

Project ID/Name: 23HF16-RED1, Red Lakes Phase 1

Address & Legal Description: Red Lake, AZ 86046 Coconino County

Project Center: 35.35161958, -112.1669749

Legal Description: T23N R2E Sec. 22, 28

Property Location, Boundary & Ownership: Phase 1 of the Red Lakes project covers 500.3 acres of Arizona State Trust land approximately 7 miles north of Williams and 17 miles south of Valle. The project is split into three implementation units separated by property lines and Highway 64. Access is available from Highway 64 through East Hctor Road and Espee Road. Other parts of the unit can be accessed using North Red Lakes Road to the east and North GC RR Frontage Road to the west. The project area is surrounded by rural private property including several inhabited homes. Additionally, the Grand Canyon railroad and power lines run through the western half of the project.

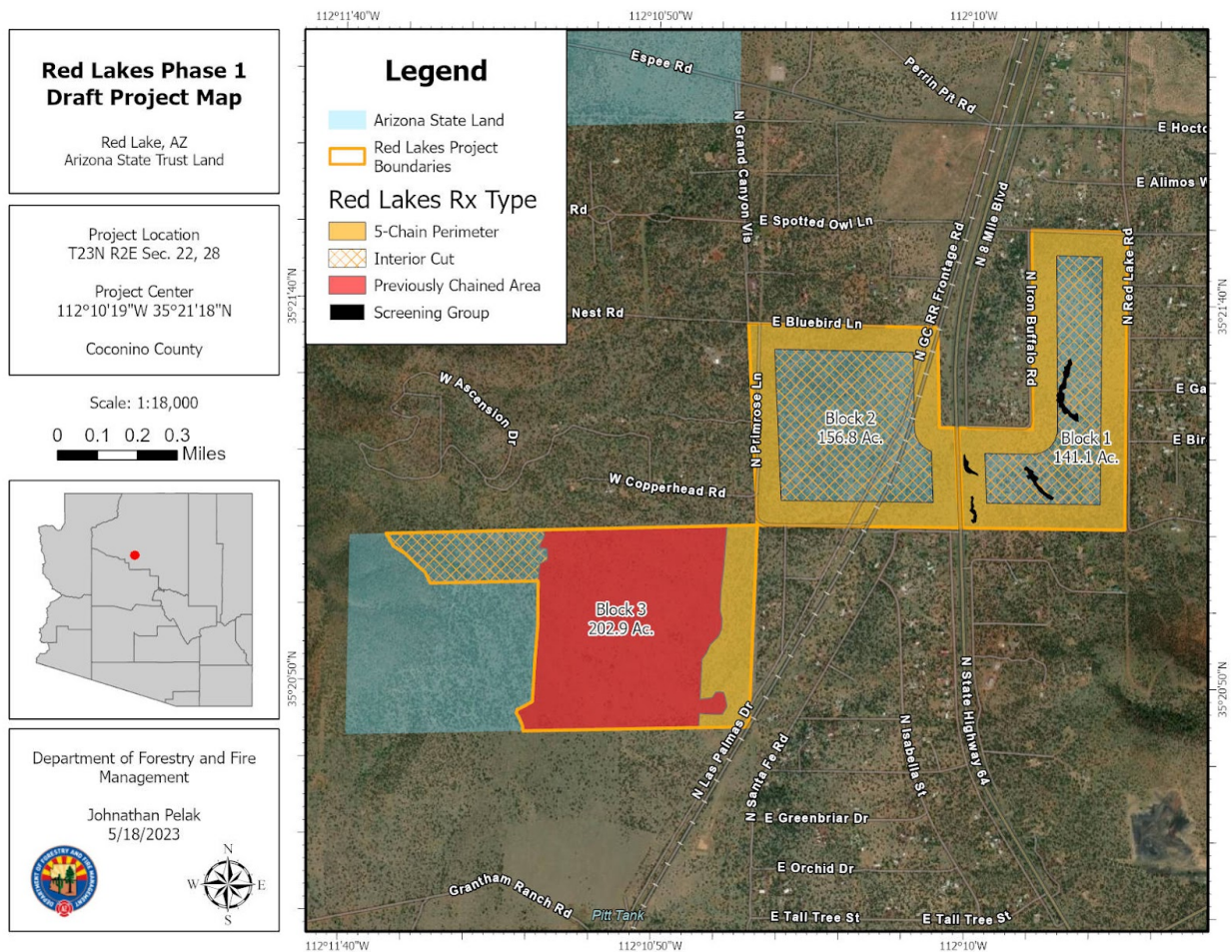


Figure 1: The Red Lakes Phase 1 project map highlighting the different implementation blocks located north of Williams and south of Valle. The treatment is broken into 4 prescription types.



