

# STATE OF ARIZONA

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## **Arizona Game and Fish Department Heritage Fund 2014 Report to the Arizona Legislature**

Project Year July 1, 2013 to June 30, 2014

December 22, 2014

## **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, 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 (USFWS), 4040 N. Fairfax Drive, Ste. 130, Arlington, Virginia 22203. 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**

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" is a designation under the federal Endangered Species Act (ESA) and means a species or subspecies or population of native Arizona wildlife whose population throughout its range has been reduced due to any cause whatsoever to such levels that it is in imminent danger of extinction, elimination from its range in Arizona, or has been eliminated from its range in Arizona.
4. "Threatened species" is a designation under the ESA and means a species, or subspecies or population of native Arizona wildlife that throughout its range although not presently in imminent danger of extinction, being eliminated from its range in Arizona, is likely to or might become an endangered species in the foreseeable future.
5. "Candidate species" is a designation under the ESA and means a species or subspecies, or population of native Arizona wildlife that warrants designation as threatened or endangered under the ESA, but that designation by the USFWS has been precluded by higher priorities, 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 (Commission) Heritage fund is established consisting of monies deposited from the state lottery fund pursuant to section 5-522 and interest earned on those monies.
- B. The fund shall be administered by the 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 5-522 shall be deposited directly with the commission heritage fund. On notice from the 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 commission heritage fund shall be spent by the 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 commission heritage fund.

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

- A. Five per cent of the monies received pursuant to section 5-522 shall be spent on public access, including maintenance and operation expenses.
- B. Sixty per cent of the monies received pursuant to section 5-522 shall be spent on the identification, inventory, acquisition, protection and management, including maintenance and operations, of sensitive habitat. At least forty per cent of the monies available under this subsection shall be spent on the acquisition of sensitive habitat utilized by endangered, threatened and candidate species. The Commission may dispose of any lands

acquired for use as habitat by an endangered, threatened or candidate species under this subsection when the species no longer qualifies as an endangered, threatened or candidate species. The 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.

- C. Fifteen per cent of the monies received pursuant to section 5-522 shall be spent on habitat evaluation or habitat protection.
- D. Fifteen per cent of the monies received pursuant to section 5-522 shall be spent on urban wildlife and urban wildlife habitat programs.
- E. Five per cent of the monies received pursuant to section 5-522 shall be spent on environmental education.
- F. All monies earned as interest on monies received pursuant to section 5-522 shall be spent only in the percentages and for the purposes described in subsections A through E of this section or for costs of administering the commission heritage fund in such amounts as determined by the Commission.
- G. On or before December 31 each year 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. 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.
    - (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 subsections A through E 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 Statutes §17-298.

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## **Identification, Inventory, Acquisition, Protection and Management (IIAPM)**

Heritage IIAPM funds are combined with other funding sources, such as State Wildlife Grants (SWG), to implement a wide variety of projects identified in Arizona's 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 become a reality. The projects below are just a few examples of hundreds of projects enabled by IIAPM thus far in Arizona. Although none of these projects has been funded solely by Heritage, their continued success is attributable to the program.

### **Bald Eagle Conservation**



Heritage IIAPM funds have contributed significantly to recovery and delisting of the bald eagle in Arizona. Arizona has used IIAPM funds to collect data on Arizona's bald eagle population which has been used several times by the USFWS to defend the decision to delist the species in Arizona. Without IIAPM funding and the biological data, pro-listing litigants would have likely succeeded in placing Arizona's bald eagle population back on the Endangered Species List. Arizona's future bald eagle monitoring and management will rely heavily on Heritage funds.

### **Greater Phoenix Area Waterbird Census**

The greater Phoenix metropolitan area has become an ever increasing destination for wintering birds. Each year, more neighborhood lakes and golf course ponds are created, attracting wintering aquatic birds. Recent coordinated bird monitoring surveys verified that this urban area holds a higher density and diversity of wintering aquatic birds than any other place of its size in Arizona. IIAPM funds help collect the data to lessen land use conflicts and to continue cooperative surveys that result in proactive wildlife management.



### **California Condor**

Heritage IIAPM funds continue to support recovery efforts for the endangered California condor.



IIAPM funds enable the Department to promote its successful voluntary lead reduction program by addressing the greatest challenge to condor recovery efforts; lead poisoning. To deliver that message, condor educational programs reached over 15,000 Arizona residents at more than 60 events in 2014. IIAPM funds also supported the Department's innovative free non-lead ammunition program which achieved an 89% hunter participation rate during the Fall 2013 and Spring 2014 hunting season, despite the global shortage of non-lead

ammunition. Lead exposure to condors was the lowest it has been in nine years as a result of this effort. In addition, the first nesting attempts by condors occurred in Utah in 2014.

## Desert Tortoise

The Sonoran desert tortoise is a Candidate for listing under the ESA. The Department has collected population information on these long-lived turtles for more than two decades, and found that most populations are stable, with relatively high adult survival. This year using IIAPM funds, the Department is wrapping up a 5-year study of juvenile tortoises, designed to fill an important gap in our knowledge of long term tortoise population health, and to inform upcoming listing decisions. The Department also took significant steps to consolidate the statewide tortoise adoption program that had been implemented by the Nongame Wildlife Branch, regional offices and external partners, and placed it entirely at the Department's Wildlife Center. This cost savings change will streamline adoption procedures and provide efficiencies that ensure the program contributes significantly to conservation of this icon of Arizona's Sonoran Desert.



## Sonoran Pronghorn Conservation

Funding from IIAPM is helping the Department save the fastest native land mammal in the United States, the endangered Sonoran pronghorn. Severe drought in the Southwest reduced the wild population in Arizona to 21 animals in 2002. Due to ongoing management efforts such as building waters, enhancing native habitats and captive breeding pens; the most recent population estimate is 196 pronghorn. This is the highest population estimate since 1994. As a result of this success, the Department established a second population in historic habitat on the Kofa National Wildlife Refuge. In 2015, the Department's captive breeding program is expected to add an additional 36 pronghorn to the wild.



