

## IDENTIFICATION, INVENTORY, ACQUISITION, PROTECTION AND MANAGEMENT (IIAPM)

Most of Arizona's natural biological diversity is composed of nongame species, wildlife that is neither hunted nor fished in a traditional sense. The Department's successful integration of these nongame species into the totality of the Department's wildlife management program is increasingly critical to Arizona's ability to manage its future without unwarranted Federal intrusion. This is especially true with regard to the burden of Federal law and regulation and resultant litigation inherent to threatened and endangered species. Identification, Inventory, Acquisition, Protection and Management (IIAPM) focuses on wildlife or habitat that is sensitive (imperiled), including species that are federally listed as endangered or threatened.

IIAPM funds were used to support the Department's Nongame and Endangered Wildlife Program and associated support programs. IIAPM funds were also used as non-federal match to leverage an additional \$1.2 million of federal grant funds through the State Wildlife Grant (SWG) program, appropriated by Congress and administered by the U.S. Fish and Wildlife Service (USFWS). SWG funds were used to help finance our mission to conserve the diversity of Arizona's wildlife by implementing Arizona's State Wildlife Action Plan (SWAP).

### Planning and Implementation of Plans

Using Heritage IIAPM funds, the Department implemented priority actions in species recovery plans, conservation agreements, management plans, and the Department's SWAP. The SWAP identified species that are most imperiled, and refers to those species as Arizona's *Species of Greatest Conservation Need*.

Some significant accomplishments funded, at least in part, by Heritage IIAPM during the reporting period include:

- Heritage IIAPM funds were used to manage the state's bald eagle conservation efforts, including the nationally recognized Arizona Bald Eagle Nestwatch Program. The Department used IIAPM funds as match for federal grants to conduct monthly bald eagle nest occupancy and reproductive flights from January to June with helicopter assistance from Salt River Project, Arizona Public Service and the U.S. Bureau of Reclamation. These flights, in conjunction with ground visits, helped determine that 54 of the 68 breeding areas were occupied in 2013, and 35 of the 49 pairs that laid eggs were successful in fledging 58 nestlings. Overall, the 2013 bald eagle breeding season yielded the highest productivity in recorded history.



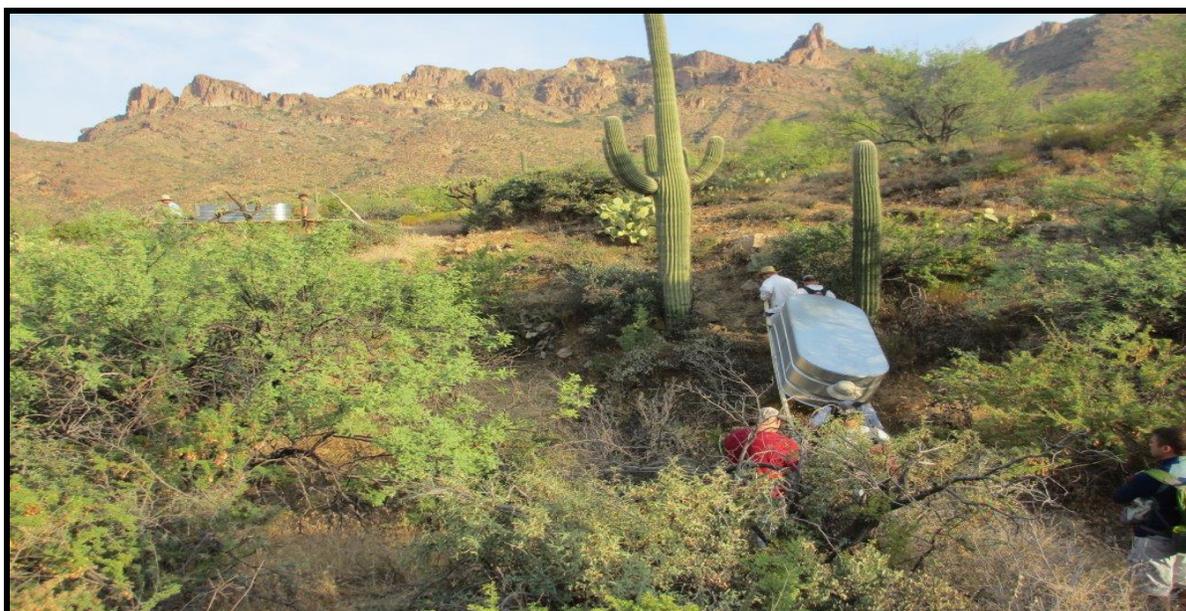
Department biologists also discovered or confirmed three new breeding areas and six new alternate nest locations. Fifteen bald eagle fledglings were banded for future identification. **All of these continuing efforts provide the data to allow the USFWS to keep the Arizona bald eagle from relisting to the Endangered Species List.**

- Using Heritage IAPM funds as match for federal grants, 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 Endangered Species Act. Through intensive monitoring and management, the current colonies within the Las Cienegas National Conservation Area remain stable. This year, the Department was able to secure a \$400,000 grant from the National Fish and Wildlife Foundation to fund these management activities for the next three years using the Heritage IAPM funds as match. These new funds will restore 700 acres of grassland habitat surrounding the prairie dog colonies and conduct genetic research on the similarities between black-tailed prairie dogs within the southwest and throughout their range. **To further the efforts to preclude the need to list the species under the Endangered Species Act, the Department is investigating future Arizona re-establishment sites outside of Las Cienegas.**

- The Department continues to manage the endangered Sonoran pronghorn population using bi-weekly aerial telemetry monitoring flights, restoring habitats through water catchments and irrigating forage enhancement areas, and through captive breeding efforts. With the help of Heritage IAPM funds, the U.S. population continues to grow and is estimated at 159 pronghorn (December 2012). The original captive breeding pen near Ajo continues to be successful with 35 fawns recruited this year, where nine pronghorn were released into the wild on Organ Pipe Cactus National Monument and the BMGR-West.



Heritage IIPAM funds were also used in the construction of four new pronghorn waters, which have proven vital to their survival during the harsh summer months.



- Heritage IIAPM funds were used as match for federal funding to begin White-nose Syndrome (WNS) surveillance for bats. Bats are important components to a healthy ecosystem and WNS has devastated populations in some regions of the country. In Arizona, little is known about the winter ecology of our 28 bat species, and these funds have allowed us to start assessing the threat of WNS by: 1) searching for hibernacula where bats may be vulnerable to WNS in southeastern Arizona caves, 2) conducting winter mist netting to help biologists understand “normal” winter bat activity, 3)



4) deploying temperature/humidity dataloggers in caves to determine microclimate information, and 4) to deploy acoustic detectors to obtain information on activity levels, species richness and relative abundance of bats in selected areas. This information will help the Department understand how the disease might affect Arizona’s bats.

