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May 30, 2023

Mr. Robert Kirschmann  
Cochise County Community Development  
Development Services Department  
126 West 5th Street, Suite 4  
Benson, AZ 85602

Electronically submitted to [RKirschmann@cochise.az.gov](mailto:RKirschmann@cochise.az.gov)  
Re: Review of the SU23-12 Ocotillo Storage construction project

Dear Mr. Kirschmann,

The Arizona Game and Fish Department (Department) reviewed your Project Evaluation Request dated May 3, 2023, regarding the special use permit to construct a new storage facility on a 15 acre parcel at the southeast corner of Ocotillo Street and Four Feathers Lane near Benson, Cochise County, Arizona. The parcel is undeveloped land with a wash that connects to the San Pedro River.

Based on the information provided, the Department offers the following general recommendations:

- Minimize impacts to vegetation during project construction. Staging areas should be located in previously disturbed sites and kept as small as possible. Implement erosion and drainage control measures during the project to prevent the introduction of sediment-laden runoff into adjacent washes or surface waters and to prevent impacts to surface water quality. Stabilize exposed soils, particularly on slopes, with native vegetation as soon as possible to prevent excess erosion.
- Washes provide habitat and are natural movement corridors for wildlife. Minimize impacts to washes and maintain the natural pathways of stormwater flow across the parcel and the greater landscape. When possible designs should include a natural vegetation buffer (e.g., 100-50 feet) on each side of the wash to maintain stormwater flow. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: [Planning for Wildlife: Wildlife-Friendly Guidelines](#)<sup>1</sup>.
- Artificial lighting could impair the ability of nocturnal animals to navigate (e.g., owls, migratory birds, bats, and other nocturnal mammals) and may affect wildlife behavior and populations. The Department recommends using only the minimum amount of light

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<sup>1</sup> <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>

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**azgfd.gov | 602.942.3000**

**5000 W. CAREFREE HIGHWAY, PHOENIX AZ 85086**

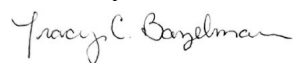
**GOVERNOR:** KATIE HOBBS **COMMISSIONERS:** CHAIRMAN JAMES E. GOUGHNOUR, PAYSON | TODD G. GEILER, PRESCOTT | CLAY HERNANDEZ, TUCSON  
MARSHA PETRIE SUE, SCOTTSDALE | JEFF BUCHANAN, PATAGONIA **DIRECTOR:** TY E. GRAY **DEPUTY DIRECTOR:** TOM P. FINLEY

needed for safety, especially in areas immediately adjacent to open space or undeveloped lands. The Department encourages the use of motion sensing lighting and narrow spectrum lighting (closer to the red spectrum) wherever possible to lower the range of species affected by lighting. Also, please consider shielding, canting, or cutting all lighting, where possible, to ensure that light reaches only areas needing illumination and to minimize impacts to nocturnal wildlife.

- If proposed ground disturbance (both temporary and permanent) will meet or exceed 0.25 acre in areas with native vegetation, please ensure the project complies with [Arizona Native Plant Law](#) regulations<sup>2</sup>. A Native Plant Inventory may need to be conducted to identify, record, and coordinate plant salvage efforts for species that are Protected under the Arizona Native Plant Law. In addition, the applicable land management agencies should be consulted regarding guidelines for revegetation efforts.
- Minimize the potential introduction or spread of exotic invasive species. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site.
- To further limit the spread of non-native, invasive plant species, the Department recommends landscaping with drought-tolerant species that are native to the area. Landscaping with native plants can help support wildlife and pollinator species that inhabit rural and urbanized areas. Visit the [Arizona Native Plant Society's website](#)<sup>3</sup> for information on preferred native plants to utilize in landscaping.
- If trenching will occur, trenching and backfilling crews should be close together to minimize the amount of open trenches at any given time. Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters. Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The slope should be less than 45 degrees (1:1). Trenches that have been left open overnight should be inspected and animals removed prior to backfilling.

