

ARIZONA GAME AND FISH DEPARTMENT

HERITAGE ENVIRONMENTAL EDUCATION & SCHOOLYARD PROGRAM

June 2009

Project proposals will only be accepted for the types of projects outlined below.

PROJECT EMPHASIS

Projects that utilize Arizona wildlife or wildlife conservation issues as a learning theme, and promote direct interaction with wildlife such as outdoor, field trip, or camp component for youth ages K-12. Projects must meet the following requirements:

- Projects must be based upon sound methodology and strong principles of education and learning strategies.
- Projects must involve students in collecting scientific data on local wildlife issues, including wildlife habitat issues and must include the communicating of the results of their studies (to include wildlife watching and appreciation, wildlife identification, and wildlife conservation issues).
- Projects must include outdoor, field experience, hands-on learning and must actively engage students in local or regional environmental and wildlife studies.

Projects or programs supporting and/or promoting smart growth efforts that incorporate wildlife habitat conservation to guide the preservation, development, or redevelopment of a neighborhood, community, or region.

SCHOOLYARD HABITAT

For the Schoolyard habitat program area, there are no major changes in the Eligible Activities as listed in the Grant Application Manual. We strongly encourage projects that involve the planning and design of more comprehensive habitat projects. *Students must play key roles* in these planning efforts. Also, we will not accept pond projects focused on raising endangered fish due to changes in federal regulations. Schoolyard projects must demonstrate a 5-year life cycle. Programmatic projects must demonstrate a 4-year life cycle.

Robyn Beck
Heritage Grant Coordinator
(623) 236-7530

ARIZONA GAME AND FISH DEPARTMENT
PUBLIC ACCESS PROGRAM

June 2009

Project proposals will only be accepted for the types of projects outlined below.

- New or enhanced wildlife-oriented recreational access (motorized or non-motorized) onto public or State Trust lands previously inaccessible to the public.
- Obtaining perpetual or other long-term rights-of-way to secure public access for wildlife oriented recreation where it may be jeopardized by potential land development or other land status changes.
- Public works projects providing new or enhanced recreational access opportunities on or to public lands for persons with disabilities.
- Public works projects providing new or enhanced recreational access opportunities on or to public lands through improved design and construction methods.
- Education and information outreach pertaining to public access in Arizona, including ethical and responsible use of private and public lands, and opportunities for volunteerism.
- Realignments of existing access routes to protect sensitive habitat areas.
- Projects that address fugitive dust issues to maintain or enhance motorized vehicular access.

Research projects are not applicable for this funding source.

Where appropriate and feasible, projects should be designed and constructed to accommodate persons with disabilities.

Robyn Beck
Heritage Grant Coordinator
(623) 236-7530

ARIZONA GAME AND FISH DEPARTMENT

URBAN WILDLIFE /URBAN HABITAT

June 2009

Project proposals will only be accepted for the types of projects outlined below.

NOTE: To be eligible for Urban funding the project must be within the corporate limits of an incorporated city or town, or within 5 miles (straight-line distance) of the boundary.

- Projects to develop and implement wildlife-viewing programs and activities in urban areas and at urban-eligible AGFD wildlife areas including site development (e.g. viewing blinds, interpretive signage, trail and facility development, etc.).
- Support wildlife-focused festivals including planning, promotion and implementation.
- Introductory outdoor programs emphasizing awareness, appreciation and education about wildlife and its habitats. Including fishing clinics and other urban lake activities.
- Educational Projects that assess and develop proactive measures by communities to reduce the risk of critical incidents and other human/wildlife conflicts in urban areas including land management practices and public awareness programs.
- Projects promoting community partnerships focusing on methods that enhance public enjoyment of wildlife in urban settings.
- Research or development of projects (such as fencing, culverts, land bridges, signage, etc.) for allowing wildlife to cross urban barriers such as roads and canals. Projects should include monitoring and research, or result in guidelines to make barriers more permeable to wildlife.
- Educational programs and outreach projects aimed at reducing conflicts between humans and wildlife, geared towards introducing people to Arizona's unique and positive wildlife interactions.
- Community partnership projects that focus on land use planning to maintain wildlife habitat connectivity in urban settings.
- Urban program lakes, fish habitat and angler enhancements.