- Heritage IIAPM funds continued to support recovery efforts for the endangered California condor in 2013. Heritage funds allowed the Department to continue to participate as a member of the Arizona Condor Field Team, to lead the Southwest Condor Working Group, and play a contributing role on the Condor Recovery Team. Since recovery efforts were initiated in the late 1980’s, condor numbers have increased from a low of 22 birds to over 400 birds today. Thanks to reintroduction efforts in Arizona, almost 80 condors now soar the



skies of the Grand Canyon State and range into southern Utah, to the delight of tourists and residents alike. Twenty-two condor chicks have hatched in the wild in Arizona, including four in 2013 (the most ever hatched in one year in the wild population).

Heritage funds enabled the Department to continue to promote its successful voluntary lead reduction program in 2013 - addressing the greatest challenge to condor recovery efforts: lead poisoning. Condor educational programs reached over 15,000 Arizona residents in 2013. Heritage funds also supported the Department's innovative free non-lead ammunition program. This voluntary program has achieved an 85-90% hunter participation rate for the past six years. Participating hunters either use non-lead ammunition provided free by the Department or hunt with lead ammunition and remove their entire game carcass (including the offal pile) from the field. **Thanks to the Heritage Fund and the Department's efforts, the amount of lead available to scavenging condors has been significantly reduced in Arizona.** The lead reduction program continues to receive overwhelming support by the hunting community, and has been well received by the general public, as well as multiple state and federal agencies. **This successful voluntary program now serves as a wildlife conservation model** for several other state wildlife management agencies, **including Utah**, which began implementation of a similar program in 2012.

- **The Department used Heritage IIAPM funds to help the state exceed the state goal required for down-listing the endangered black-footed ferrets (BFFs) to threatened.** All states with BFF populations negotiate state-specific recovery guidelines that, in total, will contribute to the national recovery effort. The national recovery guidelines must be met before down-listing and delisting of the species can be considered. In 2012, the Department's efforts and the efforts of volunteers helped us estimate the minimum number of ferrets at 123, which exceeds Arizona's objective of 74 animals required to down-list to threatened. Arizona's target for de-listing is 148 animals. The Department's management efforts, through the use of Heritage IIAPM funds, help Arizona exceed the state's objective for down-listing and put us closer to our delisting objective.



- Heritage IIAPM Funds are used to help estimate Gunnison's prairie population numbers which ultimately provided information to convince the U.S. Fish and Wildlife Service that ESA protection of the species was not warranted. Over 750 miles of transect surveys were conducted to determine the distribution of complexes and estimate the acreage of active colonies. Prairie dog populations in the northern and northwestern areas of Arizona are stable or increasing as evidenced by higher densities, visual observations of more pups, and the level of activity within the colonies. These surveys also help the Department determine the health of the population, by estimating the occupancy rates of burrows and density of the population.



- Heritage-funded Department staff worked with biologists with U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), and Grand Canyon Wildlands Council to survey the Niobrara ambersnail population at Minus Nine Mile Marsh (aka Leopard Frog Marsh) in the Lees Ferry reach of Glen Canyon. The Niobrara ambersnail is identified in Arizona as a Species of Greatest Conservation Need, and the population in Glen Canyon is only one of two known populations in the State. The NPS and Grand Canyon Wildlands Council are leading the efforts to improve habitat conditions at Minus Nine Mile Marsh for re-establishing northern leopard frogs, which had previously existed at the marsh up until the early 2000s. Department and USFWS biologists helped document the ambersnail distribution and abundance at the site, and identified areas that should be preserved to ensure the snail population is not impacted from the project. During this survey, the Department encountered high numbers of ambersnails compared to survey results from the early 2000s.



- In July 2013, Department staff surveyed eight sites throughout the Pinaleno Mountains for the presence of talussnails. Under ideal weather conditions (wet, monsoon rains and high humidity) we found live talussnails at seven of the eight sites searched; one of the sites is believed to be a new locality for these landsnails. Voucher specimens were collected at each occupied site to help verify which species of talussnail or mountainsnail reside at each location. Talussnails continue to persist in fair numbers in Wet Canyon, even after the 2004 Nuttal Fire impacted that habitat, and after the new Highway 366 bridge crossing over Wet Canyon was completed. The Department found the highest abundance of talussnails in the neighboring Twilight Canyon. Monitoring of these snail populations and their habitat is one of the requirements under the Wet Canyon Talussnail Conservation Agreement, signed by the Department, USFWS and Coronado National Forest. Both the USFWS and USFS have assisted the Department in monitoring efforts in past years. Commitments to implement the agreement have helped keep the Wet Canyon talussnail from being returned to the ESA candidate list. This work is being completed with federal grant funds through the SWG program and Arizona Heritage Funds.
- In mid-May, Department staff surveyed the native fish population below the Virgin River Gorge fish barrier using baited hoop nets—a sampling method that the Virgin River Program partners do not typically use to survey this system. Using 10 hoop nets, 476 fish were caught, comprising six different species. Flannelmouth sucker was the most abundant, followed by exotic red shiners and native desert suckers. Thirty endangered Virgin River chub were also caught and released alive. This work was completed with State Wildlife Grants and Arizona Heritage Funds.

- Heritage Funds continue to make an important contribution to federally listed Chiricahua leopard frog (CLF) recovery throughout its Arizona range by supporting a vast array of activities from using Department hatcheries for captive rearing and release of frogs to the wild, to removal of non-native bullfrogs and habitat renovation on public and private lands.



**AGFD Wildlife Specialist Christina Akins and Washington State University collaborator Caren Goldberg, swab a Chiricahua leopard frog for genetic and disease studies.**

In addition to these “on-the-ground” activities, Heritage funds have supported three important research collaborations: 1) Use of genetic information to make informed management decisions. In collaboration with the University of Arizona and other partners, the Department has collected samples and provided financial support that will help determine the need for genetic management of populations, appropriateness of populations for translocation, and provide additional insights useful in managing this species. 2) Audio call play-back as a new way to find frogs. In partnership with State University of New York, the Department collected data that will allow staff to develop and test the reliability of a new survey technique that will use call play-backs to detect “concealed” frogs, thus providing higher quality occurrence data to inform delisting decisions, and at significant savings to all partners. 3) An ongoing collaboration with the Phoenix Zoo and Smithsonian Institution investigates the genetics of immunity to a devastating amphibian fungal disease found in Arizona frogs. CLFs of known genetic make-up have been released to several sites, and will be resampled later and evaluated for genetic characteristics that are correlated with disease resistance.