## Chiricahua Leopard Frog

Heritage IIAPM funds continue to help recover ESA listed Chiricahua leopard frog (CLF) by supporting activities ranging from captive rearing and release of frogs to the wild, habitat renovations and the removal of invasive bullfrogs. In addition to these "on-the-ground" activities, IIAPM funds have supported important research partnerships with the University of Arizona, Washington State University, and State University of New York. The research includes: use of rangewide genetic markers to make informed management decisions for CLFs; use of specially developed markers to detect non-native frogs; and develop a protocol to use audio call play-back as a new way to detect "concealed" frogs and provide higher quality occurrence data. Partnerships like these could lead to the delisting of this unique member of Arizona's fauna.



## Arizona Bat Conservation Partnership



Over 50 percent of U.S. bat species are in some category of concern from emerging threats, such as White-Nose syndrome. Arizona has one of the most diverse bat faunas in the United States with 28 species. Heritage IIAPM funding allows the Department to play a key role in creating partnerships to address these threats, with the common goal of conserving Arizona's bat resources.

## Golden Eagle Baseline Surveys and Monitoring



As a result of newly established permitting authorities under the federal Bald and Golden Eagle Protection Act (BGEPA), there is an emerging need to accurately assess the population size and trends of golden eagles. Compounding this need is the increased mandate for BGEPA permits related to renewable energy resource development. Without baseline nest location, occupancy, and productivity data, the USFWS has a limited ability under the BGEPA to issue permits to ensure compliance. Heritage IIAPM funds are currently helping the Department collect data on the golden eagles to allow the USFWS to issue permits for developmental compliance.

## Black-footed Ferret Conservation

The Heritage IIAPM funded Black-footed Ferret (BFF) Reintroduction Program in Arizona's Aubrey Valley has exceeded state population goals required for down-listing the species to threatened, and will continue to focus management efforts on meeting the state's population objective for delisting. In April 2014, the Babbitt Ranches became the first ranch in Arizona to sign a Safe Harbor Agreement under the ESA, and became the second reintroduction area for BFF in the state. Thanks to continued IIAPM funding support, the BFF has moved away from the brink of extinction in Arizona and is moving towards recovery.



## Gunnison's Prairie Dog Monitoring

Heritage IIAPM funds were used to help estimate Gunnison's prairie dog population numbers, in order to convince the USFWS that ESA protection was not warranted. The Department assesses the population every five years by estimating occupancy of the colonies, and maps the perimeter of the colonies every three years. Through this effort, the Department has determined that the prairie dog populations in northern Arizona are stable or increasing. These surveys also help the Department determine whether certain prairie dog areas could also support BFF reintroduction, to help bolster recovery efforts for that species as well.



## Black-tailed Prairie Dog Reintroduction

Using Heritage IAPM funds to match SWG funds, the Department continues to manage Arizona's reintroduced population of black-tailed prairie dogs in an effort to preclude the need to list the species under the ESA. Through intensive monitoring and management, the current reintroduced colonies within the Las Cienegas National Conservation Area are increasing. In addition, these funds will restore over 700 acres of grassland habitat surrounding the colonies; will enable the Department to conduct genetic research on the similarities within the southwest populations throughout their range; and will support investigation of future Arizona re-establishment sites.



## Mexican Wolf Conservation

Heritage IAPM funds are a critical component to the Mexican wolf project in northern Arizona, and have been since the beginning. The rarest species of wolves in North America, Mexican wolves had disappeared from Arizona in the 1970s. Capture of the last seven wolves remaining, formed a captive breeding population and provided a source for their reintroduction into Arizona in 1998. In 2014, the numbers of Mexican wolves in Arizona and New Mexico were the highest they have ever been (83) and at least 40 pups were identified in dens. The interagency field team led by the Department, is responsible for conducting these counts, releasing wolves, attaching radio collars, tracking wolves, and a number of other management activities to make the program successful.

## Topminnow and Pupfish Safe Harbor Agreement Progress



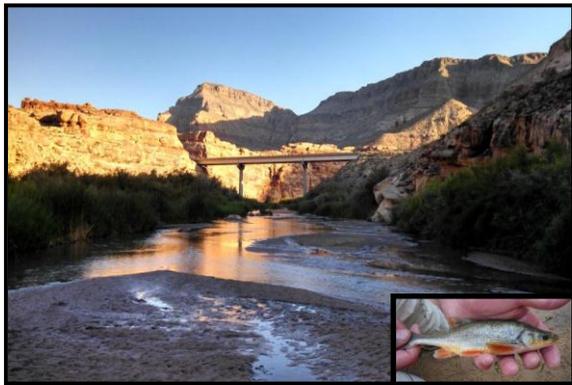
Ranchers, private landowners, and local governments are helping recover some of Arizona's endangered fishes through a Safe Harbor Agreement. IAPM funds and SWG funds enable the Department to oversee and monitor landowner-enrolled sites under the Safe Harbor Agreement for Gila and Yaqui topminnow and desert and Rio Sonoyta pupfish. Non-federal landowners have volunteered to host new populations of these rare fish on their property. To date, the Department has enrolled 16 participating landowners and stocked 22 refuge ponds for conservation. In 2014, one additional property was enrolled and 3 others are in process for enrollment. The loss and degradation of natural habitat, competition and predation by non-native fish, disease and parasites, have all impacted these fishes in the wild. These new Safe Harbor-enrolled populations help further recovery goals for these fish and provide a ready source of new fish for future stocking and repatriation efforts. In addition, these fish also provide a native solution to mosquito control in local and rural neighborhoods; as research has demonstrated that topminnow are just as effective as non-native mosquitofish in preying on mosquito larvae.