Project Description: The Red Lakes Phase 1 project is characterized as an encroached pinyon juniper shrubland with high density of overstory trees. Mature overstory density across the project site averages 60 trees per acre (TPA) of pinyon pine (*Pinus Edulis*) and 37 TPA of juniper (*Juniperus spp.*). Unlike many sites in the area, pinyon pine in the Red Lakes Phase 1 project area show signs of high site index and vigor. Occasional ponderosa pines (*Pinus ponderosa*) are also scattered across the project area. Understory conditions are generally dominated by sparse blue gramma (*Bouteloua gracilis*) and other native grasses. Several shrubs species, including sage (*Artemisia spp.*), cliffs rose (*Purshia mexicana*), and currant (*Ribes spp.*), are also present where overstory density is low. The project area is generally flat with limited slopes up to 10%. Northern aspects near the southern end of block 1 support higher densities of large pinyon pine while small rocky hillsides in the center of block 2 retain several large relic ponderosa pines. The center portion of block 3 was chained several decades ago and is primarily pinyon pine and juniper regeneration around 6 feet tall. A high density of residual coarse woody debris is also left over from the previous treatment.

Current overstory conditions around the Red Lakes Phase 1 project area are susceptible to crown fire and other severe fire behavior. Wildfire risk is increased by the abundance of ignition sources from the highway, homes, railroad, and utility lines. Additionally, the high density and productivity of pinyon pine on the site likely produces an abundance of pine nuts which are highly valuable to several wildlife species and indigenous people. Reduction of overstory density favoring the retention and release of large pinyon pine is necessary to alter fuel conditions and increase the resilience.

Goals & Objectives: The current conditions around the Red Lakes Phase 1 project necessitate action to reduce the risk of severe wildfire to the community and to increase forest resilience. With this project, the Department seeks to reduce crown density and continuity of overstory trees to decrease the likelihood of crown fire and release pinyon pines (*Pinus Edulis*). The following objectives will provide detailed references to meet these goals and should be achieved by completion of project implementation:

- Objective 1: Create a 5-chain perimeter shaded fuel break near homes with spacing of retention trees ranging from 60 to 150 feet.
- Objective 2: Retain and release ponderosa pine (*Pinus ponderosa*) and large pinyon pine within the interior cut.
- Objective 3: Reduce juniper (*Juniperus spp.*) density across the project area to less than 5 trees per acre on average.
- Objective 4: Alter stand trajectory within the previously chained part of block 3 by retaining pinyon pine regeneration and eradicating small junipers.

Project Prescription: The Red Lakes Phase 1 project is divided into 4 prescriptions to better suit the variability in current and desired conditions across the project area.

1. 5-Chain Perimeter Cut: This prescription will be used to treat a 5-chain, or 330 foot, buffer around blocks 1 and 2 and the eastern side of block 3 between the previously



chained area and eastern boundary. The following cut parameters will be used to create defensible space for the community.

- a. Overall notes:
 - i. Use a hand crew or similar application methodology that mitigates potential risk of debris and other safety hazards for the adjacent homes to selectively thin juniper (*Juniperus spp.*) and pinyon pine (*Pinus edulis*) to discourage canopy fuel continuity.
 - ii. The 5-chain Perimeter cut should be treated before or at the same time as application of the “Interior cut” and “Previously Chained area” to decrease the risk of red slash ignition post treatment.
- b. Retention parameters (Ranked in order of priority):
 - i. Retain all ponderosa pine (*Pinus ponderosa*).
 - ii. Retain all ponderosa pine regeneration.
 - iii. Retain individual and small groups of up to 3 pinyon pine trees with irregular, variable spacing ranging from 60 to 150 feet (average of about 100 feet) measured from other retention trees.
 1. Favor the retention of large, high-vigor pinyon-pines that are likely to release post-cut at the desired spacing.
 - iv. If no ponderosa pine or high-vigor pinyon pine can be retained at the desirable spacing, retain isolated high-vigor juniper trees greater than 20 inches diameter at root collar (DRC) or multi-stem junipers with 30 inch or greater DRC with irregular, variable spacing ranging from 60 to 150 feet (average of about 100 feet) measured from other retention trees.
 1. Favor the retention of juniper acting as shelter trees for pinyon pine regeneration or that exhibit alternative growth forms and damage that may be beneficial to wildlife.
- c. Additional cut parameters (Ranked in order of priority):
 - i. Cut all snags.
 - ii. Cut all juniper and pinyon pine regeneration unless a retained juniper tree is acting as a shelter tree for pinyon pine regeneration.
 - iii. Within one chain, or 66 feet, from the perimeter, limb retention trees up to 4 feet or greater unless doing so will reduce the structural integrity or health of the tree. When cutting limbs, retain the branch collar to allow for proper healing.
- d. Activity Slash:
 - i. Within 2 chains or 132 feet from the perimeter, chip and broadcast all slash less than 4 inches in diameter. Retain all activity slash greater than 4 inches in diameter where felled.
 - ii. Interior of the 2 chain perimeter, retain all slash regardless of size where felled.
 - iii. Where possible, orient activity slash away from retention trees and near cut stumps to encourage fire damage to resprouts and discourage torching of retention trees.