- The Department is the lead agency when it comes to monitoring Sonoran desert tortoises (SDT) in Arizona. With few exceptions, long-term studies on SDT have found relatively high survival of adult tortoises and tortoise populations statewide. However, without similar information regarding juvenile tortoises, it is difficult to assess or predict long term population health. Supported by Heritage funds, Department scientists are engaged in a five-year, first of its kind juvenile desert tortoise study at a site where adult tortoises have been studied since 1991. As this project approaches the five year mark, 14 juvenile tortoises have



been equipped with radio telemetered transmitters, to collect information on movements, growth, survival, sources of mortality, and habitat use for the first time ever. Soon we will be able to add significantly to our ability to assess current and future population status of SDT, and contribute information critical for the proper management of Sonoran desert tortoises throughout Arizona.

**AGFD Wildlife Specialist Audrey Owens records data from a radio-telemetered juvenile Sonoran desert tortoise.**

- The Department continued to be instrumental in implementing the Flat-tailed Horned Lizard (FTHL) Conservation Agreement. This coalition of numerous state and federal agencies has been very successful in implementing conservation actions to protect the FTHL, and these actions have been **the primary factor in precluding the need to list the species under the Endangered Species Act.** This was reinforced in 2011 when the USFWS **once again withdrew a proposal to list the species.** Heritage funded personnel in Arizona also helped to conduct the fourth year of an intensive range-wide survey of the FTHL. This information, including new localities for the lizards, will be used to refine management priorities for this species and to track population trends. Using Heritage monies as match, additional funds were obtained from the Marine Corps and the Bureau of Reclamation to provide assistance with these surveys.



### **Heritage funds spent on the Conservation and Mitigation Program (CAMP)**

For over 40 years, the Department has provided management resources for the conservation of nongame wildlife. In 1967, the Department created a full time position for the management of nongame species, the first such state position in the nation. Since 1967 the Department has developed one of the most robust state nongame programs in the nation, with expenditures of several million dollars per year. The Department recognizes the ability to continue to provide sport fishing opportunities is closely tied to the continued conservation of native aquatic species.

It is upon this foundation and consistent with its long history of conservation, that the Department intends to reduce and offset impacts of the stocking program through implementation of the Sport Fish Stocking Conservation & Mitigation Program (CAMP). CAMP includes activities targeted at species that may be affected by fish stocking activities, or species whose future conservation status can have a direct bearing on future stocking activities. What follows are CAMP activities conducted in FY2013 that were funded with Heritage dollars.

### **Headwater Chub Activities**

- Department CAMP personnel also surveyed and/or sampled the following creeks to determine the aquatic species assemblage and opportunities for establishment of native aquatic species including headwater chub, loach minnow, and CLF:
  - Dick Williams Creek, South Fork Deer Creek, Buzzard Roost Creek, Turkey Creek, Dinner Creek, Rock Creek, Spring Creek, Gordon Creek, East Verde River, Gorge Canyon, Deadman Creek, Marsh Creek, upper-middle-lower Tonto Creek, Wet Bottom Creek.



Department CAMP personnel Sharon Lashway (left) and Matt Rinker, and USFWS employee Shaula Hedwall during a native fish survey.

### **Chiricahua Leopard Frog (CLF) Activities**

- Department CAMP employees from several Regional Offices (Pinetop, Tucson and Mesa) attended CLF recovery unit team meetings to coordinate potential locations for CLF establishment and securing actions.
- Department personnel surveyed several potential locations for CLF establishment to include the Campbell Blue River, Rattlesnake Gap Tank Complex, Rudd Creek, Tenney Pond, and Estes Pond.
- In addition, Department CAMP and Nongame ranid frogs personnel from Tucson, conducted three monitoring surveys at Bull Tank in FY2013 that included two egg mass translocations from the captive breeding facility at Discovery Park in Safford to Bull Tank. Due to drought conditions at Spring Tank, frogs were salvaged and translocated to Bull Tank to augment the reintroduced population.

### **Roundtail Chub Activities**

- Department CAMP personnel surveyed and/or sampled the following creeks to determine the aquatic species assemblage and opportunities for establishment of native aquatic species including roundtail chub, loach minnow, and CLF:
  - Gap Creek post-stocking monitoring
  - Surveys of roundtail chub and other native fish species in the Bill Williams watershed: Boulder Creek, Francis Creek, upper Burro Creek, Bull Creek, and Sycamore Creek
  - Collection of roundtail chub from East Clear Creek and Chevelon Creek and transport to Bubbling Ponds Hatchery for eventual broodstock development
  - Roundtail chub, longfin dace, desert suckers, Sonora suckers and speckled dace were stocked into the Cane Springs Refugium (collection locations were Trout Creek, Fort Rock Creek, and Cow Creek)
  - Surveys for roundtail chub and other native fish species in the Black River to monitor post-Wallow Fire native fish populations
  - Initial development of the Pinetop Ponds and Wetland project that may be used to temporarily hold roundtail chub and other native aquatic species.

### **Northern Mexican Gartersnake Activities**

- Department CAMP personnel also surveyed the upper Santa Cruz River in Santa Cruz County, AZ to detect presence/absence of the San Rafael northern Mexican gartersnake population. The same survey will be conducted in the next two reporting periods to gather baseline data in order to make future management and conservation decisions to determine if a population securing action may be feasible and warranted
- Upon coordination with and guidance from Department Nongame ranid frogs program biologists, a draft research and management plan was developed. A list of information and future research needs was identified and utilized as a starting point for development of the plan. The Gartersnake Research and Management Plan for Northern Mexican and

Narrow-headed Gartersnakes have been internally reviewed and is undergoing final edits. The final plan will be completed in FY2014.

- The Horseshoe Pond was filled and vegetation is in the process of the planting stage. The pond will be monitored for several months before fish are stocked into the pond, and subsequently gartersnakes.

### **Narrow Headed Gartersnake**

- The Black River near Wildcat Crossing was surveyed for narrow-headed gartersnakes using a combination of Visual Encounter Surveys and using minnow traps.
- Signs to notify and educate the angling public about gartersnakes were installed at all priority locations with the exception of two signs at Wildcat Crossing on the Black River. Signs will be monitored for damage or the need to replace for the duration of the CAMP.
- Upon coordination with and guidance from Department Nongame ranid frogs' program biologists, a draft research and management plan was developed. A list of information and future research needs was identified and utilized as a starting point for development of the plan. The Gartersnake Research and Management Plan for Northern Mexican and Narrow-headed Gartersnakes have been internally reviewed and is undergoing final edits. The final plan will be completed in FY2014.

### **Other Native Fish Species**

- The Department mechanically removed brook trout from Rudd Creek to benefit speckled dace and bluehead suckers.
- Department personnel conducted surveys of stock tanks in the Fossil Creek drainage to determine if illegal stockings of nonnative fish have occurred.



**Department Wildlife Specialist Gregg Cummins, stocking native fish at the Cane Springs Refugium.**

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

The focus of the Identification, Inventory, Acquisition, Protection and Management (IIAPM) 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 species listed as Species of Greatest Conservation Need in the Department's Comprehensive Wildlife Conservation Strategies Plan and restore sensitive habitats for species at-risk.

