

**ARIZONA GAME AND FISH DEPARTMENT  
HABITAT PARTNERSHIP COMMITTEE  
HABITAT ENHANCEMENT AND WILDLIFE MANAGEMENT PROPOSAL**

Game Branch / HPC Project Number: 15-611

**PROJECT INFORMATION**

**Project Title:** New River Mesa Wildlife Water Catchments (KC Tank and Misery Tank)

**Region and Game Management Unit:** AGFD Region 6, GMU 21 South

**Local Habitat Partnership Committee (LHPC):**

- WHEI Working Group (AGFD) and Payson LHPC

**Was the project presented to the LHPC?**

**YES**[x] **NO**[]

**Has this project been submitted in previous years?** YES[] **NO**[x]

**If Yes, was it funded?** YES[] **NO**[] → **Funded HPC Project #(s):** N/A

**Project Type:** Water Development

**Brief Project Summary:**

The Wildlife Habitat Enhancements Initiative (WHEI) Working Group, within the Arizona Game and Fish Department (AGFD), with support of the Mule Deer Foundation (MDF) is proposing two new wildlife water catchments within the Cave Creek Ranger District of the Tonto National Forest (TNF), in Arizona utilizing Special Big Game License Tag (SBGLT) Funds. This action is needed to provide reliable year-round water for Mule deer across the western and northern portions of the Cave Creek Ranger District, TNF. The project would include the construction of catchment basins and the installation of tanks and troughs to provide supplemental water sources to wildlife at two discrete and remote locations. Activities associated with the construction of each of the catchments would occur within an approximately 150-foot by 150-foot area (0.5 acre).

**Big Game Wildlife Species to Benefit (% benefit per species) :** 100 % Mule Deer

**Implementation Schedule** (Month/Day/Year):

Project Start Date: January 1, 2016 (or upon approval)

Project End Date: January 1, 2018

**Environmental Compliance:**

NEPA Completed: Yes[x] No[] N/A[]

Projected Completion Date: Biological Evaluation, May 2015

State Historic Preservation Office - Archaeological Clearance:  
(Provide Attachment)

Yes[x] No[] N/A[]

Projected Completion Date: May 2015

Arizona Game and Fish Department EA Checklist: Yes[x] N/A[]

To be Completed by: Micah White

Projected Completion Date: September, 2015 (just awaiting signatures)

**PROJECT FUNDING**

**Special Big Game License Tag Funds Requested:** \$ 170,000

**Cost Share or Matching Funds:** \$ 15,000 (AGFD-SSDV)

**Total Project Costs:** \$ 185,000

<b>PARTICIPANT INFORMATION</b>		
<b>Applicant</b> (please print): Kyle Cooper	<b>Address:</b> 7200 E. University Drive Mesa, Arizona 85207	<b>E-mail:</b> kcooper@azgfd.gov
<b>Telephone:</b> (480) 639-9508		<b>Date:</b> 8/10/2015
<b>AGFD Contact and Phone No.</b> (If applicant is not AGFD personnel): N/A		
<b>Project has been coordinated with:</b> United States Forest Service (TNF), AGFD SSDV (Development Branch), AGFD FOR6, Mule Deer Foundation		

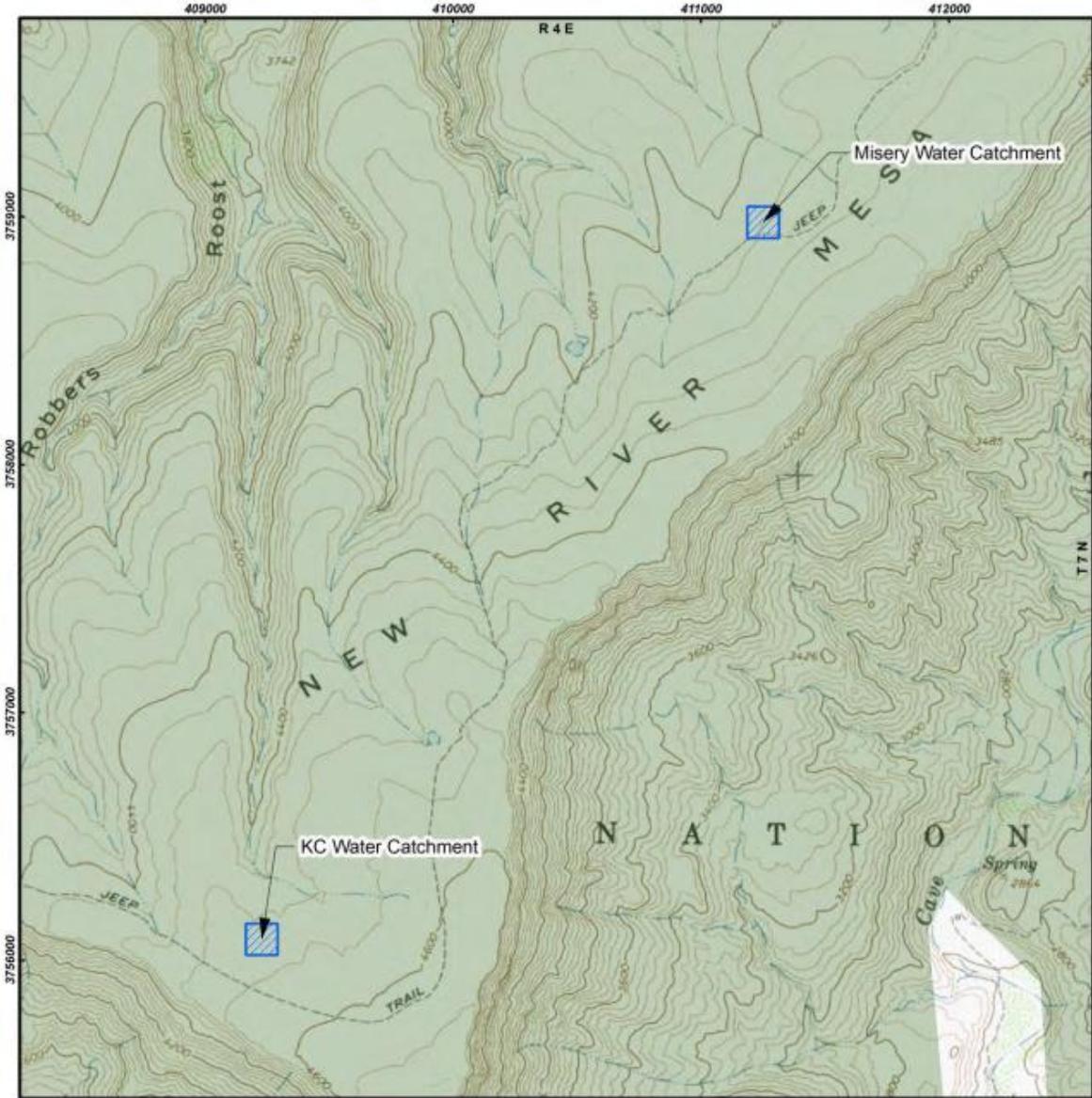
**NEED STATEMENT – PROBLEM ANALYSIS:** This action is needed to provide currently lacking year-long reliable water for Mule deer and any other wildlife species across the western and northern portions of the Cave Creek Ranger District (TNF) by collecting and storing perennial surface waters. These water developments will also allow for a more even distribution of deer in an effort to increase population levels.