## Arizona Bird Conservation Initiative – Coordinated Bird Monitoring



Continental and local declines in many bird populations have led to renewed international concern for the future of migratory and resident birds. IIAPM funds are enabling the Department to create bird conservation partnerships with federal, tribal, state, and private land management entities statewide to establish monitoring projects. These included conducting Sonoran Desert breeding bird surveys on 115 plots, visiting more than 80 colonial waterbird nesting sites across Arizona to determine the number of active nests, and marshbird surveys conducted at many of the state’s wetlands. These monitoring partnerships will contribute to future regional and national efforts assessing bird population trends, with hopes of reversing these population declines.



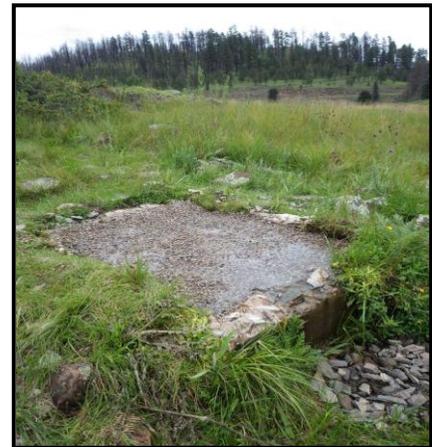
## Virgin River Gorge Habitat Restoration

In June 2014, the Department worked closely with Utah Division of Wildlife Resource biologists to complete the restoration of 17 miles of native fish habitat along the remote Virgin River Gorge, in northwestern Arizona. The shallow, high desert river in the Virgin River Gorge is home to six native fishes, including the endangered Virgin River chub and woundfin. This restoration project will also help protect the upper Virgin River watershed in Utah from reinvasion by red shiner, a

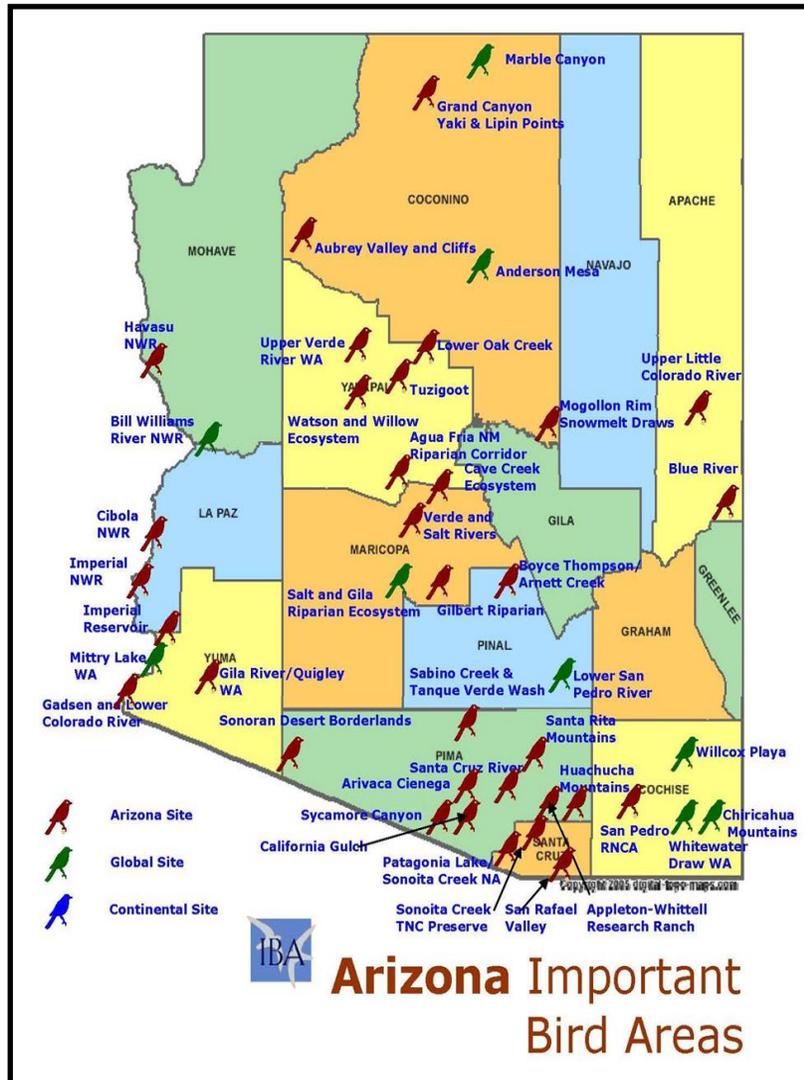
highly invasive bait fish in Lake Mead. Initial monitoring indicates that this non-native fish removal effort was successful. Heritage IIAPM funds were one of several funding sources used to support Department staff on this project. This was logistically and geographically the largest native fish habitat restoration effort the Department has conducted to date. On completion of this effort, the Department received high praise from Utah partners, from stakeholder’s involved, and from the local water district managers.

## Three Forks Springsnail Habitat Improvement

Arizona’s smallest endangered species, the tiny Three Forks springsnail, is getting some help from a unique partnership of natural resource agencies and non-government organizations. The Department has partnered with the National Wild Turkey Federation, the Nature Conservancy, Phoenix Zoo, U.S. Forest Service (USFS) and USFWS to improve and protect habitat for the snail in the White Mountains of central-eastern Arizona. The springsnail lives in shallow rocky springs in Boneyard Bog, along Boneyard Creek. In spring and summer 2014, the partners modified two of the historic spring boxes at Three Forks to improve habitat for the snail and removed hundreds of invasive crayfish that were in residence.