The Department worked with Landowners to complete 5 new habitat agreements utilizing Heritage IIAPM funding, of which two were focused to directly benefit perennial waters and riparian habitats, which are critical for wildlife in Arizona. In regards to utilizing these funds as match to federal programs, all 5 of the agreements matched Department funds to outside sources bring in a total of \$407,000 in non-department funding. Staff paid out of this fund also worked on an additional 7 habitat agreements that improved grassland habitat for a suite of grassland obligate species. These projects leveraged funding from Non-profit groups and several federal agencies to a total of \$980,000.

## **HABITAT EVALUATION AND PROTECTION**

The Department used Heritage Habitat Evaluation and Protection funds to work with government and private entities on habitat projects, land and resource planning issues. Heritage funds were also used as match for federal dollars received in fiscal year 2013 and enabled the Department to support the following critical activities:

- Department personnel completed status information changes for species (e.g., listing as endangered or threatened as well as sensitive) within 30 days of the published listing dates. The updated data were made available to the public through our Online Environmental Review Tool ([www.azgfd.gov/hgis](http://www.azgfd.gov/hgis)) and species lists on our website ([www.azgfd.gov/hdms](http://www.azgfd.gov/hdms)) quarterly.
- The Department's Aquatic Habitat Program (AHP) completed review of 9 Narrative Justification reports for the Arizona Department of Water Resources in support of establishing instream flow water rights to protect fish and wildlife habitat.
- The Department's Aquatic Habitat Program resolved one protest to a proposed sever and transfer of an existing water right in the Prescott Active Management Area.
- The Department's Aquatic Habitat Program reviewed Federal Energy Regulatory Commission (FERC) documents for 4 pump-back hydropower generation facilities and continues to monitor three of these proposed projects under FERC licensing procedures.

- The Department's Aquatic Habitat Program reviewed more than 24 federal, state or local projects for potential impacts to aquatic habitats and coordinated Department responses on 6 of those projects.
- The Department's Aquatic Habitat Program (AHP) has provided guidance to other Department staff regarding status, protection, filing or use of state water rights. The AHP has also provided review of several internal Environmental Assessment Checklists.
- The Department is represented on many watershed, technical committees or Federal National Environmental Policy Act teams to coordinate fish and wildlife concerns into ongoing activities including the Bill Williams River Corridor Steering Committee; Glen Canyon Dam LTEMP EIS, Water Resources Research Center, Water for the Environment Roadmap Steering Committee, Upper Verde River Watershed Protection Coalition, Upper Gila Watershed Partnership, Arizona State Parks Natural Areas Program Advisory Committee, Colorado River Fish and Wildlife Council, Instream Flow Council, Grand Canyon National Park Comprehensive Fisheries Management Plan and the Rosemont Mine EIS.
- The Department led coordination with ADEQ on the implementation of the EPA National Rivers and Streams Assessment, conducting EPA-designed sampling at 10 sites randomly chosen across Arizona.
- Over 50 requests were filled by Department personnel providing species occurrence and status information to others for incorporation into land and resource management planning efforts for large-scale projects, to help identify research needs, and to support conservation actions.
- The Department continues to invest into the Department's Geographic Information System (GIS) Enterprise Architecture for the next 5 years and has developed department-wide Enterprise Architecture standards for application web-service development. This includes 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 provide maps, analyses, and GIS-related support, such as troubleshooting technical issues, providing guidance on the purchase of GIS and GPS equipment, and providing assistance with individual GIS projects. Examples of these projects include:
  - Developing the Fisheries Information System (FINS), a standardized database and user interface to fish survey, fish kill, fish stocking, etc. and survey information collected by over 14 work units in the Department.
  - Standardized GPS desktop software across the Department with the Expert GPS Pro software which is compatible with current GIS software as well as the discontinued legacy GPS software.

- Developed a Department-operations-centric GIS introduction curriculum and offered training to over 70 Department staff.
  - Leading the inter- and intra-agency wildlife connectivity assessment, which involves participation from partners such as Arizona Department of Transportation, USDOT's Federal Highways Administration, US Fish and Wildlife Service, US Forest Service, Bureau of Land Management, and many more national, state, and local agencies and non-governmental organizations
- The Department's GIS Program continues 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, and standards; software and hardware improvements; and outreach activities occurring around 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 (CHAT) effort. The Department's Fisheries Information System (FINS) integrates with the USGS National Hydrography dataset and let us to partner with USGS to improve national datasets.
  - The Department's Project Evaluation Program (PEP) continues to review and/or update a number of plans, recommendations, and guidelines including: Wind Energy Guidelines, Solar Energy Guidelines, and Fencing Guidelines to help mitigate losses and to enhance fish and wildlife populations. The PEP assisted in the implementation of a web-based wildlife data viewer, HabiMap™ Arizona ([www.habitmap.org](http://www.habitmap.org)), which includes the Species and Habitat Conservation Guide. The Species and Habitat Conservation Guide [http://www.azgfd.gov/w\\_c/WildlifePlanning.shtml](http://www.azgfd.gov/w_c/WildlifePlanning.shtml) identifies wildlife conservation potential to help guide project planning in the early stages to avoid and offset negative impacts to fish and wildlife.
  - Department personnel have provided technical guidance for 92 Environmental Assessment Checklists (EAC), of which 79 have been completed. This ensures that Arizona Game and Fish activities comply with federal and state laws or other environmental legislation.
  - During the reporting period, the Department received and reviewed over 1,170 project evaluation requests and correspondence. Of the 1,170 requests, 378 warranted further evaluation and/or review, and received additional comment and/or recommendation.
  - The Department continues to track and evaluate mitigation projects related to the Department's Army Corp of Engineers In Lieu Fee Mitigation Program through our EAC process. Habitat improvement projects throughout the state are tracked and evaluated including Commission owned Heritage Properties.

Heritage funds have also supported the ongoing development and maintenance of the Heritage Data Management System (HDMS), a geospatially oriented system that tracks occurrence data, taxonomic information, and status information for sensitive species in Arizona. An associated Online Environmental Review Tool provides developers, planners, government partners, and the public with information on distribution, location, and status of sensitive plant and animal species. They can use the tool for environmental and National Environmental Policy Act compliance, which will reduce their preconstruction expenditures and speed up the federal permitting process (<http://www.azgfd.gov/hdms>). Species lists from the HDMS are also now available at <http://www.habimap.org> by USGS quadrangle. During fiscal year 2013, 920 new records were entered and 594 records were updated within HDMS by Department personnel.

Heritage funds support the Department's Aquatic Invasive Species (AIS) program which coordinates staffing requirements for AIS efforts. Efforts include the development and implementation of a training program for the AIS Department Policy 11.7, providing Watercraft Inspection training, distribution of AIS informational materials and coordination of statewide outreach campaigns (posters, mailers, brochures and other media) describing decontamination procedures and other methods the public can implement to help control aquatic invasive species to boaters at targeted waters of Arizona.