**PROJECT OBJECTIVES:** The objective of this project is to construct two new Wildlife Water Developments to provide Mule Deer with two year-long reliable water sources in GMU 21 South on the Tonto National Forest. These water developments will also allow for a more even distribution of deer in an effort to increase population levels. These developments are the first in a series of 7 new developments being constructed on the TNF to address the overall water distribution concerns for Mule deer.

**PROJECT DESCRIPTION AND STRATEGIES:** Special Big Game License Tag (SBGLT) Funds are needed to provide reliable year-round water for Mule deer across the western and northern portions of the Cave Creek Ranger District, TNF. The project would include the construction of catchment basins and the installation of tanks and troughs to provide supplemental water sources to wildlife at two discrete and remote locations. Activities associated with the construction of the catchments would occur within an approximately 150-foot by 150-foot area (0.5 acre).

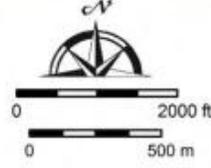
**PROJECT LOCATION**

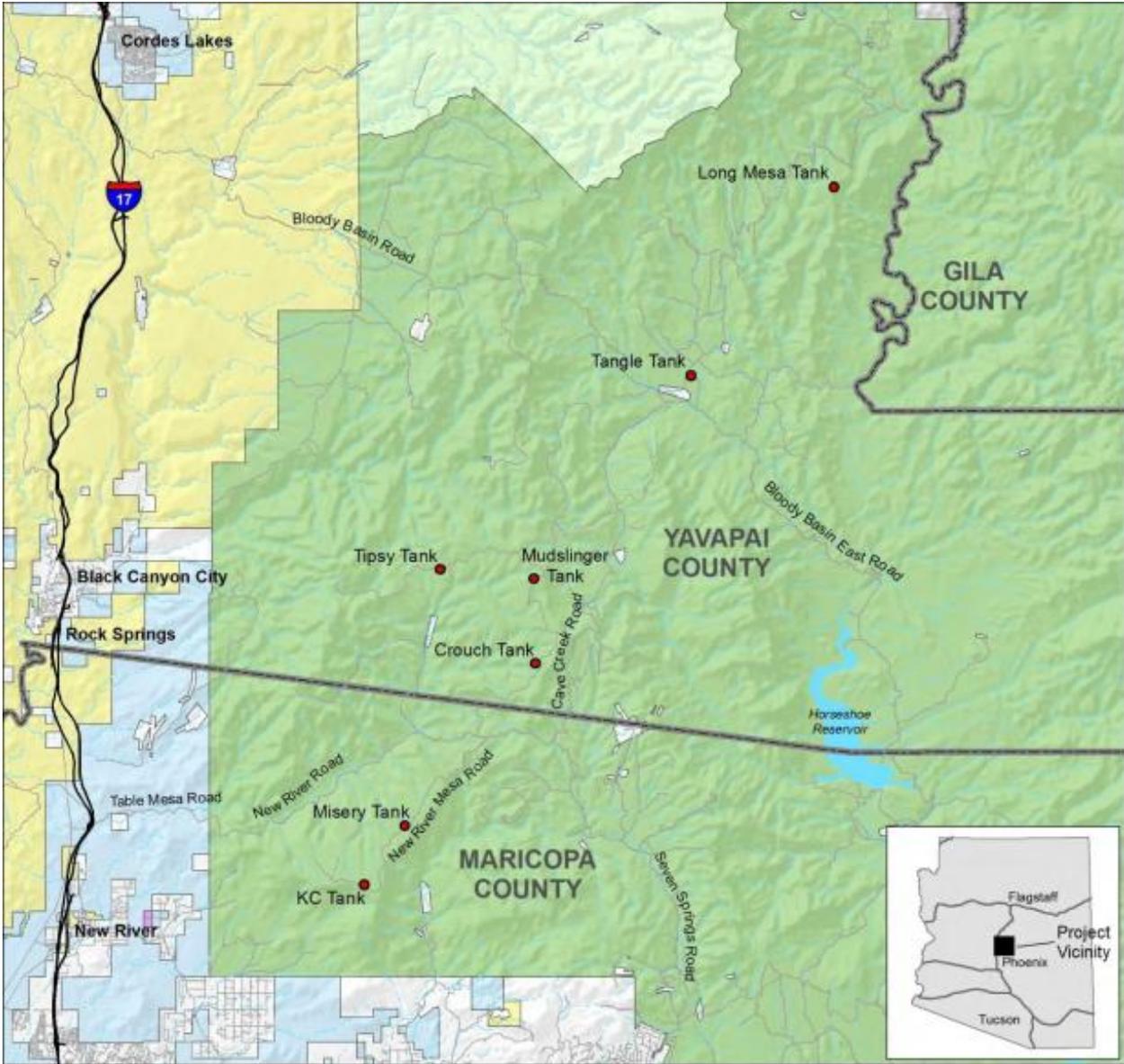
1. KC Tank – N 33° 56.480’, W 111° 58.934’ – T7N, R4E, Section 19 (4,546’ elevation)
2. Misery Tank – N 34° 58.055’, W 111° 57.639’ – T7N, R4E, Section 4 (4,217’ elevation)



