excel at developing and delivering professional educator training on mission-consistent topics. Department staff interacted with over 300 educators in FY24. The majority (67%) of these interactions occurred in person, either at professional conferences or hands-on workshops. This continues a trend we have observed for the past two years coming out of COVID as more and more educators are looking for hands-on experiences to bring back to their classrooms after teaching remotely. The Department offers engaging workshops that included lessons that integrated other disciplines, such as reading and history, into biology instruction. Department staff also participated in a variety of agency and non-governmental boards and committees that provide support and resources to the educator communities throughout the state and nation, such as: Arizona Informal Educators Network and the Rural STEM Community of Practice. In addition, Department staff met with local school districts to discuss ways to better incorporate wildlife into STEM programming.



Wildlife Center

With Heritage funding support, the Department's Wildlife Center provides specialized care for the Department's collection of twenty-one non-releasable native wildlife used as animal ambassadors for on and offsite educational programming. It also serves as an intake location for



hundreds of tortoises that are surrendered annually to the adoption program. The Wildlife Center building was completed in March 2020 and improvements have been made every year to ensure we provide optimal care for our animal ambassador collection as well the safety of our staff. The Wildlife Center is home to a wide variety of native raptors that many locals don't realize are right in their own backyard such as great horned owls, merlin

falcon and a golden eagle to name a few. Other native wildlife that call the Wildlife Center their home, a chuckwalla, spotted skunks, a rosy boa, Gila monsters and a few other small mammals and reptiles. These animal ambassadors travel with our Wildlife Education Outreach Coordinator throughout the state and serve an important role to introduce members of the public to the diverse wildlife in Arizona.

Desert Tortoise Adoption Program

With support from the Heritage Fund, The Department's Tortoise Adoption Program continues to provide education and awareness for Arizona citizens and desert tortoise caretakers. For generations, homeowners in many Arizona desert communities have kept desert tortoises as pets. Through the Department's streamlined adoption application process, potential tortoise adopters gain valuable knowledge about desert tortoises, their care and essential role in the desert environment. Many of the education and awareness campaigns focus on ensuring that unwanted desert tortoise pets are not released to the wild, potentially spreading pathogens or parasites to a wild population.

During the 2023/2024 tortoise season, the Department took in 296 surrendered and found captive desert tortoises, received 223 applications,



with 159 Arizona residents stepping up to provide homes for desert tortoises. The staff responded to the influx of tortoises by increasing their presence at community events and partnering with local businesses to help provide them much-needed homes. The Department frequently promoted the program on television and radio platforms and delivered outreach via social media to schools and local organizations such as local libraries and through PAC911 community outreach pet adoption events, educating current and new adopters on proper husbandry, nutrition and general health of tortoises. The team also established a new partnership with The Desert Tortoise Council to hold educational Desert Tortoise adoption talks for the public. The Desert Tortoise Adoption Program has also increased biosecurity and protocols to prevent upper respiratory infection from potentially spreading to wild desert tortoise populations.

Environmental/Wildlife Outreach

The Department's animal ambassadors include a variety of native hawks, eagles, owls, reptiles, invertebrates, and small mammals. These ambassador animals are not only very popular and



entertaining but also help create a true connection between the public and wildlife and help highlight the role the Department plays in conserving and protecting these animals and their habitats.

In FY24, Department staff traveled throughout the entire state delivering environmental and wildlife education to over 9,000 people at events such as the Department's Outdoor Expo, regional birding events,

community festivals, while also providing local schools and libraries with family friendly programs. This year we were able to provide programming for new audiences at the Desert Botanical Garden, Sonoran Conservancy, and the Holland Center. Staff have also expanded the "Urban Wildlife" program, which highlights our urban wildlife, and has become popular with many Homeowners Associations.

HERITAGE PUBLIC ACCESS

Public Lands Access (Heritage Public Access)

The Landowner Relations Program oversees the Department's recreational access efforts by which the Department collaboratively enhances opportunities for the public to enjoy wildlife. This is accomplished by identifying lands and waters that are closed to the public or that do not have sufficient access, and then work with all interested parties to meet recreation and other access needs.