- Research or monitoring (baseline and/or post-development) the impacts of new or proposed development in urban areas, including, but not limited to, movement or corridor use studies using GPS collars in urban areas.
- Projects supporting nature tourism marketing including partnering opportunities with related agencies, businesses and communities to develop wildlife viewing conferences and/or communication plans.
- Programs to provide for new wildlife rehabilitation facilities in urban areas.
- Design and implement wildlife-viewing recreation economic impact research to determine influence on communities.
- Research related to wildlife-viewing recreation (nature tourism) that attempts to understand the wildlife-viewing market in Arizona including, but not limited to: expectations for satisfying experiences, importance of specific wildlife species of interest, willingness to pay for valued wildlife-viewing experiences, etc.
- Projects or programs supporting and/or promoting smart growth efforts that incorporate wildlife habitat conservation to guide the preservation, development, or redevelopment of a neighborhood, community, or region.

Robyn Beck
Heritage Grant Coordinator
(623) 236-7530

**Heritage Grant Application Manual Supplement:
Sensitive Elements Eligible for
IIAPM Grant Proposals Submitted in 2009**

June, 2009

The sensitive elements (e.g. species and habitats) for which Identification, Inventory, Acquisition, Protection, and Management (IIAPM) grant proposals may be submitted in 2009 are listed in this document.

Any proposal not in full compliance with the following guidance will be rejected:

Proposals will only be accepted for the element-specific objectives listed on the following pages.

Proposals must address at least one of the listed elements and one or more of the listed Grant Proposal Objectives for that element.

The element(s) and objective(s) on which a proposal is focused and the project deliverables must be clearly identified in the proposal.

Proposals are often more competitive (in terms of funding consideration) when they address more than one listed sensitive element, and when they provide comparable information for other (non-listed) wildlife and/or habitats in the project area and when they can be tied to actions or stressors identified in Arizona's Comprehensive Wildlife Conservation Strategy.

Our intent is to fund projects that will give the greatest return for the Heritage funds invested.

Please contact the Department's IIAPM Wildlife Management Project Leader or Assistant Project Leaders (623-236-7500) regarding any questions about elements or objectives eligible this year.

Note: the list of *Wildlife of Special Concern in Arizona* and the list of CWCS priority species (Wildlife of Greatest Conservation Need) that are referenced several times in this document are available from the Department's Nongame Branch (5000 W Carefree Highway, Phoenix, Arizona 85086; phone 623-236-7507; fax 623-236-7926) or by download from the Department's website (<http://www.azgfd.gov/>).