Source: USGS 7.5' Quadrangles:  
 New River Mesa, Ariz. (1964, 1978);  
 NAD 1983, UTM Zone 12

Key		Land Jurisdiction	
	Project area		Tonto National Forest
			Private Land





Source: Land Ownership GIS Coverage provided by Arizona State Land Department (2012); Arizona Transportation Information System GIS Coverage (2013)

- Key**
- Wildlife Water Catchment
  - Arizona State Land Department
  - Bureau of Land Management
  - New River Kiwanis Community Park
  - Prescott National Forest
  - Private Land
  - Tonto National Forest



### KC Tank

The proposed KC Tank site was surveyed for presence of TES species on March 30, 2015. KC Tank is located on New River Mesa adjacent to FR 17 in the NE<sup>1</sup>/<sub>4</sub> Section 8 and NW <sup>1</sup>/<sub>4</sub> Section 9 of T7N R4E (Figure 2). Prior to the site survey the HDMS was queried for a listing of TES species known to occur in the vicinity of the KC Tank site. The HDMS query listed the 10J area Zone 2 for Mexican gray wolf, Cave Creek Riparian Important Bird Area, lowland leopard frog and the American peregrine falcon (*Falco peregrinus anatum*) as occurring within three miles of the proposed KC Tank wildlife water site.

### Misery Tank

The proposed Misery Tank site was surveyed for the presence of TES species on March 30, 2015. Misery Tank is located on New River Mesa adjacent to Forest Road (FR) 17 in Section 9 of T7N R4E (Figure 2). Prior to the site survey the AGFD Heritage Data Management System (HDMS) was queried for a listing of TES species known to occur in the vicinity of the Misery Tank site. The HDMS query listed the 10J area Zone 2 for Mexican gray wolf (*Canis lupus baileyi*), Cave Creek Riparian Important Bird Area, the Gila topminnow (*Poeciliopsis occidentalis occidentalis*:listed threatened) and the lowland leopard frog (*Lithobates yavapaiensis*) listed as a Tonto NF sensitive species as occurring within 3 miles of the proposed Misery Tank wildlife water.

**LAND OWNERSHIP AT THE PROJECT SITE(S):** USFS (TNF) – New River Allotment

**HABITAT DESCRIPTION:** The Misery Tank site occurs within a previous wildfire burn. Scattered remnants of burned juniper and brush are evident in the 4-acre survey plot. Misery Tank is located at an elevation of 4,217 feet above mean sea level (amsl) and is classified as being within the interior chaparral biotic community (Pase and Brown 1994). The area is mapped within the pinyon-juniper PNVT by the Tonto NF. During the site survey the Misery Tank area was determined to be a Utah juniper (*Juniperus osteosperma*)/*tobosa* (*Hilaria mutica*) grassland association (Appendix A Photo 1 and 2). The project area is relatively flat, with a rocky surface with no defined drainage patterns present. The proposed site is a sparse woodland with trees and shrubs generally shorter than 15 feet in height and less than 10 percent canopy cover over the 4-acre survey plot (Appendix A Photo 1 and 2). Dominant trees consist of Utah juniper, and relatively young velvet mesquite (*Prosopis velutina*). Dominant grasses include *tobosa*, and blue grama (*B. gracilis*). Other vegetation identified includes golden-flowered agave (*Agave chrysantha*), Engelmann's prickly pear (*Opuntia engelmannii*), beargrass (*Nolina microcarpa*), beehive cactus (*Escobaria vivipara*), snakeweed (*Gutierrezia sarothrae*). Herbaceous vegetation includes Goodding's verbena (*Glandularia gooddingii*), lupine (*Lupinus* spp.), sego lily (*Calochortus ambiguus*), and gaura (*Gaura* spp.). In addition, red brome (*Bromus rubens*) and heron bill (*Erodium cicutarium*) was present throughout the 4-acre survey plot. There was no apparent sign of livestock grazing, the presence of deer sign (*Odocoileus* spp.) was noted.

The KC Tank site is similar to the Misery Tank site occurring within a previous wildfire burn. Scattered remnants of burned juniper and brush are evident in the 4-acre survey plot. KC Tank is located at an elevation of 4,546 amsl, within the interior chaparral biotic community (Pase and Brown 1994). The area is mapped within the pinyon-juniper PNVT by the Tonto NF. During the site survey the KC Tank area was determined to be a semi-desert grassland with Utah juniper and mesquite being widely spaced composed of less than 10 percent cover of the 4-acre survey plot. Dominant grasses include *tobosa*, blue grama, and side oats grama (*Boutelou curtipendula*) (Appendix A Photo 3 and 4). Dominant tree species consist of Utah juniper, and relatively young

mesquite. Other vegetation identified includes Englemann's prickly pear, banana yucca (*Yucca baccata*), beargrass (*Nolina microcarpa*), beehive, snakeweed, and Rusby's desert-mallow (*Sphaeralcea rusbyi*). Herbaceous vegetation include Goodding's verbena, lupine, blue dicks (*Dichelostemma capitatum*), crowpoison (*Nothoscordum bivalve*), pepperweed (*Lepidium* spp.), and fleabane (*Erigeron divergens*). In addition, red brome was present throughout the 4-acre survey plot.