2. Interior Cut: This treatment will be applied to the interior of the 5-chain perimeter cut in blocks 1 and 2 and on the western side of block 3. The following cut parameters will be used to break up canopy continuity while favoring the retention and release of pinyon pine trees.
 - a. Overall notes:
 - i. Using a hand crew, mechanized tree shears, or similar equipment that maintains the overall integrity of the aboveground biomass of cut trees, selectively thin juniper and low-vigor pinyon pine.
 - ii. Retain cut material in the treatment area to encourage desired prescribed fire severity 1 to 3 years post cut.
 - b. Retention parameters (Ranked in order of priority):
 - i. Retain all ponderosa pine, regardless of spacing.
 - ii. Retain all ponderosa pine regeneration.
 - iii. Retain all high-vigor pinyon pines greater than 6 inches in diameter, regardless of spacing.
 - iv. Retain all high-vigor pinyon pine regeneration.
 1. Incidental removal of pinyon pine regeneration is acceptable when removing high density juniper, but should be avoided where possible.
 - v. Where large openings form between large pinyon pine and ponderosa pine retention trees, retain individual or small groups up to 5 trees of smaller pinyon pine in irregular, variable spacing ranging from 60 to 150 feet (average of about 100 feet) measured from other retention trees.
 - vi. Where pine retention trees create openings outside of the desired spacing, retain individual or small groups up to 4 trees of single stem junipers greater than 20 inches DRC or multi-stem junipers with 30 inch or greater DRC with irregular, variable spacing ranging from 60 to 150 feet (average of about 100 feet) measured from other retention trees.
 1. Where possible, favor the retention of juniper acting as shelter trees to pinyon regeneration or that exhibit wildlife features.
 - c. Additional cut parameters (Ranked in order of priority):
 - i. Cut all snags other than up to one pinyon pine snags larger than 6 inches in diameter per acre.
 - ii. Cut all juniper regeneration.
 - d. Activity slash:
 - i. Retain all activity slash where felled.
 - ii. Where possible, orient activity slash away from retention trees and near cut stumps to encourage fire damage to resprouts and discourage torching of retention trees.
3. Previously chained area: This treatment will be applied to the center of unit 3 where evidence of prior chaining operations (smaller tree size, lower mature tree density, abundance of whole tree coarse woody debris) are present. The following cut



parameters will be used to alter stand trajectory and increase the longevity of desired conditions.

- a. Overall notes:
 - i. Using a hand crew, mechanized tree shears, or similar equipment that maintains the overall integrity of the aboveground biomass of cut trees, eradicate small juniper.
 - ii. Retain cut material in the treatment area to encourage desired prescribed fire severity 1 to 3 years post cut.
 - b. Retention parameters (Ranked in order of priority):
 - i. Retain all ponderosa pine.
 - ii. Retain all ponderosa pine regeneration.
 - iii. Retain all pinyon pine.
 - iv. Retain all pinyon pine regeneration.
 - v. Where large openings form between pinyon pine and ponderosa pine retention trees, retain individual and small groups up to 4 trees of junipers greater than 20 inches DRC single stem or 30 inches DRC multi-stem with irregular, variable spacing ranging from 60 to 150 feet measured from other retention trees.
 1. Favor the retention of juniper acting as shelter trees for pinyon pine regeneration or that exhibit alternative growth forms and damage that may be beneficial to wildlife.
 - c. Additional cut parameters (Ranked in order of priority):
 - i. Cut all juniper less than 20 inches DRC single stem or 30 inches DRC multi-stem.
 - ii. Cut all juniper regeneration.
 - iii. Cut juniper greater than 20 inches DRC single stem or 30 inches DRC multi-stem as needed to create desirable spacing near ponderosa and pinyon pine.
 - d. Activity Slash:
 - i. Retain all activity slash where felled.
 - ii. Where possible, orient activity slash away from retention trees and near whole tree coarse woody debris and cut stumps to encourage fire damage to resprouts and discourage torching of retention trees.
4. Screening groups: 4 screening groups will be maintained in block 1 to act as higher density wildlife corridors and to limit viewshed issues between homes and the highway. These areas will maintain a higher density of trees and are roughly oriented north to south.
- a. Overall notes:
 - i. Exclude treatment from screening groups.
 - ii. Screening groups will be marked in pink and provided in a georeferenced map.
 - b. Retention parameters (Ranked in order of priority):
 - i. Retain all mature trees, regardless of species and size.



- c. Cut parameters (Ranked in order of priority):
 - i. None.
- d. Activity Slash:
 - i. Where possible, trees felled near screening groups should be oriented away from the group to reduce the likelihood of ignition to retention trees.

Marking & Layout Guidelines: Screening groups will be marked with pink flagging.

Budget: The total estimated cost to complete the phase 1 treatment of the Red Lakes Phase 1 project is \$683,281.00. The estimated cost is based on the following estimations:

| Line Item | Cost | Estimate or Actual |
|-------------------------|---------------------|--------------------|
| Archeological Survey | \$28,622.00 | Actual |
| Hand Crews (~183 acres) | \$274,500.00 | Estimate |
| Mechanical (~317 acres) | \$380,400.00 | Estimate |
| Total: | \$683,281.00 | Estimate |

Timeline:

| May - July 2023 | July 2023 - March 2024 | March 2024 |
|-------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------|
| <i>Finalize practice plan and solicit task order.</i> | <i>Finalize operational plan, notify neighbors, prep unit for implementation.</i> | <i>Begin project implementation.</i> |
| November 2024 | November 2024 - May 2028 | |



| | | |
|----------------------------|-------------------------------------------------------------------|--|
| <i>Complete treatment.</i> | <i>Monitor post treatment data and follow up prescribed fire.</i> | |
|----------------------------|-------------------------------------------------------------------|--|

Sustainability and Monitoring: Juniper trees are known to reproduce through asexual sprouting after removal of above-ground biomass through cutting or similar management actions. To maintain the desired conditions, Arizona Department of Forestry and Fire Management technicians will monitor the density of juniper resprouts and other stand characteristics using hand or remote sensing driven data collection methods for 1 to 3 years post-treatment. Prescribed broadcast fire should be used as follow-up treatment 1 to 3 years post treatment to achieve desired conditions.