## Arizona Important Bird Areas - Citizen Science



Heritage funding facilitated support of Arizona’s *Important Bird Areas* (IBA) Program. Launched in 2001, the Arizona program is co-administered by the Tucson Audubon Society and Audubon Arizona in coordination with the *Arizona Bird Conservation Initiative*. The IBA program identifies the most important sites for priority bird species and habitats; coordinates citizen-science bird inventory and monitoring of these sites; and promotes on-the-ground habitat projects. Approximately 160 volunteers contributed more than 2,600 hours of citizen science work, with an estimated value of \$52,000. The IBA program is closely tied to the Department’s SWAP strategies for conserving priority birds and for helping to keep common species common and prevent federal listing as Threatened or Endangered. The IBA program also pursues conservation actions to address

stressors to habitats affecting the *Species of Greatest Conservation Need*. Two new IBA’s were added to the network, Patagonia Mountains and Joshua Tree. To date 45 IBAs have been identified in Arizona that include riparian and wetland habitats, southeastern “sky island” mountains, and grasslands. Eight of these IBAs are considered of global significance.

## Heritage Aquatic Invasive Species Program

Heritage IIAPM funds also support the Department’s Invasive Species Program (ISP). The Department played a leading role in invasive species teams through collaboration with federal, state and local agencies and non-profit organizations. These teams include the Central Arizona Quagga Team (CAQTeam), Lower Colorado River ANS Task Force, Lake Mead Quagga Team, Lake Powell Interagency Quagga Mussel Containment Team, National Invasive Species Awareness Week (NISAW), Western Regional Panel of the ANS Task Force (WRP-ANSTF), Western Invasive Species Coordination Effort (WISCE), national Aquatic Nuisance Species Task Force (ANSTF), Quagga-Zebra Mussel Action Plan Team (QZAP), Feral Hog Management national planning, and the iMap Invasives web application.



### AGFD “Don’t Move A Mussel” Billboard Campaign

**Heritage Data Management System (HDMS).** During fiscal year 2014, Department staff entered 940 new records and updated an additional 662 records within the Department’s HDMS. HDMS is part of a network of more than 80 Natural Heritage Programs and Conservation Data Centers worldwide. This information is made available to help Arizonans make prudent decisions weighing future development, economic growth, and environmental integrity.

**Geographic Information System (GIS).** The Department continued to invest in GIS Enterprise Architecture and began to develop department-wide enterprise architecture standards for application web-service development. This included the replacement of all six regional office GIS File Servers and set up of distributed file system replication between Department headquarters and its regional file servers for up-to-date local GIS data access.

Department personnel continued to provide maps, analyses, and GIS-related support, such as troubleshooting technical issues, guidance on the purchase of GIS and GPS equipment, and assistance with development of individual GIS-related projects. Examples include:

- Developed and implemented species distribution update workshops designed to update statewide species presence data that is over 30 years old, and to provide a mechanism for continual update of species distributions.
- Provided development consulting to an array of data collection, survey, and development processes both within the GIS program and throughout the department to include:
  - GPS collar animal location data collection
  - Development, collection, analysis and management of watershed data
  - Off-road, distributed camping site locations
  - Wildcat shooting site locations
  - Road kill data collection
- Provided guidance, geodatabase and knowledge base development to inform the Central Arizona Grasslands Conservation Strategy (CAGCS) project.
- Provided input and support to a statewide connectivity assessment, which involves participation from partners such as Arizona Department of Transportation (ADOT), USDOT’s Federal Highways Administration, USFWS, USFS, BLM, and many more national, state, local, and non-governmental agencies and organizations.

The Department's GIS Program continued to collaborate with external agencies and organizations. As part of the multi-agency Arizona Geographic Information Council (AGIC) executive board and the AGIC data committee, the Program is informed about GIS issues and news related to dataset development, availability, standards; software and hardware improvements; and outreach activities occurring throughout the state. The GIS Program is an active participant of the Desert LCC GIS Working Group and the Western Governors Association's Crucial Habitat Assessment Tool effort.

### **Public and Private Lands: Sensitive Habitats (Heritage IIAPM Stewardships)**

The focus of the Heritage IIAPM Stewardship Program is to work cooperatively with private landowners to accomplish projects that benefit sensitive habitat and at-risk species. Every effort is made to match these state funds against federal programs in order to expand the scope and impact of these projects.

The Sensitive Habitats Project works to improve the status of wildlife with particular emphasis on those species listed as Species of Greatest Conservation Need in the Department's SWAP Plan and restore sensitive habitats for species at-risk.

The Department worked with landowners to complete 15 new habitat agreements utilizing Heritage IIAPM funding. These funds are used as match to federal programs, and nearly all 15 agreements matched Department funds bringing in a total of \$231,904 in non-department funding. Staff paid from this fund also worked on three additional habitat agreements that improved grassland habitat for a suite of grassland obligate species and six projects that improved riparian habitat for the Southwestern Willow flycatcher. Together these nine projects leveraged funding from non-profit groups and several federal agencies to a total of \$795,000.

### **Examples of IIAPM Stewardship Projects:**

**The Strayhorse Ranch Water Project:** The Strayhorse Ranch in eastern Arizona is comprised of over 25,844 acres of National Forest land. In 2011, the Wallow fire burned approximately 581,000 acres, including much of the Strayhorse Ranch infrastructure, such as fencing. This agreement will provide a new well, solar-powered pump, water storage tank, and two wildlife friendly drinkers which will provide permanent water for wildlife and livestock. It also, repaired 2.5 miles of interior ranch fencing that excludes cattle from a riparian area and several springs, while still allowing wildlife access through wildlife friendly fencing and crossings and maintaining habitat for riparian-dependent species.