### ITEMIZED USE OF FUNDS:

#### Special Big Game License Tag Funds:

**Total (itemized below): \$168,566.00**

- 8 Tanks – 2,500 gallon Polyethylene Water Storage = \$27,888.00 (\$3,486.00 each) (4 per catchment site)
- 2 Aprons – 24' X 72' metal frame and R-panel = \$12,226.00
- 2 Troughs – standard polyethylene = \$ 9,380.00
- Plumbing – (2) 3" Sch80 PVC and (4) brass ball valves= \$3,000.00
- Fence – (2) 150' X 150' Standard piperail perimeter fence (\$2,086.00 each) = \$4,172.00
- 34 Rubber mats - for tank & trough support (17 per catchment site) = \$1,900.00

Total materials = \$58,566.00

- Labor for a contractor has been estimated at \$40,000 per catchment due to access and site difficulty = \$80,000.00
- Helicopter costs are going to be about \$15,000.00 per catchment. We have materials and water (1,000 gallons or so) that we have to fly. = \$30,000.00

Total Labor = \$110,000.00

#### Cost Share or Matching Funds (for volunteer labor rates please refer to the worksheet below):

**AGFD SSDV (Development Branch): \$15,000.00**

- For services and delivery of materials to loading site

### LIST COOPERATORS AND DESCRIBE POTENTIAL PARTICIPATION:

AGFD SSDV

**WOULD IMPLEMENTATION OF THIS PROJECT ASSIST IN PROVIDING, MAINTAINING, OR FACILITATING RECREATIONAL ACCESS?**

YES[] NO[x] N/A[]

**PROJECT MONITORING PLAN:** AGFD SSDV Standard Specs

**PROJECT MAINTENANCE:** AGFD SSDV Standard Specs

**PROJECT COMPLETION REPORT TO BE FILED BY: AGFD SSDV**

**WATER DEVELOPMENT PROJECTS** (please use the worksheet below):

**TREE CLEARING/REMOVAL PROJECTS** (please use the worksheet below):

**ATTACHMENTS:**

(Please provide cultural clearance documentation from land management agency, e.g., FONSI, Inventory Standards, etc. Also attach any project pictures)

## **ARIZONA GAME AND FISH DEPARTMENT** **WATER DEVELOPMENT WORKSHEET**

**PROJECT TITLE:** New River Mesa Wildlife Water Catchments (KC Tank and Misery Tank)

- 1) **Is the water development listed as a priority in the most recent “Wildlife Water Development Annual Implementation Schedule?”** N/A
- 2) **Please list the Development Branch personnel and date coordinated with for this project.**  
AGFD Joe Currie and Ed Jahrke
- 3) **What is the estimated annual inches of precipitation for the area? (mark one)**  
2-4 4-6 6-8 8-10 10-12 12-14 14-16  >16
- 4) **Is there a perennial water source available to big game within four miles of this project?**

YES  (please complete #5 below)    NO  (skip #5 below)

**5) ~~For the accessible, perennial water source nearest this project:~~**

~~\_\_\_\_\_ Name of water source:~~

~~\_\_\_\_\_ Type of water source (catchment, spring, dirt tank):~~

~~\_\_\_\_\_ Ownership of water source:~~

~~\_\_\_\_\_ Distance in miles from project:~~

6) **Is the target wildlife species a result of transplant efforts?** YES     NO

7) **Please list any special land management status for the project site (i.e. Wilderness, National Park, National Monument). If private land, list landowner.**  
N/A (Tonto NF)

8) **Please provide the following information about access to the proposed site:**

Type of access (mark one): 2x4 vehicles    4x4 only    foot only\*\*

\*\*If foot access only: Distance in miles: n/a    Approximate hiking time: n/a

-- Does access to this site require crossing private or tribal lands? YES     NO

-- Please describe any restrictions to public access: n/a

9) **Please list below (or on a separate sheet) the material type and dimensions of each component proposed to be added, modified, or repaired.**

See AGFD SSDV Standard Specifications for Water Developments

10) **Was a site visit completed?** Yes     No

If Yes, please list personnel that attended and date.

-Kyle Cooper (AGFD)

-Summer 2015

## **ARIZONA GAME AND FISH DEPARTMENT** **TREE CLEARING/REMOVAL WORKSHEET**

**PROJECT TITLE:** New River Mesa Wildlife Water Catchments (KC Tank and Misery Tank)

- 1) **What is the estimated acreage of the project?**     1 Acre (0.5 acres per site)
  
- 2) **How are the trees going to be cleared? (agra axe, chain saw, grubbing, push, chaining):**  
    No tree clearing necessary
  
- 3) **What is the estimated number of trees per acre?**  
    3 trees per acre
  
- 4) **Describe trees to be cleared (species, estimated diameter, single stem, multi-stem):**  
    no clearing necessary (junipers near site though)
  
- 5) **Describe terrain (slope, soil type, rocks)**  
    Rocky Mesa-tops
  
- 6) **Please list any special land management status for the project site (e.g. Wilderness, National Park, National Monument). If private land, list landowner.**  
    N/A (Tonto NF)
  
- 7) **Please provide the following information about access to the proposed site:**  
    Type of access (mark one):   2x4 vehicles   4x4 only   Foot only\*\*  
  
    \*\*If foot access only: Distance in miles: n/a     Approx. hiking time: n/a  
  
    Does access to this site require crossing private or tribal lands? YES  NO   
  
    Is the site relatively accessible for tree removal equipment? YES  NO   
  
    Please describe any restrictions to public access: n/a

## **ARIZONA GAME AND FISH DEPARTMENT**

# **VOLUNTEER HOURLY RATES AND CLASSIFICATIONS WORKSHEET**

**PROJECT TITLE:** New River Mesa Wildlife Water Catchments (KC Tank and Misery Tank)

The value of volunteer labor should be calculated at the hourly rate of an employee doing similar work, or using hourly rates from the Arizona Department of Administration's Human Resource web site, plus a standard ERE rate of 35%. [http://www.hr.state.az.us/ClassComp/CC\\_Job\\_Titles\\_with\\_Ranges.asp](http://www.hr.state.az.us/ClassComp/CC_Job_Titles_with_Ranges.asp)

\$0.445/mile should be the calculation used for mileage.