Wildlife Elements	Grant Proposal Objectives
<u>Mammals</u>	
Bats: Miscellaneous	A. Projects that facilitate the implementation of the Arizona Bat Conservation Strategic Plan available at http://www.azgfd.gov/ .
Pronghorn (all subspecies)	A. Public information activities, materials, and/or plans on open space planning and its benefits to pronghorn in suburban/rural development areas, statewide. B. (1) Research and development of criteria for habitat enhancement in grasslands ecosystems, with particular emphasis on grasslands restoration in juniper invasion areas and development of measurement parameter guidelines and locally valid prescriptions for pronghorn habitat management. (2) Research on pronghorn habitat on the Anderson Mesa. (3) Determine the quantity and quality of herbaceous ground cover needed to help increase fawn recruitment in Colorado Plateau grassland habitats in northern Arizona.
Gunnison’s Prairie Dog	A. Determine the effects of disease, effects of grazing, effects on survival of relocation efforts, effects of habitat fragmentation.
Black-tailed Prairie Dog	A. Monitor the effects of black-tailed prairie dog reintroduction on the grassland ecosystem. Specifically, monitor plant composition and structure and animal diversity and abundance.
Tree Squirrels	A. Conduct studies focusing on the impact of Abert's on tree squirrels (AZ grey and Mexican fox squirrels) and possible habitat segregations that may be occurring in the sky islands. B. Continue to look at impacts of Abert's on MGRS. C. Look at the genetics of AZ grey squirrels. D. Surveys for Abert's and Arizona gray squirrels in the Catalinas and perhaps the Rincons.
Meadow Jumping Mouse	A. Inventory of historic range in the White Mountains.
Water Shrew	A. Determine genetic relationship of Arizona population to populations throughout the southwest.
Mammals: Miscellaneous	A. Through field surveys and literature review, identify distribution, habitat requirements, and current population status of any nongame mammal species found on the CWCS Species of Greatest Conservation need (tier 1a and tier 1b). B. Implementation of the small mammal conservation plan.
Wildlife Elements	Grant Proposal Objectives
<u>Birds</u>	
Birds: Various Grassland Assemblages	A. Field surveys of AGFD properties for birds of concern.
Arizona Partners in Flight Plan	A. Projects that implement priorities identified in the AZ Partners in Flight Plan, available at http://www.azgfd.gov/ .
Riparian Raptors (Mississippi kite, Gray hawk and Common Black-hawk) Zone-tailed hawk	A. Gather current status, population estimates, and demography information.

Wildlife Elements	Grant Proposal Objectives
<u>Reptiles</u>	
Tortoise, Desert	A. Using AGFD-approved protocols, conduct population sampling at one or more AGFD-selected permanent study plots in the Sonoran Desert and/or Mojave Desert. B. Investigate effects of invasive exotic plant species and catastrophic wildfires on population biology. C. Conduct field studies (including radio-telemetry and other mark-recapture techniques) to investigate ecology of hatchlings and early juvenile size classes. D. Develop a quantitative habitat model for the Sonoran population of desert tortoise.
Turtle, Box	A. Develop and conduct presence /absence surveys (including occupancy and mark-recapture) to model box turtle distribution and demographics in southeastern Arizona.
Turtle, Sonoran Mud	A. Conduct field studies (including radio-telemetry and other mark-recapture techniques) to investigate effects of invasive exotic species on the ecology of hatchling and early juvenile size classes.
Fringe-toed Lizard, Mohave and Yuma Desert	A. Develop and conduct presence/absence surveys to model population distribution across species' range. Include habitat assessments to evaluate effects of invasive exotic plants, or human-caused disturbance.
Horned Lizard, Flat-tailed	A. Determine effects of roads, off-road driving, predation, non-native plants, and agricultural pesticides on abundance, dispersal, and habitat. Use results to provide management recommendations to eliminate or mitigate negative impacts. B. Determine the following life history and demographic parameters and how they vary with environmental conditions: mortality, longevity, clutch size, clutches per year, hatching success, recruitment, diet, and home range size.
Northern Mexican Gartersnake	A. Design and conduct radio telemetry study to investigate habitat use and selection, movement patterns, and hibernation sites in northern part of range. B. Conduct population monitoring through intensive mark/recapture along the upper Santa Cruz River.
Narrow-headed and Northern Mexican Gartersnakes	A. Design and implement experiments to test effectiveness of translocations or reintroductions.
Herps General	A. Query existing museum records and other documented sources, and use that information as the basis for an interactive, statewide database for herpetofauna distributions/status throughout Arizona. This should ultimately lead to a status database of definitive species distribution patterns for Arizona herpetofauna that includes all Arizona herps.
Wildlife Elements	Grant Proposal Objectives
<u>Amphibians</u>	
Salamander, Sonora Tiger	A. Conduct field studies (including radiotelemetry and other mark-release-recapture techniques) to investigate demographic and dispersal information. B. At the local level, investigate effects of life history variation (i.e., maturation as branchiate or metamorphosed animals) on demography and on disease maintenance and spread. C. Investigate effects of habitat enhancement (e.g., vegetation enhancement, fencing, improved water supplies, etc.) on Sonora tiger salamander survivorship and demography.