The Department appreciates the opportunity to provide an evaluation of impacts to wildlife or wildlife habitats associated with the SU23-12 Ocotillo Storage construction project. The attached Department's Online Environmental Review Tool report (HGIS-19343) attached provides a list of species within 3 miles of the project area and general recommendations. If you have any questions regarding this letter, please contact me at (623) 236-7513 and visit our [website](#)<sup>4</sup> for additional guidelines.

Sincerely,



Tracy C. Bazelman  
Project Evaluation Program Specialist, Habitat Branch  
Arizona Game and Fish Department  
AZGFD #M23-05030315

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<sup>2</sup> <https://agriculture.az.gov/plantsproduce/native-plants>

<sup>3</sup> <https://aznps.com/grow-native/>

<sup>4</sup> <https://live-azgfd-main.pantheonsite.io/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>

# 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:**

SU23-12 (Ocotillo Storage) Cochise Co.

**Project Description:**

M23-05030315 SU23-12 Ocotillo Storage

**Project Type:**

Development Outside Municipalities (Rural Development), Commercial/industrial (mall) and associated infrastructure, New construction

**Contact Person:**

Tracy C. Bazelman

**Organization:**

AZGFD

**On Behalf Of:**

COCHISE

**Project ID:**

HGIS-19343

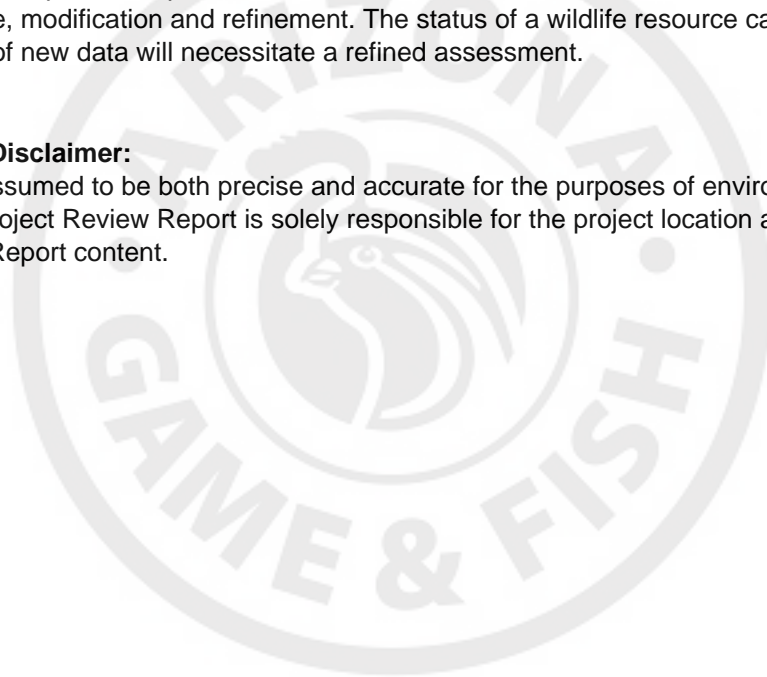
***Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.***

**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. Arizona Wildlife Conservation Strategy (AWCS), specifically Species of Greatest Conservation Need (SGCN), 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:**