**Crigler Ranch Wolf/Livestock Conflict Reduction Project:** In fiscal year 2014 the Arizona Game and Fish Department entered into an agreement with the Crigler Ranch in eastern Arizona in order to reduce wolf/livestock conflicts. The Crigler Ranch grazes cattle within the Mexican Wolf Recovery Area and must move cattle to wintering areas away from known wolf pack locations to reduce conflicts. To help the Crigler Ranch offset costs, the Department provided monetary compensation for materials, fuel, and labor required by the Crigler Ranch.

### **IIAPM – Acquisition**

There were no Heritage property acquisitions made by the Commission during fiscal year 2014.

# HABITAT EVALUATION AND PROTECTION

As defined in Title 17, Heritage Habitat Evaluation and Protection 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 populations of Arizona wildlife.

Heritage Habitat Evaluation and Protection funding supports a realty program that includes acquisition, disposals, and exchanges; existing property and water rights tracking; land and water use fees associated with Commission owned properties; 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 properties; project reviews on Commission owned properties; and maintenance of Commission owned properties.

In fiscal year 2014 the Department:

- Received a Certificate of Water Right for water storage in Biscuit Tank located on the Ben Avery Shooting Facility.
- Paid \$7,394.76 from Heritage non-acquisition in voluntary payments in lieu of taxes.
- Renewed eight of ten agreements with other entities during the fiscal year with the remaining agreements still being negotiated.
- Reviewed Federal Energy Regulatory Commission (FERC) documents for several pump-back hydropower generation facilities and continued to monitor three of these proposed projects under FERC licensing procedures.
- Received and reviewed 1,217 evaluation requests or correspondence from federal, state or local project proponents for potential impacts to aquatic and terrestrial habitats. Of the 1,217 requests received, 655 warranted further evaluation and review, and 569 received an additional comment and/or recommendation.

The Department engaged with several federal land management agencies, including but not limited to, USFS, Bureau of Land Management (BLM), Department of Defense (DoD), and the Bureau of Reclamation on habitat projects and land and resource planning issues.

The Department continued to work with ADOT to identify important movement corridors for wildlife populations on a statewide basis. The Department worked closely with ADOT during the review of numerous highway projects to address potential impacts to wildlife resources and develop mitigation measures to reduce those impacts. Project recommendations are made on components such as road designs, wildlife crossings, bridges/culverts, and right-of-way fencing. Transportation planning is ongoing, and the Department is engaged in planning efforts statewide.

# HERITAGE URBAN WILDLIFE

As defined in Title 17, Heritage Urban funds shall be spent on urban wildlife and urban wildlife habitat programs. Urban wildlife is defined as wildlife that occurs within limits of an incorporated area or in close proximity to an urban area that receives significant impact from human use.

The Department spends Heritage Urban funds on a wide variety of projects and activities. These activities include urban law enforcement, human-wildlife interactions, information and education public outreach, and watchable wildlife.

## Urban Law Enforcement

The Department currently has four urban wildlife managers; three within the Phoenix metropolitan area and one within the Tucson metropolitan area. Activities included responding to wildlife conflict complaints, coordinating with local planning and zoning entities, providing extensive wildlife information and education opportunities, and conducting watchable wildlife projects.



## Human Wildlife Interactions

The Department received over 2,000 human wildlife conflict calls or reports. In most instances, the Department provides callers with information on how to reduce potential wildlife attractants from their property, and self-help tips and methods to reduce or eliminate conflicts. In addition, the Department conducted numerous talks and presentations statewide to discuss “living with wildlife” with various communities and groups. Coyote awareness classes were also conducted in specific areas where coyotes were an issue.

The Department is working with an external contractor to develop a computerized database to document all human wildlife interactions statewide. The new database will allow for consistent documentation of interactions, increased accessibility to review, evaluate and analyze data, and improved ability to generate necessary reports.



## Urban Wildlife Information and Education Outreach

One of the major activities associated with Heritage Urban Funds is public information and education outreach. Hundreds of general wildlife presentations are conducted every year across the state, covering such topics as urban wildlife; birding and wildlife viewing; outdoor and wilderness awareness; and hunting safety; venomous reptiles; and, numerous species-specific presentations (owls, bats, elk, bighorn sheep, bald eagles, and waterfowl). In many instances, the presentations included live animals from the Department's Wildlife Center.



Department staff participated in numerous events sponsored by other entities to promote public information on wildlife management. These events included: Verde Valley Birding and Nature Festival; Prescott Earth Day Celebration; Yuma Proving Grounds Health and Wellness Fair; Show Low Days Outdoor Recreation Show; Woodland Lake Wildlife Festival; Yuma Nature Fair; Payson Wildlife Fair; Grand Canyon Wildlife Day; San Luis Health and Safety Fair; Wings over Wilcox; Tres Rios Nature and Earth Festival; Prescott Go Outdoors; Arizona Western College Science, Technology and Agriculture Career Expo; Mormon Lake Outdoor Festival; Prescott Great Outdoors; National Trails Day; BIG Fish Day for Big Brothers and Big Sisters of Central Arizona; and Public Lands Day.

The Department partnered with three communities in eastern Arizona to conduct wildlife, nature



and outdoor festivals to promote wildlife-related recreation, tourism and economic impetus. These included the 11th annual High Country Hummers Festival with the Springerville-Eagar Regional Chamber of Commerce, with approximate attendance of 800; the 8th annual Woodland Wildlife Festival with the Pinetop-Lakeside Chamber of Commerce, with approximate attendance of 1000; the 3rd annual Fall into the Wild Festival with the White Mountain Regional Medical Center in Springerville, with approximate attendance 200; Greer Days, with an estimated attendance of 150; and the Pinetop Fire Department's Safety Village program, which promotes outdoor recreational safety to elementary and middle schools.