Frogs, Ranid (native)	<p>A. Design and/or implement habitat enhancements to increase habitat suitability, including removal of exotic predators, increasing permanency of aquatic habitats, and protecting important habitats from recreational pressures and other land management practices at historical and/or current sites of occurrence.</p> <p>B. Design and implement research to address specific objectives outlined in recovery plans, conservation and reestablishment proposals.</p> <p>C. Investigate mechanisms by which disease (chytridiomycosis, rana viruses) contributes to species decline.</p>
Frog, Leopard (Rio Grande) and Bullfrogs	<p>A. Research, develop, and field-test methods to effectively eradicate, suppress or restrict movements of bullfrogs or Rio Grande leopard frogs to promote conservation of native species of leopard frogs.</p>
Wildlife Elements	Grant Proposal Objectives
<u>Fish</u>	
Pupfish, Desert	<p>A. Design and/or implement habitat enhancement and restoration activities at extant sites or at sites approved by AGFD for reestablishment.</p> <p>B. Investigate interactions and effects of fathead minnow and/or mosquitofish on pupfish population dynamics.</p> <p>C. Investigate interactions and effects of predaceous aquatic invertebrates on pupfish population dynamics</p>
Topminnow, Sonoran (includes Gila and Yaqui subspecies), Spikedace, and Loach minnow	<p>A. Design and/or implement habitat enhancement and restoration activities at AGFD-approved sites.</p> <p>B. Investigate interactions and effects of predaceous aquatic invertebrates on topminnow population dynamics.</p>
Virgin River Fishes	<p>A. Design and/or implement habitat enhancement and restoration activities at extant sites or at sites approved by AGFD for reestablishment.</p>
Yaqui Basin Fishes and Sonora Chub	<p>A. Design and/or implement habitat enhancement and restoration activities at extant sites or at sites approved by AGFD for reestablishment.</p>
Little Colorado Spinedace	<p>A. Design and/or implement habitat enhancement and restoration activities at extant sites or at sites approved by AGFD for reestablishment.</p> <p>B. Investigate interactions and effects of habitat, community interactions with other fish species, and predaceous aquatic invertebrates on spinedace population dynamics.</p>
Chub, Roundtail/Headwater; Sucker, Flannelmouth/Little Colorado River; Sucker, Bluehead/Zuni	<p>A. Conduct studies evaluating current ongoing surveys and their abilities to accurately represent population status and trends.</p> <p>B. Investigate known information on conservation genetics and assess the need for additional genetic characterization.</p> <p>C. Design and/or implement habitat enhancements and restoration activities at extant sites or at sites approved by AGFD for reestablishment pursuant to the Three Species Rangewide Conservation Agreement and the State Conservation Agreement and Strategy for Six Native Fish Species.</p>
Wildlife Elements	Grant Proposal Objectives
<u>Crustaceans and Mollusks</u>	
Miscellaneous	<p>A. Field surveys and literature search to determine historical and present occurrence, population status and trends, and management needs of one or more of the following elements: Arizona cave amphipod, California floater, Gila tryonia.</p> <p>B. Research on how one or more of the following elements respond to specific land management practices, and on their population genetics, taxonomic validity, and habitat requirements: Arizona cave amphipod or California floater.</p> <p>C. Genetic and morphological analysis to resolve taxonomic uncertainties of CWCS tier 1a species of</p>