Biological Resource Concerns: A review of federal and state recognized wildlife species of conservation need was completed on April 5th, 2023 using the Arizona Environmental Online Review Tool and US Fish and Wildlife IPac (Appendix B) online tool. Most species on this list, such as the northern Mexican garter snake (*Thamnophis eques megalops*) and yellow-billed cuckoo (*Coccyzus americanus*), are not likely to occur at the project site or to be impacted with this management plan. However, due to the abundance of large pinyon pine (*Pinus edulis*), species such as pinyon jay (*Gymnorhinus cyanocephalus*) that rely on pine nuts were considered during prescription development. Large pinyon pine that are likely to produce pine nuts will be favored and higher pinyon pine density will be maintained in the interior cut.

Cultural Resource Concerns: A targeted Class III inventory of a 20 percent sample (survey area) of the total Project area was completed by PaleoWest (now Chronicle Heritage) in fall of 2022. Per that survey, the State Historic Preservation Office determined a No Historic Properties Impacted for hand-thinning treatments in the Phase 1 project area (See SHPO-2023-0169 [167735]). AZFFM Cultural Resources Specialist Sara Cullen conducted a secondary Class III survey of 321 acres of the Phase 1 project area to obtain clearance for alternative mechanical treatments with limited ground disturbance equipment. 3 sites were recorded during the survey that require exclusion from the treatment with a 50 foot buffer around site boundaries. With these restrictions, the State Historic Preservation Office determined a No Historic Properties Impacted for mechanical equipment with limited ground disturbance for the project (See SHPO-2023-0169 [170821], Appendix C). To reduce the likelihood of significant soil damage, wheeled vehicles should only be used during dry and frozen conditions and operations should be halted if rutting or unmarked archeological sites are noted. If equipment cannot move around the site without significant ground disturbance, machinery must be confined to existing roads. The Department of Forestry and Fire Management cultural resources team can revoke authorization of mechanized equipment at any time if ground disturbance is deemed to exceed allowable levels.

Additional Resource Concerns: The implementation team should be especially considerate of noise and aesthetics when completing portions of the project that are within 300 feet of



residential properties. Excessive noise, such as the operation of a chainsaw or chipper, should not begin until after 7:30 AM to reduce impact to residents. Additional care should also be observed in the vicinity of the Grand Canyon Railroad for crew safety and ignitions concerns. Crews should not operate in the immediate vicinity of the track and slash produced near the railroad should be spaced away to reduce the likelihood of wildfire ignition.

Signatures & Approvals: I have, to the best of my knowledge, and as a qualified resource professional, prepared this plan in accordance with best management practices and Department policy and procedures.

Johnathan Pelak Date: 8/31/2023
Johnathan Pelak, District Forester
Phone: (602) 826-1476
Email: XXXXX@dffm.az.gov

Amanda Webb Date: 9/5/2023
Amanda Webb, Forestry Projects Manager
Phone: (602) 309-0046
Email: awebb@dffm.az.gov

I have reviewed this Practice Plan for the designated area and I agree to the management activities during the period specified:

See Appendix A Date: June 2, 2022
Arizona State Land Department, Simone Hall
Phone: (602) 931-5006
Email: shall@azland.gov



Appendix A: ASLD concurrence memo





Keith Pajkos <kpajkos@dffm.az.gov>

Fwd: Red Lakes Concurrence

Russell Benford <rbenford@dffm.az.gov>
 To: Brece Hendrix <bhendrix@dffm.az.gov>
 Cc: Keith Pajkos <kpajkos@dffm.az.gov>

Mon, Jun 6, 2022 at 11:26 AM

Brece,

We've received ASLD concurrence on the Red Lakes project. Please include the email thread below as an appendix of the plan and surrogate for landowner signature. Please also communicate with the lessees before the project gets handed off to OPS to ensure that we're answering the lessees' questions, addressing their concerns and accommodating their needs.

thanks,
 B

----- Forwarded message -----

From: John Richardson <jrichardson@dffm.az.gov>
 Date: Sun, Jun 5, 2022 at 4:05 PM
 Subject: Fwd: Red Lakes Concurrence
 To: Russell Benford <rbenford@dffm.az.gov>

Concurrence for Red Lakes...

----- Forwarded message -----

From: Simone Hall <shall@azland.gov>
 Date: Thu, Jun 2, 2022 at 3:29 PM
 Subject: Fwd: Red Lakes Concurrence
 To: John Richardson <jrichardson@dffm.az.gov>

John,

Apologies on the latent response - our SMEs have run some of the issues involving a few of the parcels to ground on the proposed Red Lakes project.

Cory has done a terrific job, yet again, on providing necessary lessee/parcel information.

Please accept this email as ASLD's concurrence on the proposed project.