<b>Water Development</b>	<b>Volunteer Hours</b>	<b>Volunteer Miles</b>	<b>Hourly Rate</b>	<b>Estimated Value</b>
	n/a	n/a	\$14.14	n/a

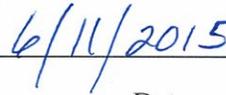
## LIST OF PREPARERS

Richard Remington – Logan Simpson, Senior Biologist

Ian Tackett – Logan Simpson, Senior Biologist

Determinations approved by:

/s/ 



Date

Cave Creek District Biologist – Tonto National Forest

# Arizona Environmental Online Review Tool Report



## *Arizona Game and Fish Department Mission*

*To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.*

**Project Name:**

PNF TNF Catchments

**Project Description:**

8 Trick Tank Style Catchments

**Project Type:**

Water Use, Transfer, and Channel Activities, Water storage, Tanks

**Contact Person:**

Micah White

**Organization:**

AGFD

**On Behalf Of:**

AZGFD

**Project ID:**

HGIS-01849

***Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.***

**Disclaimer:**

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

**Locations Accuracy Disclaimer:**

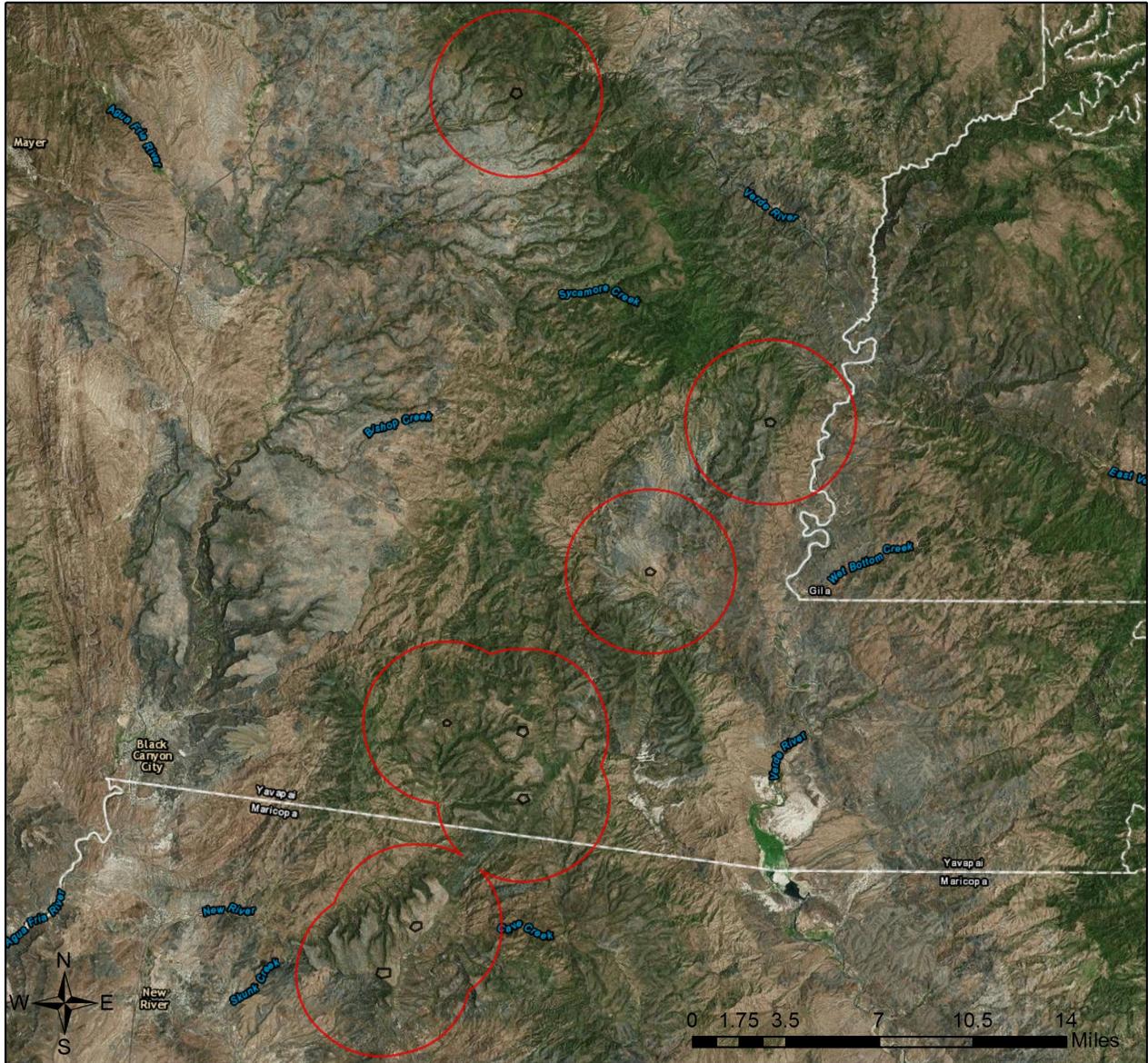
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

**Recommendations Disclaimer:**

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:  
**Project Evaluation Program, Habitat Branch**  
**Arizona Game and Fish Department**  
**5000 West Carefree Highway**  
**Phoenix, Arizona 85086-5000**  
**Phone Number: (623) 236-7600**  
**Fax Number: (623) 236-7366**  
**Or**  
[PEP@azgfd.gov](mailto:PEP@azgfd.gov)
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