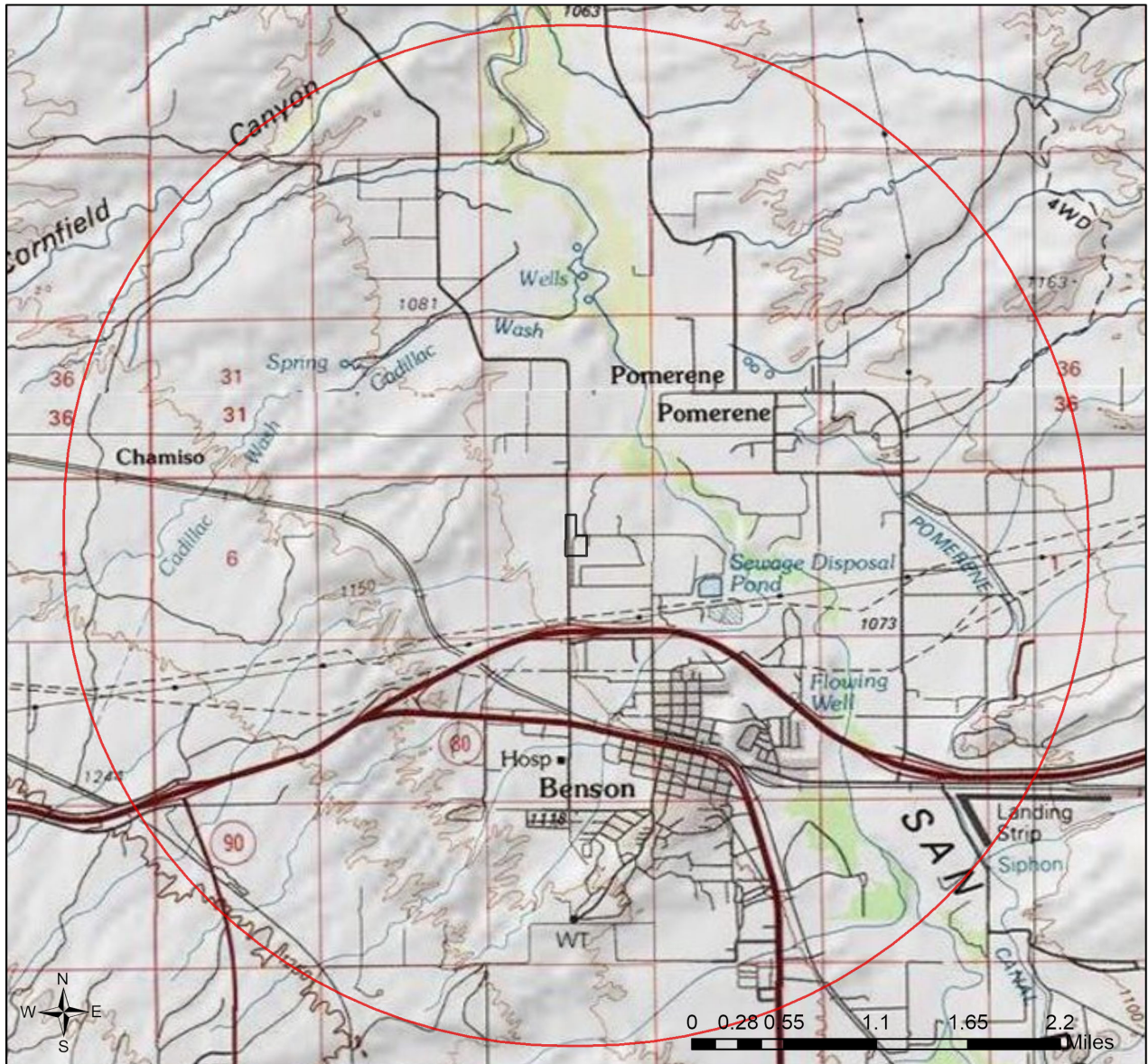
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.