The Department's Aquatic Invasive Species program reviewed species for potential incorporation into AIS Director's Orders. This past fiscal year, largemouth bass virus, whirling disease and all snakehead species were added to Director's Orders 1, 2, and 3.

The Department's Invasive Species Program 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, Lower Colorado River ANS Task Force, Lake Mead Quagga Team, Lake Powell Invasive Mussel Team, National Invasive Species Awareness Week, Western Regional Panel of the ANS Task Force, Western Invasive Species Coordination Effort, and the iMap Invasives web application.

### **IIPAM – Acquisition**

The Arizona Game and Fish Commission purchased the Triangle Bar Ranch this fiscal year. Located between the towns of Dudleyville and Mammoth along the Lower San Pedro River in Pinal County, Arizona, the Triangle Bar Ranch sits at the confluence of the San Pedro River and Aravaipa Creek. The property consists of four large parcels of approximately 993.7 deeded acres of land. This acquisition will help the Department improve and maintain access to the public, and protect the aquatic and riparian habitat and intermountain corridors important for threatened, endangered, and sensitive species, including: the Southwestern willow flycatcher, loach Minnow, Western yellow-billed cuckoo, Gila topminnow, spikedace, desert pupfish, and Chiricahua leopard frog. **Heritage funds were used as match to the \$2,025,000 Section 6 Recovery Land Acquisition Grant funds to purchase this property.**

The Department spent \$2,714,755 in Heritage acquisition funds on the acquisition of Triangle Bar Ranch along with due diligence associated with this property and another potential property acquisition. This total amount included \$87,841 in fiscal year 2013 Heritage funds and \$2,626,914 in Heritage funds encumbered in fiscal year 2009 and fiscal year 2011 that had been held in escrow specifically for the Triangle Bar Ranch purchase.



There are four full-time employees working for the Department in the preceding fiscal year connected to property acquisitions. The Department spent \$15,941.91 for Heritage Acquisition Personnel Services and \$152,396.94 for Heritage IIPAM Personnel Services for these activities.

### **IIPAM (non-acquisition) and Habitat Evaluation and Protection**

Heritage IIPAM and Habitat Evaluation and Protection funding supports existing property and water rights tracking; disposal of property; management of land use agreement on Arizona Game and Fish Commission owned properties; land use agreements on federal, state, local government, and private property; and maintenance of property records.



An exchange with the City of Phoenix was completed at the Base and Meridian Wildlife Area involving an equivalent swap of 11.3 acres.

The **state grazing lease** at the Upper Verde River Wildlife Area was transferred to the Commission, and will provide further protections to the Verde River.

The Department perfected a water right at the Lamar Haines Wildlife Area located 12 miles north of Flagstaff, securing water for wildlife.

There were **eight new agreements** executed on or associated with Arizona Game and Fish Commission deeded parcels.

## **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 by identifying lands and waters that are closed to the public or that do not have sufficient access and work with all interested parties to meet recreation and other access needs.

Fiscal year 2013 was a very successful year with a number of significant accomplishments. To begin with the Department received a grant from Yamaha to purchase an access easement which was a first for industry providing funding to acquire an easement for recreational access. This project is highlighted below and has several partners involved. Without the Heritage Access funding, the Department would not have received this funding and through this grant the citizens of Arizona have received 10 times the benefit they would have received with only the Heritage funding available for securing Public access.

The Department completed 7 recreational stewardship agreements and 1 perpetual access easement with private landowners, all of them utilized Department funds to match against partnering funds including the Yamaha grant for a total of approximately \$443,000. In addition the Respect program worked with approximately 310 landowners statewide and the Department assisted with 42 Adopt-A-Ranch events which included 964 volunteers totaling 9,807 volunteer hours. Using a value of \$21.69 per hour, this represents \$212,714 in volunteer in kind funding that contributes to the Heritage Access funding for projects that secure access for Arizona's citizens.

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

**Desert Premium Farms Access-**The Department broke down some barriers with farmers in the Yuma area. \$20,000 in Heritage Access funding was used to ensure limited public access into the Peterson and Allen Ranch segments of Desert Premium Farms primarily for Migratory Bird Hunting. The farm is comprised of private lands previously not accessible to hunters. Hunter use is expected to increase once the public becomes more aware of the increased dove and small game availability on these farms. According to the local wildlife manager these ranches are extremely popular with non-resident and resident quail & dove hunters. Estimated use is in excess of 1,000 small game hunters per year. 7 acres of Wheat and 40 acres of Milo were planted and portions of these crops were allowed to remain in fields through the dove season.

**Lackner Brothers Ranch Access-**Locations of private land and very good whitetail deer hunting have perpetually caused challenges to hunters in Game Management Unit 32. Public access into the east side of the unit has been granted through Rattlesnake Gulch through the Lackner Brothers Ranch. The Lackner Brothers have been good partners for more than 10 years and remain gracious enough to allow hunters into the back country of Unit 32. \$15,000 in Heritage Access dollars were used to ensure short term access into roughly 10,000 acres of State and Federal land. The funding continues a valuable relationship with valued partners in Unit 32.

**Frye Mesa Road Perpetual Easement-** The Department, in collaboration with two landowners, the National Wild Turkey Federation, US Forest Service, Arizona Mule Deer Foundation, Rocky Mountain Elk Foundation, Arizona Chapter of the Safari Club International, Tread Lightly, and Yamaha, secured a perpetual easement for recreational access into nearly 37,000 acres of US Forest Service lands outside Safford, AZ. The Frye Mesa road is the only access point to get to lakes stocked by native trout by the Department for angling opportunity, is the access point for over 200 big and small game hunters, and is the access point for campers, hikers, and OHV enthusiasts. Yamaha provided \$20,000 towards this project to purchase the easements, the Department contributed Heritage funding for all the required survey work and road modification, and the US Forest Service incorporated this road in the travel management system for the forest.

Source	Amount	Purpose
Yamaha	\$20,000	ROW acquisition
AZ chapter NWTF	\$1,428.57	ROW acquisition
AZ Chapter NWTF	\$1,455.38	Fencing
AZ GFD	\$18,571.43	ROW acquisition
AZ GFD	\$1,485	Survey
Tread Lightly!	\$400	Signage
Rocky Mountain Elk Foundation	\$5,000	Fencing
Mule Deer Foundation	\$7,500	Fencing
Valley Auto Wrecking	\$2,200	Fencing
AZ Chapter Safari Club International	\$2,500	Fencing

Actual Costs: State - \$496,926



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

The focus of the Identification, Inventory, Acquisition, Protection and Management (IIAPM) 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 5 new habitat agreements utilizing Heritage IIAPM funding, of which two were focused to directly benefit perennial waters and

riparian habitats, which are critical for wildlife in Arizona. In regards to utilizing these funds as match to federal programs, all 6 of the agreements matched Department funds to outside sources bring in a total of \$167,000 in non-department funding. Staff paid out of this fund also worked on an additional 6 habitat agreements that improved grassland habitat for a suite of grassland obligate species. These projects leveraged funding from Non-profit groups and several federal agencies to a total of \$780,000.