	<p>mollusks and crustaceans considered as candidates for listing or that have threatened or endangered status.</p> <p>D. Mollusk/crustacean habitat enhancement, including: vegetation restoration, renovation/repairing springheads, fencing sites, improving water quality, creation of new sites and long-term protection of sites by other means.</p>
Crayfish	<p>A. Investigate effects of crayfish and crayfish removal on lotic or lentic aquatic communities (invertebrates, fishes, amphibians, reptiles, etc.).</p> <p>B. Research, develop, and field-test methods to effectively eradicate, suppress or restrict movements of crayfish.</p> <p>C. Research habitat selection criteria and maximum range movements to determine what, if any, buffer distances from at-risk native fish, reptile, and amphibian populations are effective.</p>
San Bernardino Springsnail and Three Forks Springsnail	<p>A. Design and/or implement habitat enhancement and restoration activities at extant sites or at sites approved by AGFD for reestablishment.</p> <p>B. For Three Forks Springsnail, extent and distribution surveys at springs in the vicinity of Three Forks and Boneyard Bog that are currently or historically were connected by water.</p> <p>C. Develop captive propagation techniques and protocols to aid in the establishment of a Three Forks springsnail refugia.</p>
Community/Other Elements	Grant Proposal Objectives
<u>Habitat Types</u> ¹	
Great Basin and Plains Grassland and Semidesert Grassland	<p>A. Develop strategies for conservation of Great Basin and Plains Grassland (142.1) and Semidesert Grassland (143.1) to offset habitat and wildlife population fragmentation.</p> <p>B. Investigate impacts of the wildfires on habitats that were occupied by species listed by AGFD as <i>Wildlife of Special Concern in Arizona</i> and CWCS priority species (Wildlife of Greatest Conservation Need – Tier 1 and 2).; assess post-fire population status of such species; and provide fire-impact mitigation measure recommendations for such species and the habitats they occupy post-fire or occupied pre-fire.</p>
Sonoran Riparian Deciduous Forest and Woodlands, Cottonwood Willow Series	<p>A. Develop “best management practices” for riparian woodlands and their associated waters. Develop and implement integrated management plans and adaptive management processes for these waters and woodlands, to include recovery of degraded rivers and streams.</p> <p>B. Research the physical, chemical, seasonal and “other” parameters that contribute significantly to the health/restoration of this community.</p>
Other	Grant Proposal Objectives
Significant Caves	<p>A. Develop site-specific management plans for caves with significant crustacean, mollusk, bat, and/or other wildlife values.</p> <p>B. Implement habitat enhancement, renovation, and restoration activities for caves with significant crustacean, mollusk, bat, and/or other wildlife values. Examples: gating to control access; reinforcing weathering zones.</p>
Beaver	A. Reestablishment of riparian habitats using biological mechanisms.
Smart Growth	A. Project or program supporting and /or promoting smart growth efforts that incorporate wildlife habitat conservation. Project species must be at least one of the Wildlife Elements listed above.

:eg

Document Sensitive Elements List for 2009.doc

¹The parenthetical numbers below are references to: Brown, D.E., C.H. Lowe, and C.P. Pase. 1980. A digitized classification system for the biotic communities of North America, with community (series) and association examples for the Southwest. *Journal of the Arizona-Nevada Academy of Science* 14 (Suppl. 1):1-16.

ARIZONA GAME AND FISH DEPARTMENT

HERITAGE GRANT APPLICATION MANUAL

Appendix C: Special Conditions (Examples)

Special conditions are additional conditions included in Attachment A of the Participant Grant-in-Aid Agreement. Any special condition shown on Attachment A is part of the Agreement and is a binding condition. The following are examples of special conditions, which depending on the type of project, may apply to the funded project:

- All valid special permits must be acquired and maintained by the Participant. All persons working on this project must meet the same requirement.
- Participant must initiate technical coordination with the Department's Heritage Data Management System (HDMS) regarding locality-specific information on sensitive species.
- The project must comply with and receive clearance from the State Historic Preservation Officer (SHPO) prior to the release of funds.
- Interpretive topics must focus primarily on wildlife and its habitat.
- All materials produced must give credit to the Arizona Game and Fish Department's Heritage Fund.
- The Participant must work closely with the Arizona Game and Fish Department Education Branch staff, who will review the curriculum materials for content accuracy.
- The draft report shall be submitted to the Department for review for completeness and accuracy at least sixty (60) days prior to Agreement closing date.
- The Participant shall submit seven copies (six bound and one unbound) and one computer word-processing file of the final report to the Department's Heritage Grant Coordinator.
- The Participant shall notify the Department's Heritage Grant Coordinator of any equipment purchased with grant dollars, with a unit value greater than \$500, at the time of purchase. The equipment shall be used in accordance with Part II, D of the Participant-in-Aid Agreement.
- The Participant will provide the Department with copies of all articles published about the project in the newspaper or other media.
- The Participant will provide the Department with copies of all articles published about the project in professional journals and technical literature. The Participant will acknowledge the Arizona Game and Fish Department Heritage Fund in all articles about the project published in professional journals and technical literature.