The Department continued to take a lead role in the 10<sup>th</sup> annual Tres Rios Nature and Earth Festival. The festival celebrates the cultural and wildlife diversity of the "three rivers" area in southwest Phoenix. The family-friendly event provides opportunities for wildlife viewing, fishing clinics, bird watching, beginning archery, canoeing and nature hikes. In addition, there were numerous talks on wildlife and outdoor related activities. Attendance was estimated at over 6,000.



The Department used news releases in several communities across the state to inform and educate the public relative to ongoing or emerging wildlife issues. Such efforts have included the dangers of feeding wildlife, the importance of leaving baby wildlife alone, and taking care when driving in the fall. These news releases have led to television appearances, radio interviews and in-depth newspaper articles.

In 2014, the Department also responded to numerous media requests from network television, local and statewide print publications and radio news stations dealing with wildlife issues such as tortoise adoptions, lovebird disease in the Phoenix area, and urban wildlife issues.

Over the past three years, the Department developed Birds of Prey and Mammals of Arizona



trading cards for distribution to children during Department information and education outreach events. The trading cards proved exceedingly popular with the children, as well as many adults. The Department recently developed Venomous Creatures of Arizona and Fish Prescott brochures for distribution to the public. The Fish Prescott brochure is the start of a more comprehensive effort that will include signage at Prescott area lakes.

The Department also conducted a Tortoise Adoption Clinic in Prescott. The clinic marked the beginning of the Department's effort to adopt tortoises in the Prescott area. Qualified publics were able to adopt tortoises that have been in captivity and cannot be returned to the wild.

### **Wildlife Viewing/Watchable Wildlife**

In 2014, Department staff conducted numerous in-depth, wildlife viewing information programs for the public across the state to provide tips and advice for viewing wildlife in Arizona. Bighorn sheep workshops were conducted at Canyon Lake and along the Colorado River; elk viewing workshops were conducted in eastern and northern Arizona, a bald eagle workshop was conducted in northern Arizona, a hummingbird workshop was conducted in eastern Arizona, and bird watching, reptile and endangered species programs were conducted throughout the state.



In a cooperative effort with the City of Flagstaff, Coconino County, the Arizona Wildlife Federation, and the Coconino National Forest, the Department continued efforts on the Arizona Watchable Wildlife Experience (AWWE). Partners identified 30 watchable wildlife sites within 30 miles of Flagstaff, created an AWWE website, and published articles in the Department's Wildlife Views publications and the Arizona Wildlife Federation's magazine.



Partners are also in the process of developing a brochure and map for the sites. An audio guide has been developed for 17 of the 30 sites. The guides highlight wildlife information for the sites, interviews with local biologists, and animal sounds. Research is being conducted to find more funding sources to complete audio guides for the remaining watchable wildlife sites. The AWWE partners have also attended numerous public outreach events in northern Arizona to promote the watchable wildlife sites and the project.

The Department is coordinating with the City of Yuma to institute a "Go Wild" program spearheaded by the Arizona Watchable Wildlife Tourism Association. The goal is to promote and advocate for Arizona's watchable wildlife tourism industry in rural communities by strategically working with communities in the development of wildlife viewing opportunities and capitalizing on existing community resources.

## **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.

Department staff implemented four primary programs through the Environmental Education Heritage Fund: professional educator development; environmental/wildlife outreach; wildlife rehabilitation; and, school programs.

### **Professional Educator Development**

Department staff developed and delivered professional educator instruction to over 200 individuals during the reporting period. An additional 135 people have accessed the professional development archived materials via the internet. Participating professional educators had the opportunity to learn about wildlife management and conservation, technology, science inquiry, Heritage grants, and a variety of other available educational resources from the Department.

Heritage-funded staff also served on a variety of agency and nongovernmental boards and committees that provide support and resources to the communities throughout the state, such as: Be Outdoors Arizona, Arizona STEM Network, Arizona SciTech Festival, and the Arizona Science Education Leaders Association.

## **Environmental/Wildlife Outreach**

Department staff and volunteers interacted with approximately 200,000 individuals at over 175 public gatherings, workshops, festivals, and fairs throughout the state. Examples of some of the larger public events the Department delivered programs at include:

- The Department's annual Outdoor Expo
- Prescott Great Outdoors Event
- Verde Valley Birding and Nature Festival
- El Día de los Niños's Children's Festival
- Yavapai County Cattle Growers Annual Sale
- High Country Hummers at Sipe White Mountain Wildlife Area
- Gila River Indian Community Earth Day
- Show Low Days Outdoor Recreation Show
- Legislative Day at the State Capitol
- Bullhead Wings and Wildlife Festival
- Diamondbacks Sportsmen's Day
- Woodland Lake Wildlife Festival
- Becoming an Outdoor Woman
- Yuma Birding and Nature Festival
- San Pedro River Ecofest
- Payson Wildlife Fair
- Grand Canyon National Park Wildlife Day
- Wings over Wilcox
- Hispanic Women's Expo
- Yuma Catfish Rodeo
- Flagstaff Arboretum Hummingbird Festival
- Southwest Birding and Nature Festival
- Tres Rios Nature and Earth Festival
- Arizona Elk Society Wapiti Weekend
- Mormon Lake Outdoor Festival
- Kartchner Cavern Cave Fest
- Tucson Birding and Wildlife Festival
- Coconino County Fair



Two of the most noteworthy events Department staff participated in during the reporting period (in regards to extraordinary public attendance) were the Department's Wildlife Center Open House and Youth Day at the Department's annual Outdoor Expo. Public attendance at these two events exceeded 50,000 visitors.

To help inspire and engage attendees at the aforementioned public outreach events, the Department brings live wildlife from its Wildlife Center to nearly all outreach presentations.