### **Examples of IIPAM Successful Projects:**

**Friends of the Verde River Greenway (FVRG):** Heritage IIPAM funding was used in cooperation with the Friends of the Verde River Greenway (FVRG). FVRG is an affiliate of Arizona State Parks Foundation, and is a non-profit organization with the mission to preserve, enhance and promote the scenic, natural, historic, cultural and recreation resources of the Verde River Greenway corridor and the greater Verde River watershed. FVRG is the lead organization for the Verde Watershed Restoration Coalition (VWRC). VWRC is a multi-stakeholder group, representing both private and public land interests, working collaboratively to improve watershed health in the Verde watershed. \$20,000 in IIPAM funding was specifically used by VWRC to implement the Verde River Cooperative Invasive Plant Management Plan (Verde River CIPMP), which was initiated to bring together private landowners, non-profit organizations, local communities, businesses and federal and state agencies to develop a strategic approach for controlling invasive plants in the riparian coordinators of the Verde River watershed. \$20,000 in IIPAM funding was used by FVRG to treat invasive riparian vegetation (Russian Olive, Salt Cedar, Arundo Donax, Tree of Heaven) on AGFD Hatchery property and adjacent deeded lands along Oak Creek.

### **Aztec Land and Cattle Company-Grassland Restoration:**

Over many years one-seed juniper (*Juniperus monosperma*) trees have invaded into former grasslands and/or have increased in density in former savannahs resulting in smaller, more fragmented blocks of grassland. Heritage IIPAM funding was used to compliment ongoing efforts to remove invading one-seed juniper from the Carlisle Ranch near Snowflake. The funding helped restore these historic grasslands and savannahs thereby improving habitat conditions for grassland associated wildlife species. The project utilized a rubber tire front end loader to push juniper trees. One year following the treatment, juniper carcasses will be burned.

\$44,000 in IIPAM funding was used on two sections (1200 acres of private land owned by the Aztec Land and Cattle Company. Previously on the ranch, roughly 5,900 acres of grassland habitat had been treated. Restored grasslands on the two sections will enlarge the remaining grasslands and reconnect the fragmented blocks. Removal of the young trees will leave more moisture for growth of the scattered shrubs, as well as perennial forbs and grasses. The plant diversity is expected to improve as well. Grass and forbs biomass, insect populations and seed production should all improve and provide more food for the grassland associated bird community and for small mammals which in turn provide food for raptors.

Actual Costs: State - \$176,373

# HERITAGE URBAN WILDLIFE

As defined in Title 17, Urban Heritage funds shall be spent of urban wildlife and urban wildlife habitat programs. Urban wildlife is further defined as 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.

The Department spends the Urban Heritage 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 4 urban wildlife managers; three within the phoenix area and one within the Tucson area. These officers are responsible for all game and fish duties within large urban metropolitan areas. In addition to normal game and fish management activities, urban wildlife managers' duties are expanded due to the urban interface. These activities include nuisance wildlife conflicts, coordination with local planning and zoning entities, extensive education and information, and watchable wildlife.

## Human Wildlife Interactions

- The Department received over 2400 human wildlife conflict during 2013. Most callers were provided with information on what was attracting wildlife to their property and then given information on discouraging wildlife from their property, including self-help tips and methods to reduce or eliminate conflicts. In many instances, site visits by officers were required to address the issue.
- The Department continued education efforts statewide to address public safety issues associated with the feeding of wildlife. Printed brochures were provided to homeowner's associations, press releases and news releases were produced, live radio shows and local television segments were conducted, and public speaking presentations were performed throughout the state to keep the public informed of the dangers of intentional and unintentional feeding of wildlife, particularly bears, coyote and javelina.
- After a long, cooperative process involving the Department and the City of Flagstaff, a wildlife feeding ordinance was passed in October 2013. The ordinance makes it illegal for the public to feed wildlife, either intentionally or unintentionally, through improperly managed garbage or pet food. This ordinance is similar to ordinances passed in other



urban areas in recent years (Phoenix, Tucson, Pinetop) and has been very effective at reducing human-wildlife interactions.

### **Urban Wildlife Information and Education Outreach**

- One of the major activities associated with Urban Heritage Funds is public information and education outreach. The Department has six Information and Education Program Managers, one in each region across the state. These individuals are responsible for coordination and communication with local governments, media outlets, and the general public relative to wildlife management issues. 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, non-lead ammunitions, OHV/ watercraft/hunting safety, venomous reptiles, as well as numerous wildlife specific presentations (owls, bats, condors, elk, bighorn sheep, bald eagles, pronghorn and waterfowl.) In many instances, the presentations included live animals from the Adobe Mountain Wildlife Center.
- Department staff participated in numerous events sponsored by other entities to promote public information on wildlife management. These events include Verde Valley Birding and Nature Festival, Bullhead Wings and Wildlife Festival, Prescott Earth Day Celebration, Kingman Fire Department Safety Day, Show Low Days Outdoor Recreation Show, Woodland Lake Wildlife Festival, Yuma Nature Fair, Payson Wildlife Fair, Grand Canyon Wildlife Day, Wings over Willcox, Tres Rios Nature and Earth Festival, Mormon Lake Outdoor Festival, Prescott Great Outdoors, Kingman Campout, National Trails Day, 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 10<sup>th</sup> annual High Country Hummers Festival with the Springerville-Eagar Regional Chamber of Commerce, with approximate attendance of 800; the 8<sup>th</sup> annual Woodland Wildlife Festival with the Pinetop-Lakeside Chamber of Commerce, approximate attendance of 600; the 2nd annual Fall into the Wild Festival with the White Mountain Regional Medical Center in Springerville, with approximate attendance 300; and Greer Days, with an estimated attendance of 150.



The Department hosted the 10<sup>th</sup> Annual High Country Hummers Festival held at the Commission owned SIPE White Mountain Wildlife Area located in eastern Arizona.

### Wildlife Viewing/Watchable Wildlife

- Department staff conducted numerous in-depth, wildlife viewing information programs for the public across the state to provide the tips and advice on wildlife viewing in Arizona. Bighorn sheep workshops were conducted at Canyon Lake and along the Colorado River; bald eagle workshops were conducted in northern Arizona, hummingbird workshops were 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, published articles in the Department's Wildlife Views publications and the Arizona Wildlife Federation's magazine, and are in the process of developing a brochure and map for the sites as well as an audio tour for several of the sites.