# PNF TNF Catchments

## Aerial Image Basemap With Locator Map



- Project Boundary
- Buffered Project Boundary

Project Size (acres): 501.06

Lat/Long (DD): 33.9413 / -111.9819

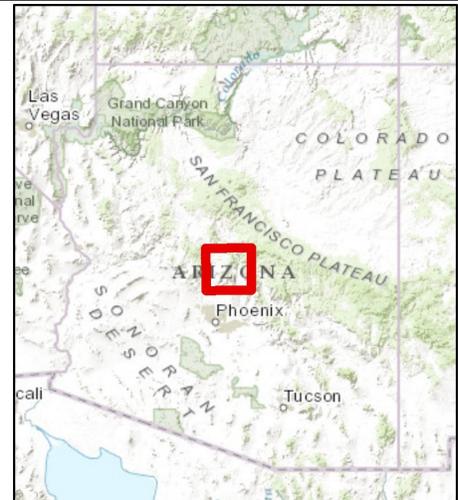
County(s): Yavapai; Maricopa

AGFD Region(s): Mesa

Township/Range(s): T12N, R4E; T10N, R6E; T9.5N, R5E +

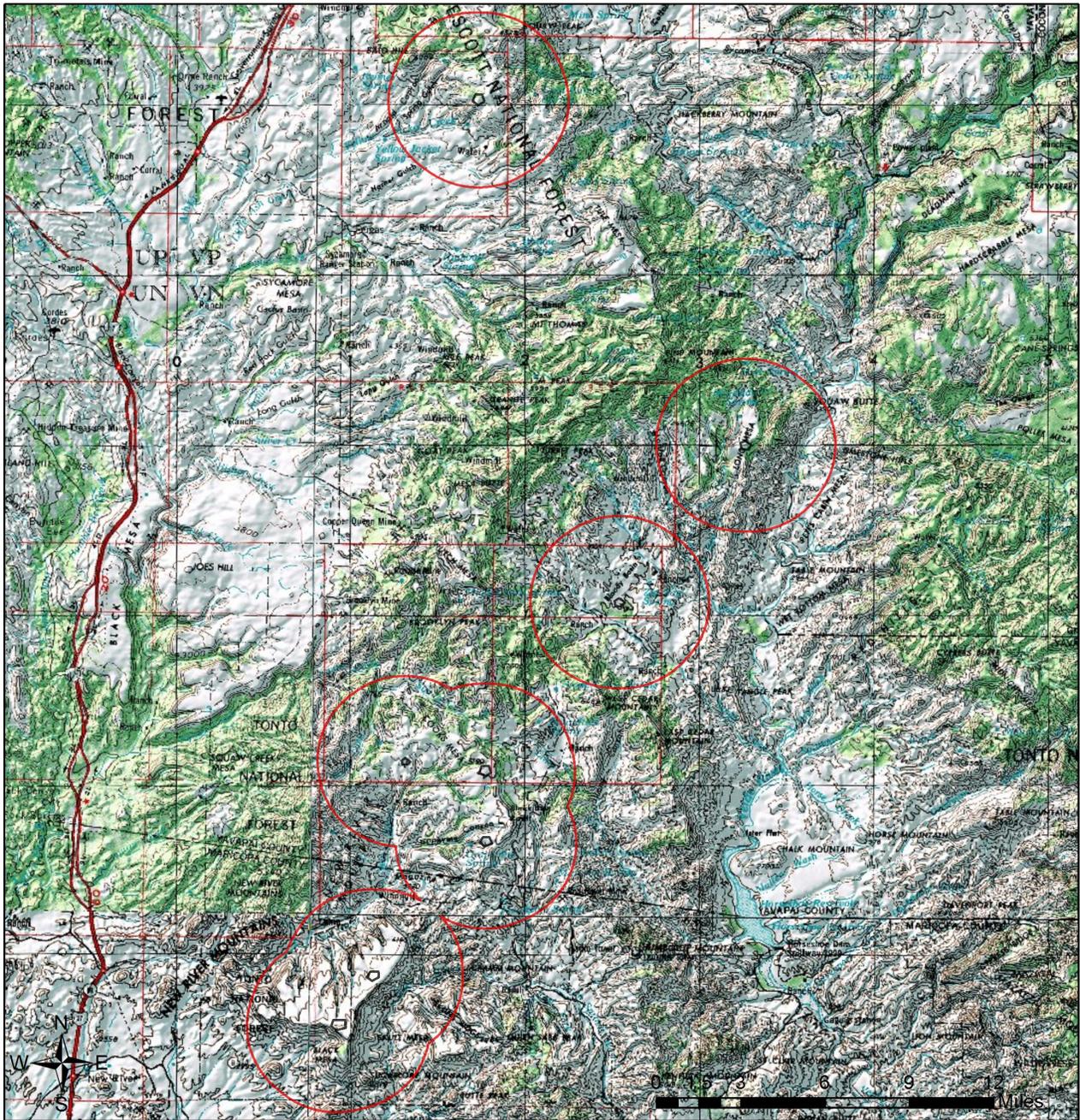
USGS Quad(s): ARNOLD MESA; VERDE HOT SPRINGS +

Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),



# PNF TNF Catchments

## Web Map As Submitted By User



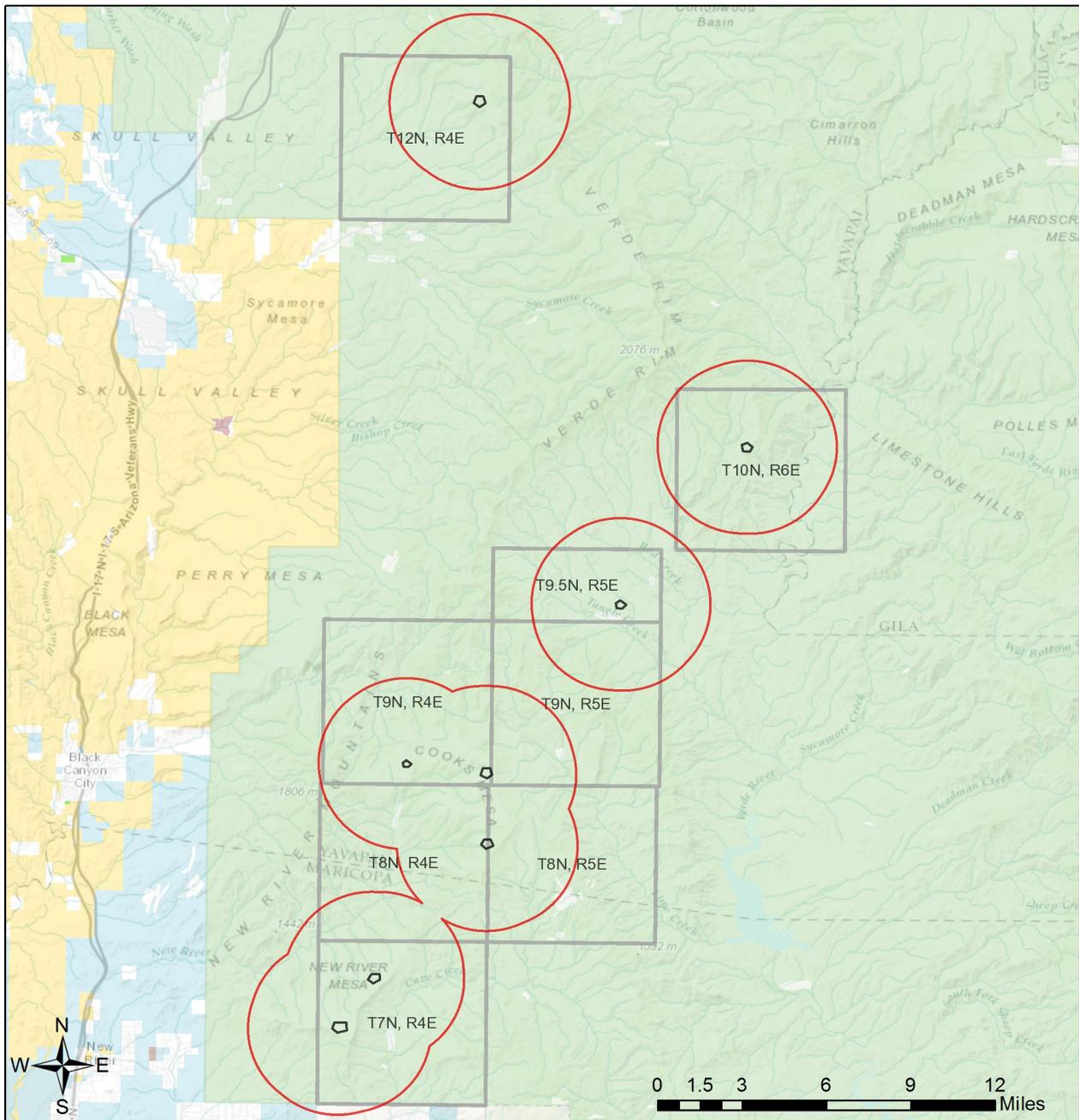
- Project Boundary
- Buffered Project Boundary