ARIZONA GAME AND FISH DEPARTMENT

HERITAGE GRANT APPLICATION MANUAL

Appendix D: Frequently Asked Questions

Q: Can older versions of the application manual and forms be used for this grant cycle? **A:** No, the Heritage grant application manual, application forms, and grant prioritization process manual have been revised. The current version of the application manual is *Arizona Game and Fish Department, Heritage Grant Application Manual June 2009*. Do not use previous versions of the grant application manual or application forms.

Q: When is the application deadline time and date? **A:** One original and two copies of the application must be received by the Heritage Grant Coordinator no later than 5:00 p.m. the last working day of November.

Q: Are all mandatory forms and information required by the deadline? **A:** Yes, to be accepted for review and evaluation the application must be received at the Heritage Grant Coordinator's office on or before the deadline and must include all mandatory forms and information.

Q: Can I apply for funding in more than one subprogram fund in a given year, e.g., apply for funding for an IIAPM project and funding for an Urban Wildlife project? **A:** Yes, as long as the applications are not for the same project. Each application must identify the specific subprogram fund that applies. Requested funding must be specific for each project.

Q: Does the applicant have to be located in Arizona to qualify as an eligible public? **A:** Government agencies represented in Arizona are eligible publics, including federal agencies, tribes, Arizona state, county, and local government agencies, commission, and corporations. The project should be located in Arizona or involve research in which the wildlife or its habitat is located in Arizona.

Q: What is the difference between match and donation? **A:** Match dollars are funds that the applicant has available and committed to the project. Donation represents other support such as volunteer labor and donated or loaned equipment for the purpose of project implementation and development. Potential match or donation is not allowed as a basis of match/donation funding. The applicant must show proof of secured and dedicated match and/or donation support in the application. Augmented support is encouraged and is a scored item in the grant prioritization process.

Q: Can State Parks Heritage funding be used as match for a Department Heritage project? **A:** If the State Parks Heritage funding has already been awarded to the applicant and there is no conflict regarding eligible uses for which the funding has been awarded, the funding can be used as match. The Department project for which Game and Fish Heritage funding is sought must have a wildlife- or wildlife habitat-related focus.

Q: Do charter schools count as eligible publics? A: Schools that are supported by public revenue in the state of Arizona and are part of the Arizona public education system are eligible publics.

Q: Do I need an Arizona Game and Fish Department Scientific Collecting Permit if I am working for the applicant? A: All persons conducting field work on Heritage-funded projects involving the sampling, taking, handling, capturing and containing, transporting, or disturbing through field activity, of any Arizona wildlife must either have a valid Department Scientific Collecting Permit or a valid hunting and/or fishing license. The terms of allowable activities, including bag limits and disposition are covered by the permit or license. Contact the Scientific Collecting Permit Administrator for specific information (623) 236-7625 or e-mail, scpermits@azgfd.gov).

Q: Is SHPO certification required if the applicant is not a state agency? A: Yes, the Department shall not release grant funds until certification is received from the State Historic Preservation Officer in accordance with A.R.S. §§ 41-861 through 41-864, the State Preservation Act, which mandates that all state agencies consider the potential of activities or projects to impact significant cultural resources. (Commission Rule R12-4-710).

Q: What will I need to do to fulfill the “Term of Public Use” obligation after the project closes? A: The DEPARTMENT will send compliance forms requesting information on the project each year until the end of the Term of Public Use. In addition, on-site inspections may be conducted periodically at the discretion of the DEPARTMENT.