### Miscellaneous

- During the past two 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 conducted a Tortoise Adoption Clinic in the Kingman area during the Kingman Regional Medical Center's Kids' Day event. Qualified publics were able to adopt tortoises that have been in captivity and cannot be returned to the wild.

## **HERITAGE ENVIRONMENTAL EDUCATION**

Department staff implemented three programs through the Environmental Education Heritage Fund: 1) environmental/wildlife outreach, 2) professional educator development, and 3) school programs supporting state educational standards.

### **Environmental/Wildlife Outreach**

Department staff and volunteers interacted with over 300,000 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:

- Adobe Mountain Wildlife Center Open House
- Tohono O'odham Earth Day
- State Capitol Legislative Day
- Verde Valley Birding and Nature Festival
- El Día de los Niños' Children's Festival Bullhead Wings and Wildlife Festival
- Arizona Centennial Events
- High Country Hummers at Sipe White Mountain Wildlife Area
- Yavapai County Cattle Growers Annual Sale
- Prescott Earth Day Celebration
- Diamondbacks Sportsmen's Day
- Show Low Days Outdoor Recreation Show
- Woodland Lake Wildlife Festival
- Becoming an Outdoor Woman
- Yuma Birding and Nature Festival
- San Pedro River Ecofest
- Payson Wildlife Fair
- Tohono O'odham Community Event
- Grand Canyon Wildlife Day
- Wings over Wilcox
- Hispanic Women's Expo
- Yuma Catfish Rodeo
- Flagstaff Arboretum Hummingbird Festival
- International Sportsmen's Expo

- 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



**Annual Public Open House at the Department’s Adobe Mountain Wildlife Center in North Phoenix**

Perhaps the most noteworthy events Department staff participated in during the reporting period (in regards to extraordinary public attendance) were the two state centennial celebrations in (Prescott and Phoenix) and the Department’s annual Youth Day and Outdoor Expo. Public attendance at just these events exceeded 250,000 visitors.

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



**Department Wildlife Education Outreach Coordinator Sam Huselton, presenting wildlife education outreach at Hualapai Elementary School in Kingman, Arizona.**

## **Professional Educator Development**

Department staff developed and delivered professional educator information and instruction to over 2,000 individuals during the reporting period. Professional educators had the opportunity to learn about wildlife management and conservation, technology, invasive species, migrations, literacy, science inquiry, and a variety of other available educational resources from the Department. In addition, the Department's education program was well represented at the regional conference for the National Science Teachers' Association.

Department staff also serve on a variety of agency and non-governmental boards and committees that provide community support and resources throughout the state, such as: Canon Envirothon, Arizona Council for Social Studies, Be Outdoors Arizona Board, Arizona's Instrument to Measure Standards (AIMS), Arizona STEM Network, Arizona SciTech Festival, and the Arizona Science Education Leaders Association.

During this reporting cycle the Department opened the Hirsch Family Conservation Education Area on the Ben Avery Shooting Facility. The facility has a classroom, demonstration pond, nature trail, and outdoor shooting bays. A diversity of programs are offered to professional educators, the general public, public school and home schooled children, and other groups.

## **Elementary School Programs**

Heritage funds are utilized to deliver education programs to K-12 school programs. 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 4,000 K-12 students and their chaperones participated in the Department's Youth Day at the Outdoor Expo where students gained hands-on experience in outdoor recreation and wildlife education activities.

The Department's largest outreach effort is directed toward 4<sup>th</sup> grade students. Approximately 10,000 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. Nature related events include: bat mist netting, invasive species removal, archery and air gun shooting, non-native turtle trapping, wildlife tracking, fishing clinics, digital photography, geocaching, wildlife viewing, and butterfly tagging.

During the reporting period staff collaborated with several school district superintendents discussing ways the Department can support professional educators in the classroom and Arizona's College and Career Ready Standards (previously known as Common Core).

## OTHER REPORT REQUIREMENTS

The Department received \$10 million from lottery revenues for Heritage Funded programs and expenditures totaled approximately \$9.24 million in 2013. The following information represents Department expenditures in fiscal year 2013:

1. Heritage Funds Spent for:
  - (a) Property acquisition (fiscal year 2013 funds) \$87,841
  - (b) Identification, inventory, protection & management of sensitive species \$3,836,912
  - (c) Habitat evaluation & protection \$2,044,938 (\$1,617,587 used as Federal Grant Match)
  - (d) Urban Wildlife \$1,527,851
  - (e) Environmental education \$476,790
  - (f) Public access \$586,217
2. The Department spent \$3,289,495 for employee personnel services and \$1,408,136 for employee related expenses.
3. Four employees charged time to Heritage funds, when involved with Heritage funded property acquisition. These employees also charge non-Heritage fund sources.
4. The Department employed 60 full-time employees and 9 partially funded employees for all of the Heritage-funded programs to include 15 Department administrative positions.
5. No funds were legislatively transferred from the Heritage Fund in FY 2013.
6. The list of Heritage Grants awarded in 2013 follows:

## 2013 HERITAGE GRANT AWARD RECIPIENTS

For the 2013 Heritage Grant cycle, the Department received seventy-three grant application proposals and thirty-two Heritage Fund Grant recipients were awarded a total of \$415,647 in Heritage Funded Grants. Grant applicants committed an additional \$770,000 in match for a total value of over \$1,185,000 to local communities statewide. The Department conducted six Heritage Grant Workshops held in five communities throughout Arizona during August 2012.

**Environmental Education (EE)** received a total of five applications and the amount available was \$16,000. The following three education programs were awarded 2012-2013 EE grants.

1. Tucson Unified School District, for the project *“Classrooms to Canyons: Teaching Core Curriculum through a Small Mammal Study.”* The award amount is \$2,901.
2. Flagstaff Unified School District and the Friends of Camp Colton, for the project *“Camp Colton Curriculum Project.”* The award amount is \$ 9,979.
3. Cactus High School for the project *“AZ Prepared Promoting Research Education by Photographing and Recording Elusive Desert Wildlife.”* The award amount is \$3,120.

**Outdoor Education (OE)** received a total of twenty-six applications and the amount available was \$16,000. The following ten Arizona Schools were awarded 2012-2013 OE grants.