## **Wildlife Rehabilitation**

The Department's Wildlife Center is almost exclusively supported with Heritage Urban funds. The wildlife center's primary objectives are to care for sick, injured, orphaned, and confiscated wildlife, and deliver wildlife education outreach programs utilizing live animals. Each year the

center provides care and medical treatment for more than 1,000 animals, including birds, mammals, and reptiles. Most of these animals are rehabilitated and returned to the wild. Those that are non-releasable are sent to sanctuaries or serve as “animal ambassadors” in Department outreach programs.

### **School Programs**

Heritage Environmental Education funds are utilized to deliver education programs to K-12 schools. For example, over 2,000 K-12 students participated in “hands on” wildlife education activities throughout the state through summer camps, classroom programs, career fairs, homeschooled activities, and field based research events. An additional 5,000 K-12 students and their chaperones participated in the Department’s Youth Day event at the Outdoor Expo where students gained hands-on experience with wildlife education activities.

The Department’s largest outreach effort is directed toward 4<sup>th</sup> grade students. Approximately 11,000 4th grade students throughout the state received a live wildlife education program correlated to Arizona’s Academic Content standards. This program focuses on animal adaptations and uses live animals to better illustrate the concepts presented to the students.

Department staff also participated in or conducted numerous outdoor wildlife workshop events, summer camps, and special needs camps orientated toward children. The workshop-type events are hands-on activities, often directed toward large groups (e.g., Scouts, elementary school students) or families. One of these was the Department’s first Career Exploration Day. Approximately 175 high school and college aged students listened to a panel of biologists discuss the diversity of jobs available in wildlife management.

With the official opening of the Hirsch Conservation Education Area at the Ben Avery Shooting Facility, the Department provided a series of monthly homeschool programs at the facility. These programs introduced families to a variety of nature and outdoor related activities and topics. These included: raptors of Arizona, digital photography, wildlife viewing, geocaching, wildlife tracking, kayaking, fishing, and off-highway vehicle safety. More than 200 people participated in these events.

In addition to the events at the Hirsch Conservation Education Area, the Department hosted a number of homeschool family programs throughout the Phoenix area. These included nonnative turtle trapping, crayfish capture, and watching bats emerge from their daytime roosts. More than 500 people participated in these events.

## **HERITAGE PUBLIC ACCESS**

As defined in Title 17, Heritage Public Access funds shall be spent on programs and projects providing entry to publicly held lands for recreational use where such entry is consistent with the provisions establishing those lands.

## **Public Lands Access (Heritage Public Access)**

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

Fiscal year 2014 was a very successful year with a number of significant accomplishments. The Department received a grant from Yamaha to purchase an access easement, which was a first for industry providing funding for recreational access. Without Heritage Access funding, the Department would not have received this grant and the citizens of Arizona would not have benefited in this additional public access opportunity.

The Department also completed 19 recreational stewardship agreements with private landowners. The Department allocated \$400,000 in federal funds matched by Heritage access. These efforts secured 936,000 acres for wildlife related recreation. In addition, the Department's Landowner/Sportsman Respect Program (a voluntary program designed to improve sportsman's ethics), worked with approximately 300 landowners statewide. The Department assisted with 36 Adopt-A-Ranch events which included 974 volunteers totaling over 8,000 volunteer hours. Using a value of \$21.69 per hour, this represents \$173,520 in volunteer in-kind match value that contributes to Heritage access resources for projects that enhance access for Arizona's citizens.

## **Examples of Successful Heritage Access Projects:**

**The Big Boquillas Ranch Landowner Compact Agreement.** The Big Boquillas Ranch in northern Arizona comprises 729,532 acres of land, with 491,432 acres privately owned by the Navajo Nation, and 238,100 acres of State Trust Land. This land is leased to the Cholla Livestock, LLC for cattle grazing, and comprises over half of the Department's Game Management Unit 10. This agreement is the first of its kind in Arizona, working with both a private entity, and the Navajo Nation. The agreement provides a recreation fee based entry system for recreationists who must pay to access the ranch during legally drawn hunts. Recreationists also receive a copy of Big Boquillas Ranch specific rules, and a ranch pass. The Department has been delegated authority by Cholla Livestock, LLC and the Navajo Nation to enforce ranch rules (which are conditions for written permission for access) and to cite or remove violators. Public recreationists, specifically elk hunters, have greatly benefited from this agreement, by allowing them access to hunt some of the best elk habitat in Arizona, previously closed to the public.

**Allan Ranch Access.** Dove hunting in the Yuma area is a huge event, and access for dove hunters has become important for the Department to secure and maintain. In fiscal year 2014, the Department entered into a recreational access agreement with Desert Premium Farms LLC. Desert Premium Farms owns Allen Ranch, comprising 418 acres of private agricultural land, and has agreed to allow recreational access to the ranch. They also agreed to leave 33% of their grass-seeded crop standing until after the Arizona dove hunting season has ended. This provides additional habitat and feed for migratory birds such as dove. In exchange for Heritage access compensation, dove hunters and other recreationists will enjoy access for years to come.

## OTHER REPORT REQUIREMENTS

The Department received \$10 million from lottery revenues for Heritage Funded programs and expenditures totaled approximately \$7.66 million in fiscal year 2014. The following information represents Department Heritage Fund expenditures in fiscal year 2014:

1. Heritage Funds Spent for:
  - (a) Property acquisition (due diligence associated costs) \$49,356
  - (b) Identification, inventory, protection & management of sensitive species \$3,622,793
  - (c) Habitat evaluation and protection (\$147,793 used to match federal grants) \$1,204,396
  - (d) Urban Wildlife \$1,545,368
  - (e) Environmental education \$408,382
  - (f) Public access \$643,410
2. No properties were acquired with Heritage Funds in FY 2014.
3. No properties were acquired.
4. The Department spent \$2,834,009 for employee personnel services and \$1,280,742 for employee related expenses.
5. Three employees charged time to Heritage funds, when involved with Heritage funded property acquisition. These employees also charge non-Heritage fund sources.
6. In fiscal year 2014, the Department employed 58 full-time employees for all of the Heritage-funded programs.
7. The list of Heritage Grants awarded follows:

In fiscal year 2014, the Department awarded 27 Heritage Fund Grants out of 47 grant applications received awarding **\$410,190** in Heritage Funded Grants. The Department conducted Heritage Grant Workshops in six communities throughout Arizona during August 2013. Following is information on each of the 27 Heritage Grant award recipients:

**Environmental Education (EE)** received nine applications and two applicants received Heritage EE Grant awards totaling **\$16,000** of the \$16,000 available.