Project Size (acres): 501.06  
Lat/Long (DD): 33.9413 / -111.9819  
County(s): Yavapai; Maricopa  
AGFD Region(s): Mesa  
Township/Range(s): T12N, R4E; T10N, R6E; T9.5N, R5E +  
USGS Quad(s): ARNOLD MESA; VERDE HOT SPRINGS +

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## PNF TNF Catchments

### Topo Basemap With Township/Ranges and Land Ownership



- |                           |                          |
|---------------------------|--------------------------|
| Project Boundary          | Mixed/Other              |
| Buffered Project Boundary | National Park/Mon.       |
| Township/Ranges           | Private                  |
| AZ Game and Fish Dept.    | State and Regional Parks |
| BLM                       | State Trust              |
| BOR                       | US Forest Service        |
| Indian Res.               | Wildlife Area/Refuge     |
| Military                  |                          |

Project Size (acres): 501.06  
 Lat/Long (DD): 33.9413 / -111.9819  
 County(s): Yavapai; Maricopa  
 AGFD Region(s): Mesa  
 Township/Range(s): T12N, R4E; T10N, R6E; T9.5N, R5E +  
 USGS Quad(s): ARNOLD MESA; VERDE HOT SPRINGS +

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

**Special Status Species and Special Areas Documented within 3 Miles of Project Vicinity**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Agave toumeyana var. bella	Toumey Agave				SR	
Agave x arizonica	Arizona agave	No status			HS	
Agosia chrysogaster chrysogaster	Gila Longfin Dace	SC		S		1B
Aquila chrysaetos	Golden Eagle	BGA		S		1B
Bat Colony						
CH for Empidonax traillii extimus	Southwestern willow flycatcher Designated Critical Habitat					
CH for Xyrauchen texanus	Razorback sucker Designated Critical Habitat					
Canis lupus baileyi	10J area Zone 2 for Mexican gray wolf	LE,XN				
Catostomus clarkii	Desert Sucker	SC	S	S		1B
Cave Creek Riparian Maricopa County Important Bird Area						
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
Cylloepus parkeri	Parker's Cylloepus Riffle Beetle	SC	S			
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Gila robusta	Roundtail Chub	C*	S			1A
Gopherus morafkai	Sonoran Desert Tortoise	C*	S			1A
Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	SC,BG A	S	S		1A
Haliaeetus leucocephalus pop. 3	Bald Eagle - Sonoran Desert Population	SC,BG A	S	S		1A
Heuchera eastwoodiae	Eastwood Alum Root		S			
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1A
PCH for Thamnophis eques megalops	Northern Mexican gartersnake Proposed Critical Habitat					
PCH for Thamnophis rufipunctatus	Narrow-headed gartersnake Proposed Critical Habitat					
Poeciliopsis occidentalis occidentalis	Gila Topminnow	LE				1A
Ptychocheilus lucius	10J area for Colorado pikeminnow	LE,XN				
Salt and Verde Riparian Ecosystem Important Bird Area						

Note: Status code definitions can be found at [http://www.azgfd.gov/w\\_c/edits/hdms\\_status\\_definitions.shtml](http://www.azgfd.gov/w_c/edits/hdms_status_definitions.shtml).

**Species of Greatest Conservation Need  
 Predicted within Project Vicinity based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Accipiter gentilis atricapillus	Northern Goshawk	SC	S			1B
Agosia chrysogaster	Longfin Dace	SC		S		1B

**Species of Greatest Conservation Need  
 Predicted within Project Vicinity based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Aix sponsa</i>	Wood Duck					1B
<i>Ambystoma mavortium nebulosum</i>	Arizona Tiger Salamander					1B
<i>Ammospermophilus harrisi</i>	Harris' Antelope Squirrel					1B
<i>Anaxyrus microscaphus</i>	Arizona Toad	SC				1B
<i>Antilocapra americana americana</i>	America Pronghorn					1B
<i>Aquila chrysaetos</i>	Golden Eagle	BGA		S		1B
<i>Aspidoscelis flagellicauda</i>	Gila Spotted Whiptail					1B
<i>Athene cucularia hypugaea</i>	Western Burrowing Owl	SC	S	S		1B
<i>Botaurus lentiginosus</i>	American Bittern					1B
<i>Buteo regalis</i>	Ferruginous Hawk	SC		S		1B
<i>Castor canadensis</i>	American Beaver					1B
<i>Catostomus clarkii</i>	Desert Sucker	SC	S	S		1B
<i>Catostomus insignis</i>	Sonora Sucker	SC	S	S		1B
<i>Chilomeniscus stramineus</i>	Variable Sandsnake					1B
<i>Chordeiles minor</i>	Common Nighthawk					1B
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S			1A
<i>Colaptes chrysoides</i>	Gilded Flicker			S		1B
<i>Coluber bilineatus</i>	Sonoran Whipsnake					1B
<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat	SC	S	S		1B
<i>Crotalus cerberus</i>	Arizona Black Rattlesnake					1B
<i>Crotalus tigris</i>	Tiger Rattlesnake					1B
<i>Cyprinodon macularius</i>	Desert Pupfish	LE				1A
<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher	LE				1A
<i>Euderma maculatum</i>	Spotted Bat	SC	S	S		1B
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat	SC		S		1B
<i>Falco peregrinus anatum</i>	American Peregrine Falcon	SC	S	S		1A
<i>Gila intermedia</i>	Gila Chub	LE				1A
<i>Gila nigra</i>	Headwater Chub	C*	S			1A
<i>Gila robusta</i>	Roundtail Chub	C*	S			1A
<i>Gopherus morafkai</i>	Sonoran Desert Tortoise	C*	S			1A
<i>Haliaeetus leucocephalus</i>	Bald Eagle	SC, BGA	S	S		1A
<i>Heloderma suspectum</i>	Gila Monster					1A
<i>Idionycteris phyllotis</i>	Allen's Lappet-browed Bat	SC	S	S		1B
<i>Incilius alvarius</i>	Sonoran Desert Toad					1B
<i>Kinosternon sonoriense sonoriense</i>	Desert Mud Turtle			S		1B
<i>Lasiurus blossevillii</i>	Western Red Bat		S			1B
<i>Lasiurus xanthinus</i>	Western Yellow Bat		S			1B
<i>Leopardus pardalis</i>	Ocelot	LE				1A