Best,
 S

Simone Westbrook Hall | Director, Natural Resources Division

Arizona State Land Department

1616 W. Adams Street | Phoenix, AZ 85007

O: 602-542-3179 | C: 602-931-5006 | shall@azland.gov



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6/6/22, 11:33 AM

State of Arizona Mail - Fwd: Red Lakes Concurrence

----- Forwarded message -----

From: Cory Runyon <crunyon@azland.gov>
Date: Wed, Jun 1, 2022 at 3:56 PM
Subject: Re: Red Lakes Concurrence
To: Simone Hall <shall@azland.gov>, Steve Rusiecki <srusiecki@azland.gov>

Hi Simone,

Sections 2, approximately half of section 10, 12 & 14 are leased to John Mahan 05-1684, [REDACTED] There are no authorized improvements on the parcels associated with this lease, however there is an unauthorized fenceline in section 14.

The other half of section 10 is leased to the Perrin Ranch LLC and the contact info is Michael Macauley [REDACTED] There are no improvements on this parcel.

Sections 22 & 28 are leased to Allen Grantham [REDACTED] In section 28 there is a pipeline located in NENE running S to N. There is also a water tank and trough in the NENE corner.

Let me know if you need anything else.

Thanks,

Cory R. Runyon | Land Resources Section Manager
Arizona State Land Department

1616 W. Adams Street | Phoenix, AZ 85007

O: 602-542-2922 | crunyon@azland.gov



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On Thu, May 26, 2022 at 8:04 AM Simone Hall <shall@azland.gov> wrote:

Cory - I'm behind this week. Please take a look as soon as you are able.

Thanks,

S

Simone Westbrook Hall | Director, Natural Resources Division
Arizona State Land Department

1616 W. Adams Street | Phoenix, AZ 85007

O: 602-542-3179 | C: 602-931-5006 | shall@azland.gov



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----- Forwarded message -----

From: John Richardson <jrichardson@dfm.az.gov>
Date: Tue, May 24, 2022 at 8:37 AM
Subject: Red Lakes Concurrence
To: Simone Hall <shall@azland.gov>

Simone,

Attached are documents to support ASLD concurrence for the Red Lakes project. This is a phased hand-thinning, mastication and burn project that will protect a community about 10 miles north of Williams. Please let me know if you concur and we will proceed. Thanks!

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<https://mail.google.com/mail/u/0/?ik=be0d652af6&view=pt&search=all&permmsgid=msg-f%3A1734910912912754747&simpl=msg-f%3A17349109129...> 2/3



6/8/22, 11:33 AM

State of Arizona Mail - Fwd: Red Lakes Concurrence

John C. Richardson
Assistant State Forester (Forestry Programs)
Arizona Department of Forestry and Fire Management
1110 West Washington, Suite 500, Phoenix, AZ 85007
(Office) 602-771-1420

—
John C. Richardson
Assistant State Forester (Forestry Programs)
Arizona Department of Forestry and Fire Management
1110 West Washington, Suite 500, Phoenix, AZ 85007
(Office) 602-771-1420

<https://mail.google.com/mail/u/0/?ik=be0d652af6&view=pt&search=all&permmsgid=msg-f%3A1734910912912754747&simpl=msg-f%3A17349109129...> 3/3



AZDFFM – Practice Plan Form

Appendix B: Biological Reports



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:

RedLakes_Phase1

Project Description:

Thinning and Rx burns

Project Type:

Forest, Woodland, Vegetation Management, Thinning

Contact Person:

Johnathan Pelak

Organization:

Arizona State Department of Forestry and Fire Management

On Behalf Of:

AZSFD

Project ID:

HGIS-18822

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:

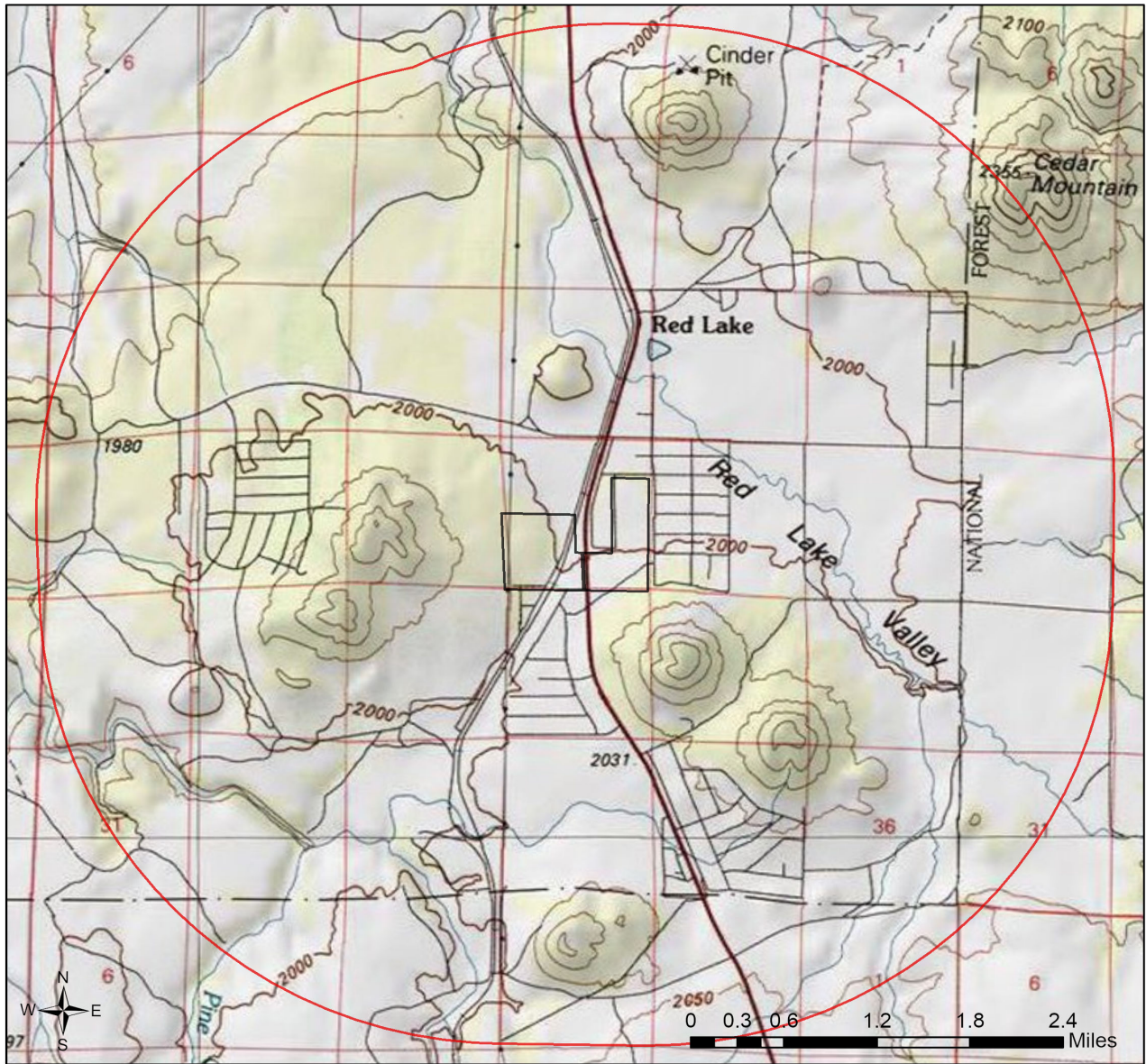
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.



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
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