**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

## SU23-12 (Ocotillo Storage) Cochise Co. USA Topo Basemap With Locator Map



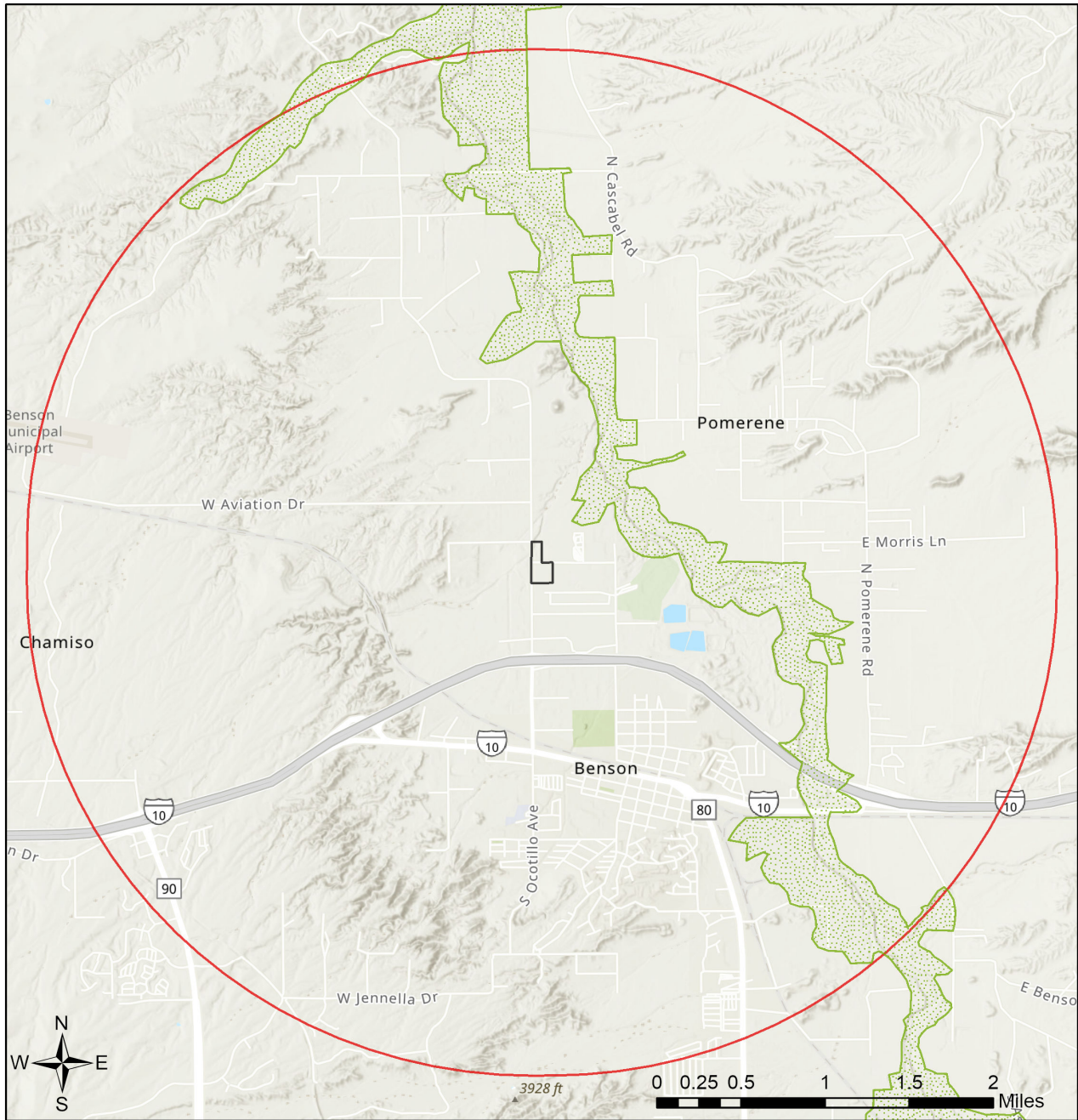
- Buffered Project Boundary
- Project Boundary

Project Size (acres): 14.99  
 Lat/Long (DD): 31.9869 / -110.3062  
 County(s): Cochise  
 AGFD Region(s): Tucson  
 Township/Range(s): T17S, R20E  
 USGS Quad(s): BENSON