FY24 was a successful year with significant accomplishments. The Department entered into 17 new or renewed access agreements. This fiscal year the Department allocated \$215,000 of federal funds, \$423,500 in Heritage funding and \$303,000 of other Game and Fish funding towards

securing access agreements and easements, the Respect Program, and the Adopt-A-Ranch program. The projects funded with these federal dollars are included in this report as accomplishments because the Department biologists that developed and administered these projects were funded partially with Heritage Program funds. These efforts secured access to an additional 100,000 acres for the public to enjoy for wildlife related recreation. In total, the



Department had 80 active access agreements in FY24 and the Department has secured 1.6 million acres of public recreational access. The Respect program provided signs to 93 ranches, cattle guards to 3 ranches, 12 swinging gates, 3 ranch clean ups, and fence modification projects to improve wildlife connectivity. The Department assisted with 21 Adopt-A-Ranch events which included more than 287 volunteers

totaling more than 2,204 volunteer hours. These volunteer hours represent in-kind match that contributes to the Heritage Access resources for projects that secure access for Arizona's citizens.

The Landowner Compact Program

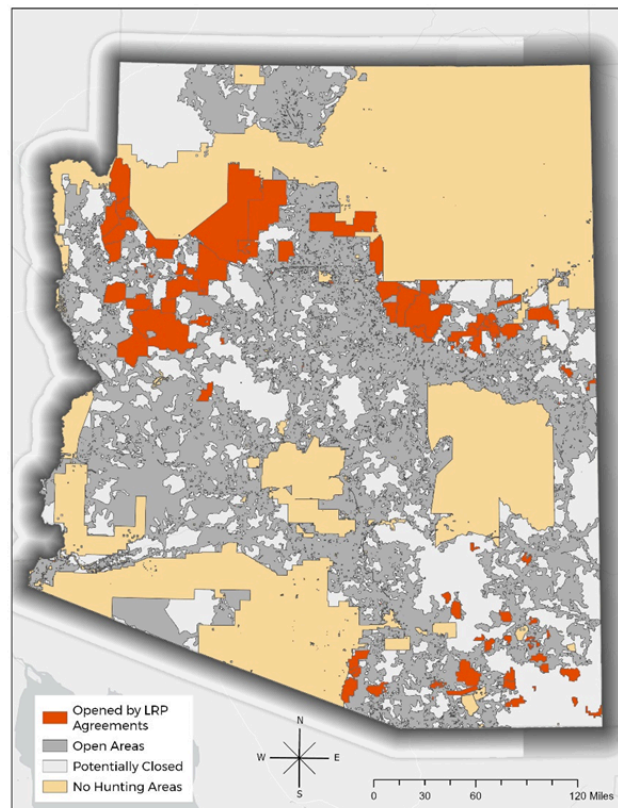
The Department began a program called the Landowner Compact in 2013 designed to make an impact on the behavior of people recreating on private lands. The Compact is not appropriate for every landowner or every ranch in the state, but it has been a successful program with 13 landowners currently enrolled.



To learn more about the program, visit <https://www.azgfd.com/landowner-compact/>

Private and Landlocked Public Areas Opened for the Public - Statewide Perspective

GIS analysis of private, state trust and landlocked public lands secured for public access through cooperative agreements showed 1.6 million acres (orange in map) at the end of FY24.



OTHER REPORT REQUIREMENTS

The Department received \$10 million from lottery revenues for Heritage funded programs. Expenditures totaled approximately \$8.3 million in FY24. The following information represents Department expenditures in FY24:

Heritage funds spent for:

- (a) Heritage Property Acquisition /Due Diligence \$0.00
- (b) Heritage Property Operations and Maintenance \$737,222
- (c) Identification, inventory, protection & management of sensitive habitat \$4,051,676
- (d) Habitat evaluation and protection \$1,350,236 (\$850,000 used to match Federal Grants)
- (e) Urban wildlife \$1,373,438
- (f) Environmental education \$450,997
- (g) Public access \$359,777

The Department spent \$2,335,873 for employee personnel services and \$846,920 for employee related expenses on 29 FTE's and 23 PTE's

There were 3 full-time employees working for the Department in the preceding fiscal year connected to property and water rights acquisitions. The Department expended a total of \$97,466 for Habitat Evaluation and Protection Personnel Services for these activities.