RedLakes_Phase1

USA Topo Basemap With Locator Map



-  Buffered Project Boundary
-  Project Boundary

Project Size (acres): 297.63

Lat/Long (DD): 35.3566 / -112.1719

County(s): Coconino

AGFD Region(s): Flagstaff

Township/Range(s): T23N, R2E

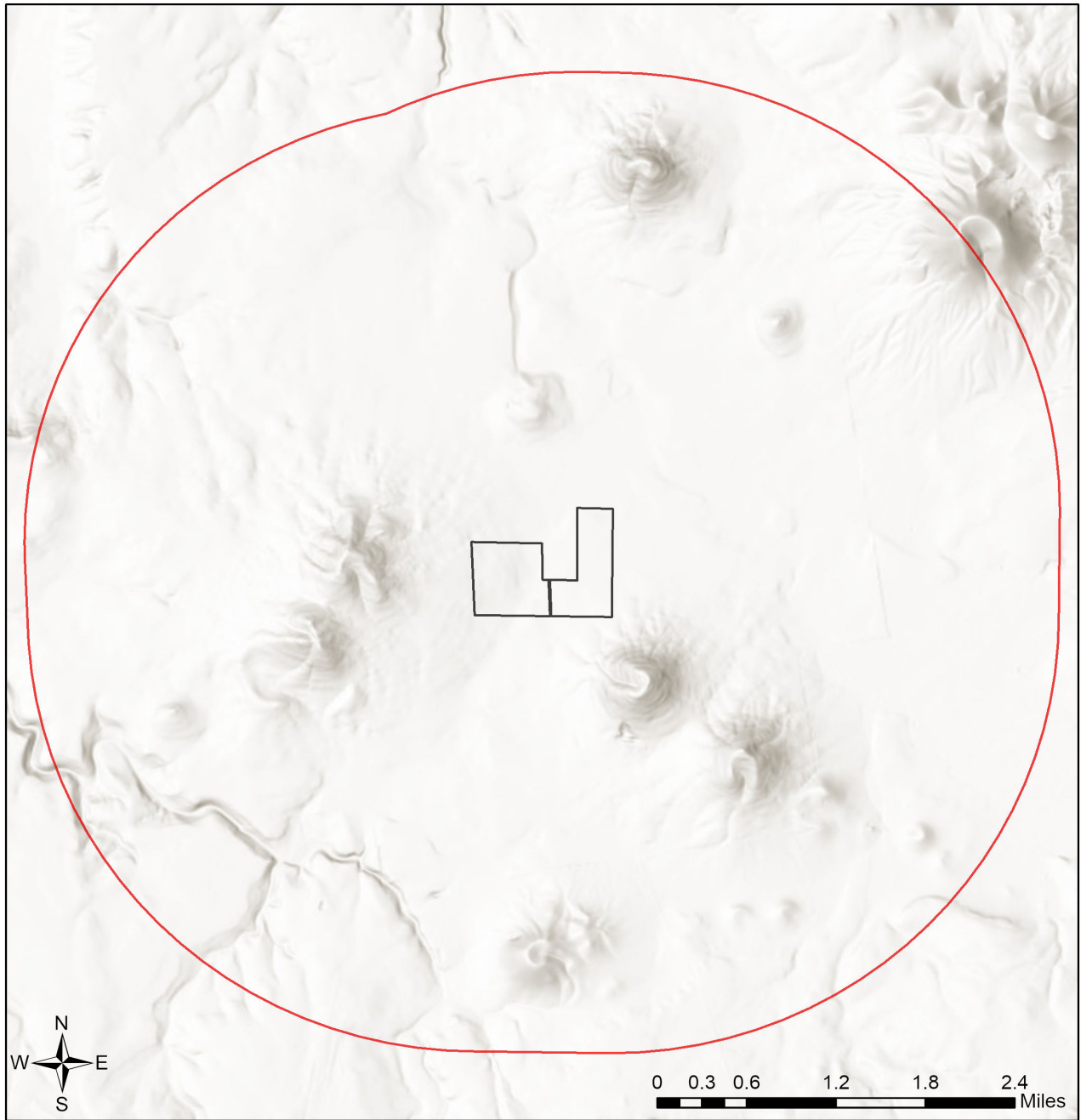
USGS Quad(s): WILLIAMS NORTH



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



RedLakes_Phase1

Web Map As Submitted By User

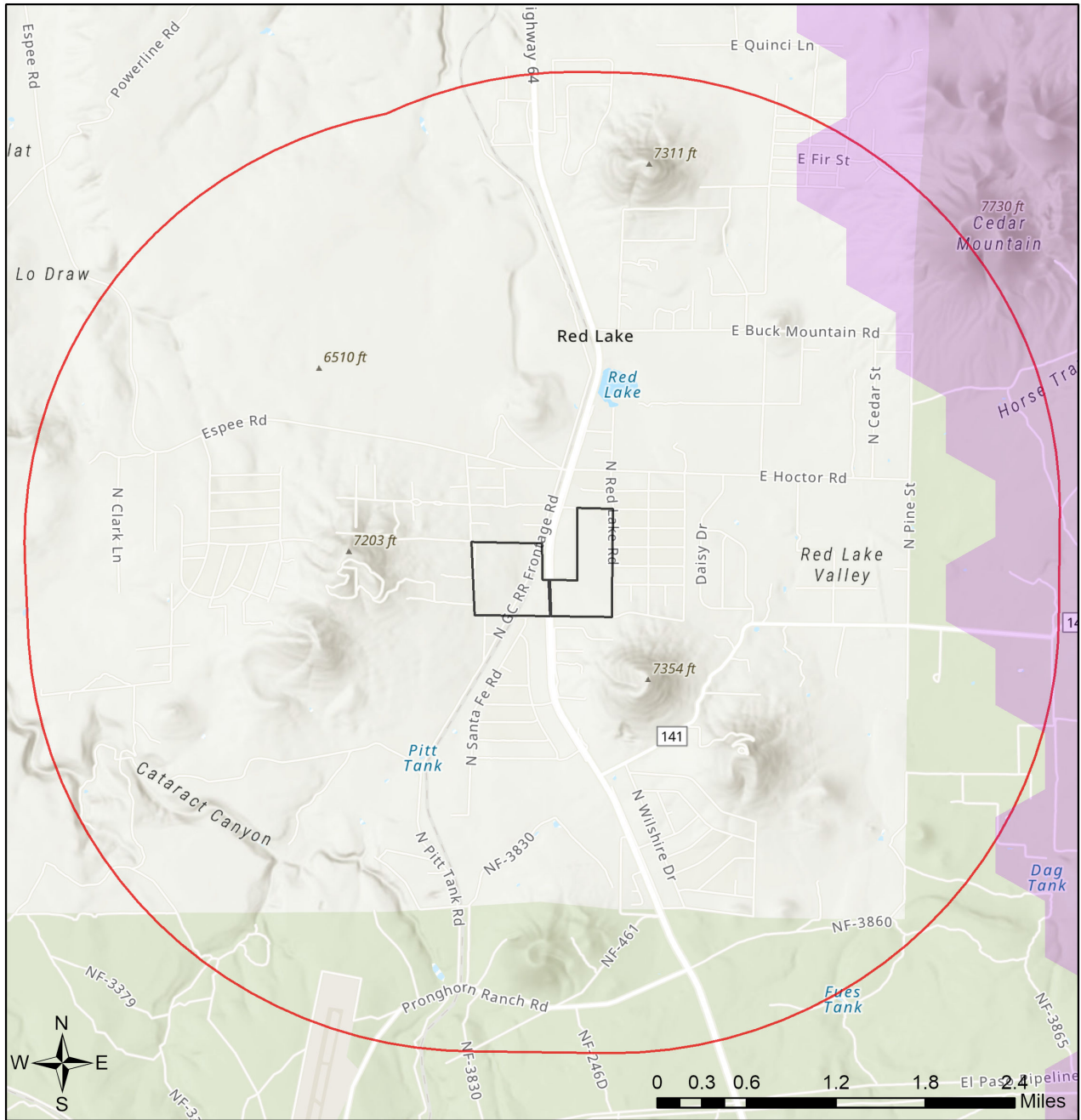


-  Buffered Project Boundary
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RedLakes_Phase1 Important Areas