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community



## SU23-12 (Ocotillo Storage) Cochise Co. Important Areas

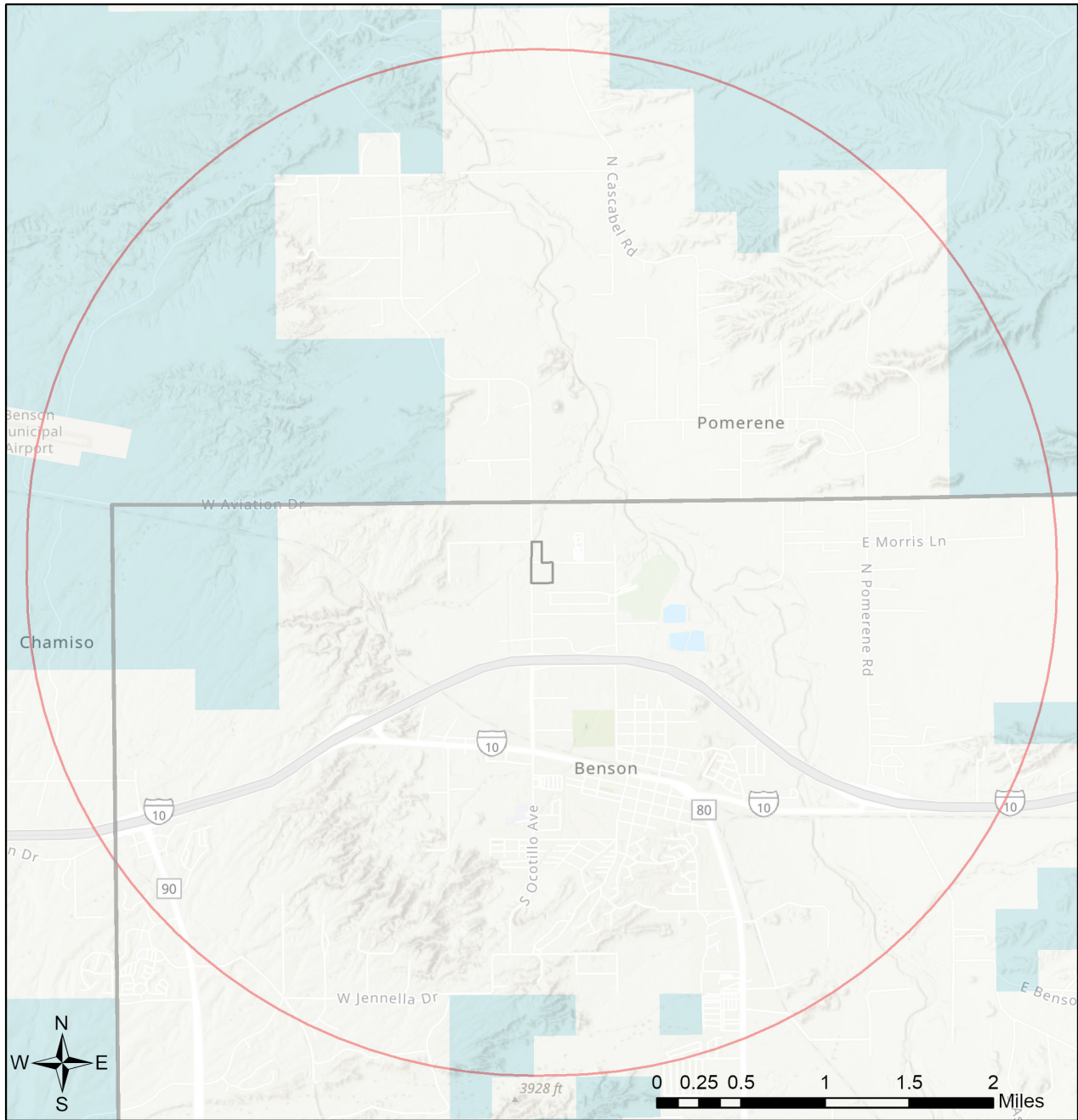


- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Important Connectivity Zones
- Wildlife Connectivity

Project Size (acres): 14.99  
 Lat/Long (DD): 31.9869 / -110.3062  
 County(s): Cochise  
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 Township/Range(s): T17S, R20E  
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 Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