1. Arizona State University – Art Museum, for the project “*Trout Fishing in America and Other Stories.*” The award amount was \$10,000.
2. Pima County Natural Resources, Parks and Recreation Department, Tucson for the project “*Professional Development Workshops, Arizona Wildlife Education and Wetlands Field Study.*” The award amount was \$ 6,000.

**Outdoor Education (OE)** received 11 applications and eight applicants received Heritage OE Grant awards totaling **\$13,150** of the \$16,000 available.

1. Glendale Elementary School District, Glendale, AZ for a field-trip to “*The Arizona Game and Fish Department’s Annual Youth Day Event at the Ben Avery Facility.*” The award amount was \$1,200.
2. City of Safford & Graham County Public Library, Safford, AZ for a field-trip to “*Cluff Ranch Wildlife Area.*” The award amount was \$600.

3. Flagstaff Unified School District, for field-trips to *“Walnut Canyon NM, Lamar Haines Wildlife Area, Montezuma Well/Castle National Monument’s, Sunset Crater/ Wapatki National Monument, Grand Canyon National Park and the Arizona Science Center.”* The award amount was \$ 2,350.
4. Madison School District, Phoenix for field trips to *“The Tonto Rim Fish Hatchery and Tonto Rim Science Camp.”* The award amount was \$1,500.
5. Bureau of Land Management, sponsoring Audubon Arizona, Phoenix for field-trips to *“Horseshoe Ranch.”* The award amount was \$2,500.
6. Desert Heights Preparatory Academy, Glendale for a field-trip to *“Red Rock State Park.”* The award amount was \$1,000.
7. Grand Canyon School District, Grand Canyon, AZ for field-trips to *“Sky-Y Camp and Chauncey Ranch.”* The award amount was \$2,000.
8. Flagstaff Unified School District, Flagstaff for field-trips to *“The Phoenix Zoo.”* The award amount was \$2,000.

**Schoolyard Habitat (SCHOOLYARD)** received five applications and all five schools received Heritage Schoolyard Grant awards totaling **\$29,486** of the \$37,500 available.

1. Williams High School, Williams, AZ for the project *“Williams High School Courtyard Habitat.”* The award amount was \$ 8,350.
2. Clarkdale/Jerome School, Clarkdale, AZ, for the project *“Restoration and Maintenance of Schoolyard Habitat.”* The award amount was \$ 2,500.
3. Coconino County Superintendent of Schools, Flagstaff for the project *“Environmental Science in the Schoolyard.”* The award amount was \$9,516.
4. Seven Mile Elementary School, Whiteriver, AZ for the project *“Seven Mile Interpretive Trail.”* The award amount was \$ 4,560.
5. Cradleboard Elementary School, Whiteriver, AZ for the project *“Me bitsal Danalkid Cradleboard Interpretive Trail.”* The award amount was \$4,560.

**Urban Wildlife (URBAN)** received nine applications and six applicants received Heritage Urban Grant awards totaling **\$112,500** of the \$112,500 available.

1. Coconino County, Flagstaff, AZ for the project *“Creation of Rogers Lake Wildlife Viewing Platform & Interactive Educational Display.”* The award amount was \$26,600.
2. Coronado National Forest, sponsoring Environmental Education Exchange, Tucson for the project *“Wild Tucson – Bighorns in Our Backyard & Lions in our Landscape.”* The award amount was \$19,867.

3. The Town of Payson, for the project *“Green Valley Lake 3 Fish Barrier.”* The award amount was \$24,472.
4. Saguaro National Park, sponsoring Tucson Audubon Society, Tucson for the project *“Tucson Bird Count Urban Bird Habitat Improvement.”* The award amount was \$13,000.
5. City of Tucson Parks & Recreation Department, for the project *“Tucson Birding Trail: Promoting Wildlife Watching & Conservation in Greater Tucson.”* The award amount was \$7,390.
6. City of Sedona, for the project *“Wildlife Viewing Platform for Sedona Wetland Preserve.”* The award amount was \$21,171.

**Public Access (ACCESS)** received five applications and two applicants received Heritage Access Grant awards totaling **\$46,700** of the \$50,000 available.

1. The Town of Payson for the project *“Green Valley Lake Shoreline Stabilization.”* The award amount was \$6,700.
2. The Town of Buckeye for the project *“Skyline Park Access Road.”* The award amount was \$40,000.

**Identification, Inventory, Acquisition, Protection and Management (IIAPM)** received eight applications and four applicants received Heritage IIAPM Grant awards totaling **\$192,354** of the \$200,000 available.

1. The City of Phoenix, for the project *“Ecology of Sonoran Desert Tortoises at South Mountain Park.”* The award amount was \$66,095.
2. The University of Arizona, for the project *“Monitoring Populations of Breeding Grassland Birds.”* The award amount was \$43,438.
3. Grand Canyon National Park, sponsoring Hawk Watch International for the project *“Population Monitoring of Diurnal Raptors at Grand Canyon National Park.”* The award amount was \$13,398.
4. The University of Arizona, for the project *“Assessment of Raptor Migration Corridors in Arizona’s Sky Islands.”* The award amount was \$69,423.