1. Tombstone High School & Hereford Natural Resource Conservation District, for the project ***“Prescott Valley Antelope Monitoring Project.”*** The award amount is \$1,936.
2. Marshall Magnet Elementary, Flagstaff, AZ for field-trips to ***“The Phoenix Zoo, Lamar Haines Environmental Area and Veit Springs.”*** The award amount is \$ 2,200.
3. Borton Elementary, Tucson, AZ for field-trips to ***“Saguaro National Park West, Arizona Sonora Desert Museum, Tucson Botanical Gardens and Reid Park Zoo.”*** The award amount is \$2,400.
4. Roberts/Naylor K-8 School, Tucson, AZ for field-trips to ***“The Desert Museum and Camp Cooper Environmental Center.”*** The award amount is \$1,572.
5. Desert Oasis Elementary School, Surprise, AZ for field-trips to ***“Desert Outdoor Center and Participate in Youth Day at AZGFD.”*** The award amount is \$1,000.
6. Gridley Middle School, Tucson, AZ for field-trips to ***“Sabino Canyon, Coronado National Forest and Santa Catalina Ranger District.”*** The award amount is \$1,250.
7. Ash Creek Elementary K-8 School, Pearce, AZ for field-trips to ***“The Phoenix Zoo, Whitewater Draw, Wilcox Playa, Cluff Ranch and to Participate in Youth Day at AZGFD.”*** The award amount is \$1,000.
8. Amphitheater High School, Tucson, AZ for field-trips to ***“Tucson Mountain Park and Agua Caliente Park.”*** The award amount is \$1,400.
9. Flagstaff Unified School District, for all 6<sup>th</sup> Grade Students to ***“Participate in Camp Colton’s Residential Environmental Education Program.”*** The award amount is \$2,242.
10. Lee Williams High School, Kingman, AZ for a field-trip to ***“Grand Canyon National Park.”*** The award amount is \$1,000.

**Schoolyard Habitat** received a total of seven applications and the amount available was \$37,500. The following five schools were awarded 2012-2013 Schoolyard Habitat grants.

1. Arizona Western College, Yuma for the project ***“Habitat Improvement Project for the Science, Technology and Engineering Reptile Shelter.”*** The award amount is \$ 10,000.
2. Copperwood Elementary K-8 School, Glendale, AZ, for the project ***“Schoolyard Habitat for Environmental Education.”*** The award amount is \$ 10,000.
3. Marshall Magnet Elementary School, Flagstaff, AZ for the project ***“Marshall Magnet Heritage Habitat and Garden, Phase-II.”*** The award amount is \$10,000.

4. Palo Verde Magnet High School, Tucson, AZ for the project ***“Restoration/Enhancement of Tierra Mojada Environmental Research Center.”*** The award amount is \$ 5,000.
5. Topock Elementary Pre-K-8 School, Topock, AZ for the project ***“Tortoise Habitat for Teaching Desert Habitat’s and Ecology.”*** The award amount is \$2,500.

**Urban Wildlife** received a total of twenty-five applications and the amount available was \$112,500. The following nine projects were awarded 2012-2013 Urban Wildlife grants.

1. The Town of Pinetop/Lakeside and the Little Colorado River Plateau RC&D for the project ***“Rainbow Lake Carp Project.”*** The award is in the amount of \$20,000.
2. The University of Arizona, Tucson, AZ for the project ***“Wildlife Interpretive Signage for Tumamoc: People and Habitats.”*** The award is in the amount of \$17,963.
3. Coconino County Parks and Recreation, Flagstaff, AZ for the project ***“Audio Guide to the AZGFD’s Arizona Watchable Wildlife Experience Sites.”*** The award amount is \$26,248.
4. City of Wilcox, for the project ***“Wings over Wilcox Birding and Nature Festival.”*** The award is in the amount of \$3,000.
5. City of Globe, for the project ***“Round Mountain Park Watchable Wildlife Signage.”*** The award is in the amount of \$1,200.
6. City of Glendale, for the project ***“Glendale Habitat Garden Education Program.”*** The award is in the amount of \$17,800.
7. Maricopa County Parks and Recreation, Phoenix, AZ for the project ***“White Tank Mountain Regional Park Tortoise Habitat.”*** The award is in the amount of \$7,909.
8. Bullhead City, for the project ***“Colorado River Nature Center (CRNC) Information Kiosks & Field Guide.”*** The award is in the amount of \$12,230.
9. City of Holbrook, for the project ***“Hidden Cove Park Wildlife Viewing Activity, Packs and Field Guides.”*** The award is in the amount of \$6,150.

**Public Access** received a total of five applications and the amount available was \$50,000. The following three projects were awarded 2012-2013 Public Access grants.

1. Imperial National Wildlife Refuge, Yuma, AZ, for the project ***“Meer’s Point Boat Ramp and Bank Fishing Enhancement.”*** The award is in the amount of \$30,000.

2. Town of Pinetop/Lakeside, for the project *“Improving Safety on the White Mountain Trail System.”* The award is in the amount of \$1,841.

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In 2013 the Towns of Pinetop/Lakeside in partnership with TRACKS, a community volunteer organization who maintain the multi-use, non-motorized Arizona White Mountains Trails System (WMTS), received a Heritage Funded Grant for an Emergency Response project they proposed. Although recently completed in August, 2013 the project has already had a significant impact to citizens of rural Eastern Arizona communities. In September alone, emergency responders successfully completed 3 rescues each in 45 minutes or less, to include the rescue of five elderly 70+ year old female hikers who had been lost for over three hours when they came across a white diamond marker.

This Heritage funded grant project proposed placement of almost 1500 reflective white diamond markers every ¼ mile on over 200+ miles of trails encompassed within the WMTS. Each individual trail marker contains a unique alpha-numeric code (as depicted). Once placed, each coded marker location was identified with a GPS unit to obtain its exact location and verified on each of the twenty-five TRACKS official trail maps encompassed within the WMTS.



Once all coded marker locations for each trail were mapped, these maps and the gps coordinates were then provided and coordinated for use, with all local and regional emergency response organizations located throughout the White Mountains. If a person becomes lost or injured, they simply call 911 and provide emergency responders with the information on the closest white diamond marker to their location. To date, TRACKS volunteers have provided over 1,000 volunteer hours towards completion of the Heritage funded project. TRACKS also maintains a website free of charge to the public, that provides updated information about the new safety measures implemented for those using the WMTS and what to do in case

of an emergency on any of their trails. In addition, the Arizona State Committee on Trails voted to recommend this project to Arizona State Parks and the ASP Board voted to recommend this emergency response project as a possible model for other trail systems to incorporate throughout Arizona. This project truly exemplifies how the Heritage Fund has a positive effect for citizens while enhancing local community partnerships throughout the State of Arizona.

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3. Bureau of Land Management, Yuma, AZ for the project *“Paradise Walking Trail.”* The award is in the amount of \$18,159.

**Identification, Inventory, Acquisition, Protection and Management (IIAPM)** received a total of five applications and the amount available was \$ 200,000.00. The following two projects were awarded 2012-2013 IIAPM grants.

1. The University of Arizona, for the project *“Potential resource competition between introduced Abert’s and endangered Mount Graham Red Squirrel’s.”* The award is in the amount of \$63,777.
2. The University of Arizona, for the project *“Historical connectivity of Black-Tailed prairie dog populations in the Southwest.”* The award is in the amount of \$40,000.