Heritage Partnership Program

The Heritage Partnership Program provides the Department with the opportunity to collaborate with external entities and fund conservation and recreational projects around the state. For FY24, the Heritage Partnership Program provided funding for two projects:

New Mexico Meadow Jumping Mouse Translocation

\$166,000 was approved to collaborate with Northern Arizona University to study if translocations from degraded to better quality habitats could be used as a conservation action to improve the status of the species, listed as Endangered under the ESA. Both translocated mice and mice already inhabiting the better quality habitats are fitted with transmitters to measure survivorship and impacts to an existing population. Research into translocation methods will gather valuable information for recovery efforts.



Status of Sonora and Desert Sucker Populations in the Lower Salt and Verde River Systems

\$85,667 was approved to collaborate with the Arizona Cooperative Fish and Wildlife Research Unit. This project will provide information on the status of Desert Sucker and Sonora Sucker populations in the lower Salt and Verde Rivers and estimate population demographics, and movement patterns. Without this information, the Department is unable to evaluate how angling



pressure may affect the populations. Currently, both species are not sport fish, but both have been identified as tier 2 SGCN in the AWCS. There have been requests from the public to create a catch-and-release sport fishery for both species in this area, but population demographic information for both species that will inform the need for regulation is lacking. This project will help inform fish population

demographics and whether this population and section of river could support a recreational fishery.

Heritage K-12 Small Grant Program

The Heritage K-12 Small Grants Program provides grant opportunities for educators. After going through an internal review process in FY21, the traditional Heritage Grants for Urban, Schoolyard, IIAPM and Public Access funding shifted to a new approach (beginning FY22) for providing outside funding opportunities on a case by case basis. Funding opportunities are still available for projects eligible under A.R.S. 17-298 and that align with current Department and Commission priorities. ([Heritage Grant Update](#))

Arizona Game and Fish Department Heritage K-12 Small Grant Program

Another round of the new Heritage K-12 Small Grants was opened. These grants provide small financial resources (up to \$3,000) to Arizona teachers to help implement quality wildlife education in their classrooms. The Department received 24 applications and 14 grants were awarded either full or partial funding, totaling \$27,950. These projects spanned across 7 Arizona counties (Cochise, Coconino, Maricopa, Pima, Pinal, Yavapai and Yuma). Staff delivered multiple informational grant webinars for applicants to ensure high quality grant applications.

- Marshall Elementary School was awarded \$3000 for “Nature and Birdwatching Opportunities for Low-income Flagstaff Youth”
- University High School was awarded \$3000 for “The RUHS Solar-Powered Schoolyard River”
- Kinsey Inquiry and Discovery School was awarded \$3000 for “5th Grade Verde River and Research Trip”

- Sinagua Middle School was awarded \$3000 for “Arizona Animal Mini Golf Course”
- Mansfeld Magnet Middle School was awarded \$1650 for “Connected to Water: a cultural, biological, and chemical connection”
- The Orme School was awarded \$2655 for “Wildlife Inventory, Creation of Field Guide, wildlife Wednesdays and Identification of potential Yellow-billed cuckoo habitat”
- Sirrine Montessori Center was awarded \$1500 for “Native Wildlife Habitat Creation and Sustainable Farming”
- Palo Verde Elementary School was awarded \$199 for “Wildlife Bridge STEM Project”
- Wellton Elementary School was awarded \$541 for “Taking A Look Into Arizona Invasive Species”
- Tri-City College Prep was awarded \$2898 for “A New Sense of Place”
- Satori Charter School was awarded \$2650 for “Habitats for our Inhabitants: Habitat Development for Schoolyard Wildlife”
- Prenda was awarded \$1030 for “Outdoor Learning Trips”
- Safford K-8 was awarded \$1050 for “Riparian Ecosystems Field Research”
- Bowie High School was awarded \$2827 for “Wildlife Habitat and Land Use Observed”