**Species of Greatest Conservation Need  
 Predicted within Project Vicinity based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Leptonycteris curasoae yerbabuenae	Lesser Long-nosed Bat	LE				1A
Lithobates yavapaiensis	Lowland Leopard Frog	SC	S	S		1A
Lontra canadensis lataxina	Southeastern River Otter					1B
Lontra canadensis sonora	Southwestern River Otter	SC				1B
Macrotus californicus	California Leaf-nosed Bat	SC		S		1B
Maricopella allynsmithi	Squaw Park Talussnail	SC				1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolni	Lincoln's Sparrow					1B
Melospiza aberti	Abert's Towhee		S			1B
Microtus mexicanus	Mexican Vole					1B
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tuberculifer	Dusky-capped Flycatcher					1B
Myiodynastes luteiventris	Sulphur-bellied Flycatcher		S			1B
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Odocoileus virginianus	White-tailed Deer					1B
Oncorhynchus gilae	Gila Trout	LT				1A
Panthera onca	Jaguar	LE				1A
Passerculus sandwichensis	Savannah Sparrow					1B
Perognathus amplus	Arizona Pocket Mouse					1B
Perognathus longimembris	Little Pocket Mouse					1B
Phrynosoma solare	Regal Horned Lizard					1B
Phyllorhynchus browni	Saddled Leaf-nosed Snake					1B
Poeciliopsis occidentalis occidentalis	Gila Topminnow	LE				1A
Progne subis hesperia	Desert Purple Martin			S		1B
Ptychocheilus lucius	Colorado Pikeminnow	LE,XN				1A
Pyrgulopsis glandulosa	Verde Rim Springsnail	SC	S	S		1A
Pyrgulopsis sola	Brown Springsnail	SC	S	S		1A
Rhinichthys osculus	Speckled Dace	SC		S		1B
Sciurus arizonensis	Arizona Gray Squirrel					1B
Setophaga petechia	Yellow Warbler					1B
Strix occidentalis lucida	Mexican Spotted Owl	LT				1A
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Thamnophis rufipunctatus	Narrow-headed Gartersnake	PT	S			1A
Troglodytes pacificus	Pacific Wren					1B

**Species of Greatest Conservation Need  
 Predicted within Project Vicinity based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox					1B
Xyrauchen texanus	Razorback Sucker	LE				1A

**Species of Economic and Recreation Importance Predicted within Project Vicinity**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Antilocapra americana americana	America Pronghorn					1B
Callipepla gambelii	Gambel's Quail					
Meleagris gallopavo	Wild Turkey					
Odocoileus hemionus	Mule Deer					
Odocoileus virginianus	White-tailed Deer					1B
Patagioenas fasciata	Band-tailed Pigeon					1C
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Sciurus nayaritensis	Mexican Fox Squirrel					
Ursus americanus	American Black Bear					
Zenaida asiatica	White-winged Dove					

**Project Type: Water Use, Transfer, and Channel Activities, Water storage, Tanks**

**Project Type Recommendations:**

Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, <https://agriculture.az.gov/>. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, <http://www.usda.gov/wps/portal/usdahome>. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information [http://www.azgfd.gov/h\\_f/hunting\\_rules.shtml](http://www.azgfd.gov/h_f/hunting_rules.shtml)

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

Based on the project type entered, coordination with State Historic Preservation Office may be required (<http://azstateparks.com/SHPO/index.html>).

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (<http://www.azdeq.gov/>).

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (<http://www.azwater.gov/azdwr/default.aspx>).

**Project Location and/or Species Recommendations:**

HDMS records indicate that one or more native plants listed on the Arizona Native Plant Law and Antiquities Act have been documented within the vicinity of your project area. Please contact:

Arizona Department of Agriculture

1688 W Adams St.

Phoenix, AZ 85007

Phone: 602.542.4373

<https://agriculture.az.gov/environmental-services/np1>

HDMS records indicate that one or more listed, proposed, or candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at <http://www.fws.gov/southwest/es/arizona/> or:

**Phoenix Main Office**

2321 W. Royal Palm Rd, Suite 103

Phoenix, AZ 85021

Phone: 602-242-0210

Fax: 602-242-2513

**Tucson Sub-Office**

201 N. Bonita Suite 141

Tucson, AZ 85745

Phone: 520-670-6144

Fax: 520-670-6155

**Flagstaff Sub-Office**

SW Forest Science Complex

2500 S. Pine Knoll Dr.

Flagstaff, AZ 86001

Phone: 928-556-2157

Fax: 928-556-2121

HDMS records indicate that Sonoran Desert Tortoise have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at: <http://www.azgfd.gov/hgis/pdfs/Tortoisehandlingguidelines.pdf>

The analysis has detected one or more Important Bird Areas within your project vicinity. Please see [http://aziba.org/?page\\_id=38](http://aziba.org/?page_id=38) for details about the Important Bird Area(s) identified in the report.