## SU23-12 (Ocotillo Storage) Cochise Co. Township/Ranges and Land Ownership



- |  |   |
|--|---|
| <span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span> Buffered Project Boundary | <span style="background-color: #cccccc; display: inline-block; width: 15px; height: 10px;"></span> National Park/Mon.     |
| <span style="border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Project Boundary        | Private   |
| <span style="background-color: #c0504d; display: inline-block; width: 15px; height: 10px;"></span> AZ Game & Fish Dept.  | <span style="background-color: #8b4513; display: inline-block; width: 15px; height: 10px;"></span> State & Regional Parks |
| <span style="background-color: #ffff00; display: inline-block; width: 15px; height: 10px;"></span> BLM                   | <span style="background-color: #add8e6; display: inline-block; width: 15px; height: 10px;"></span> State Trust            |
| <span style="background-color: #d2b48c; display: inline-block; width: 15px; height: 10px;"></span> BOR                   | <span style="background-color: #90ee90; display: inline-block; width: 15px; height: 10px;"></span> US Forest Service      |
| <span style="background-color: #ffa500; display: inline-block; width: 15px; height: 10px;"></span> Indian Res.           | <span style="background-color: #3cb371; display: inline-block; width: 15px; height: 10px;"></span> Wildlife Area/Refuge   |
| <span style="background-color: #ffb6c1; display: inline-block; width: 15px; height: 10px;"></span> Military              | <span style="border: 1px solid gray; display: inline-block; width: 15px; height: 10px;"></span> Township/Ranges           |
| <span style="background-color: #32cd32; display: inline-block; width: 15px; height: 10px;"></span> Mixed/Other           |   |

Project Size (acres): 14.99  
 Lat/Long (DD): 31.9869 / -110.3062  
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Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastystyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community  
 Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

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

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	LT	S	S		1
Danaus plexippus	Monarch	C		S		
Echinomastus erectocentrus var. erectocentrus	Needle-spined Pineapple Cactus	SC			SR	
Empidonax traillii extimus	Southwestern Willow Flycatcher	LE				1
Eriogonum terrenatum	San Pedro River Wild Buckwheat			S		
Terrapene ornata luteola	Desert Box Turtle			S		

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/>

**No Special Areas Detected**

No special areas were detected within the project vicinity.

**Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Ammodramus savannarum perpallidus	Western Grasshopper Sparrow					
Anthus spragueii	Sprague's Pipit	SC				2
Aquila chrysaetos	Golden Eagle			S		2
Asio otus	Long-eared Owl					2
Aspidoscelis sonorae	Sonoran Spotted Whiptail					2
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		2
Auriparus flaviceps	Verdin					2
Botaurus lentiginosus	American Bittern					2
Buteo regalis	Ferruginous Hawk	SC		S		2
Buteo swainsoni	Swainson's Hawk					2
Callipepla squamata	Scaled Quail					2
Calypte costae	Costa's Hummingbird					2
Camptostoma imberbe	Northern Beardless-Tyrannulet		S			2
Campylorhynchus brunneicapillus	Cactus Wren					2
Catharus ustulatus	Swainson's Thrush					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Chordeiles minor	Common Nighthawk					2
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)					
Colaptes chrysoides	Gilded Flicker			S		2
Coluber bilineatus	Sonoran Whipsnake					2
Columbina inca	Inca Dove					2
Corvus cryptoleucus	Chihuahuan Raven					2
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1

**Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Cynomys ludovicianus	Black-tailed Prairie Dog	CCA		S		1
Elgaria kingii	Madrean Alligator Lizard					2
Empidonax traillii extimus	Southwestern Willow Flycatcher					
Empidonax wrightii	Gray Flycatcher					2
Eumops perotis californicus	Greater Western Bonneted Bat					
Falco mexicanus	Prairie Falcon					2
Falco peregrinus anatum	American Peregrine Falcon					
Falco sparverius	American Kestrel					2
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1
Haemorhous cassinii	Cassin's Finch					2
Heloderma suspectum	Gila Monster					1
Hypsiglena sp. nov.	Hooded Nightsnake					2
Icterus bullockii	Bullock's Oriole					2
Icterus cucullatus	Hooded Oriole					2
Icterus parisorum	Scott's Oriole					2
Ictinia mississippiensis	Mississippi Kite					2
Incilius alvarius	Sonoran Desert Toad					2
Kinosternon sonoriense sonoriense	Desert Mud Turtle					
Lanius ludovicianus	Loggerhead Shrike	SC				2
Lasiurus blossevillii	Western Red Bat		S			2
Lasiurus cinereus	Hoary Bat					2
Lasiurus xanthinus	Western Yellow Bat		S			2
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1
Megascops kennicottii	Western Screech-owl					
Melanerpes uropygialis	Gila Woodpecker					2
Melospiza lincolni	Lincoln's Sparrow					2
Melospiza aberti	Abert's Towhee		S			2
Micrathene whitneyi	Elf Owl					
Micruroides euryxanthus	Sonoran Coralsnake					2
Myadestes townsendi	Townsend's Solitaire					2
Myotis auriculus	Southwestern Myotis					2
Myotis velifer	Cave Myotis	SC		S		2
Myotis yumanensis	Yuma Myotis	SC				2
Notiosorex cockrumi	Cockrum's Desert Shrew					2
Nyctinomops macrotis	Big Free-tailed Bat	SC				2
Parabuteo unicinctus	Harris's Hawk					2
Passerculus sandwichensis	Savannah Sparrow					2
Peucaea botterii arizonae	Arizona Botteri's Sparrow			S		2
Peucaea carpalis	Rufous-winged Sparrow					2

**Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Phrynosoma solare	Regal Horned Lizard					2
Poocetes gramineus	Vesper Sparrow					2
Spizella breweri	Brewer's Sparrow					2
Tadarida brasiliensis	Brazilian Free-tailed Bat					
Terrapene ornata	Ornate Box Turtle				S	1
Troglodytes pacificus	Pacific Wren					2

**Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn**

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Callipepla squamata	Scaled Quail					
Odocoileus hemionus	Mule Deer					
Odocoileus virginianus	White-tailed Deer					
Patagioenas fasciata	Band-tailed Pigeon					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

**Project Type: Development Outside Municipalities (Rural Development), Commercial/industrial (mall) and associated infrastructure, New construction**

**Project Type Recommendations:**

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/>.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at <https://www.invasivespeciesinfo.gov/unitedstates/az.shtml> and the Arizona Native Plant Society <https://aznps.com/invas> for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - a national cloud-based application for tracking and managing invasive species at <https://imap.natureserve.org/imap/services/page/map.html>.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select "See What's Here" for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

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.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

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

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herpetofauna (snakes, lizards, tortoise) from entering ditches.

Communities can actively support the sustainability and mobility of wildlife by incorporating wildlife planning into their regional/comprehensive plans, their regional transportation plans, and their open space/conservation land system programs. An effective approach to wildlife planning begins with the identification of the wildlife resources in need of protection, an assessment of important habitat blocks and connective corridors, and the incorporation of these critical wildlife components into the community plans and programs. Community planners should identify open spaces and habitat blocks that can be maintained in their area, and the necessary connections between those blocks to be preserved or protected. Community planners should also work with State and local transportation planning entities, and planners from other communities, to foster coordination and cooperation in developing compatible development plans to ensure wildlife habitat connectivity. The Department's guidelines for incorporating wildlife considerations into community planning and developments can be found on the Wildlife Friendly Guidelines portion of the Wildlife Planning page at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/>.

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 (<https://new.azwater.gov/>).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (<http://www.usace.army.mil/>)

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Development plans should provide for open natural space for wildlife movement, while also minimizing the potential for wildlife-human interactions through design features. Please contact Project Evaluation Program for more information on living with urban wildlife at [PEP@azgfd.gov](mailto:PEP@azgfd.gov) or at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/> and <https://www.azgfd.com/Wildlife/LivingWith>.

***The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly at [PEP@azgfd.gov](mailto:PEP@azgfd.gov).***

**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/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf> starts on page 44