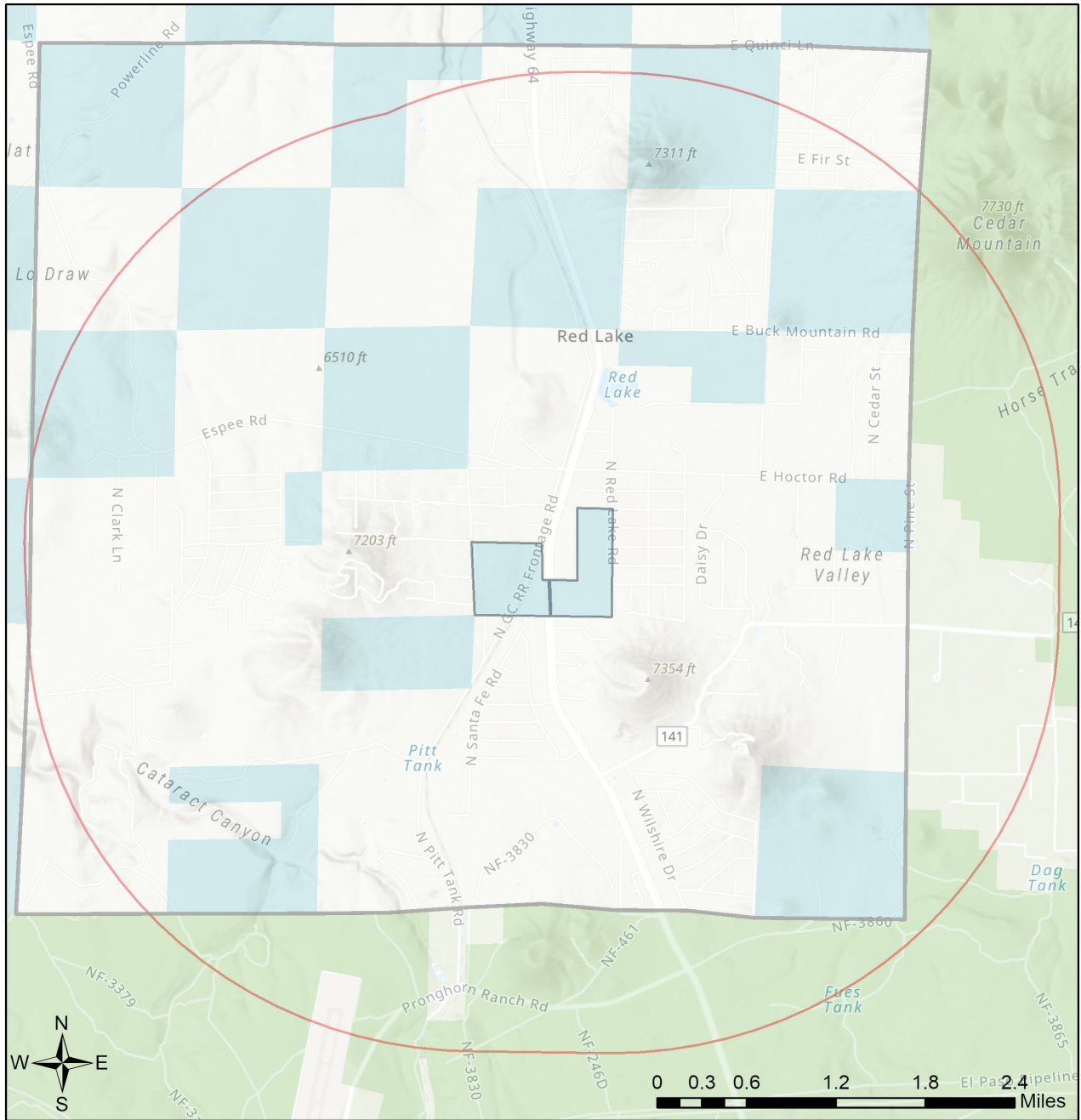
- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Important Connectivity Zones
- Wildlife Connectivity

Project Size (acres): 297.63
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 County(s): Coconino
 AGFD Region(s): Flagstaff
 Township/Range(s): T23N, R2E
 USGS Quad(s): WILLIAMS NORTH

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
 Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

RedLakes_Phase1

Township/Ranges and Land Ownership



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

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 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 |
|--------------------------------------------------|--------------------------------|---------|------|-----|-----|------|
| <i>Aquila chrysaetos</i> | Golden Eagle | BGA | | S | | 2 |
| <i>Canis lupus baileyi</i> | Mexican Wolf | LE,XN | | | | 1 |
| <i>Haliaeetus leucocephalus</i> (wintering pop.) | Bald Eagle - Winter Population | SC, BGA | S | S | | |

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

Special Areas Documented that Intersect with Project Footprint as Drawn

| Scientific Name | Common Name | FWS | USFS | BLM | NPL | SGCN |
|----------------------------------------------------------------|--------------------------------------------------|-----|------|-----|-----|------|
| Espee-Cataract Conservation Easements - Kaibab National Forest | Coconino County Wildlife Movement Area - Diffuse | | | | | |
| Grasslands south of Valle – I-40 | Coconino County Wildlife Movement Area - Diffuse | | | | | |

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

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 |
|-------------------------------------------|-------------------------------|-----|------|-----|-----|------|
| <i>Accipiter gentilis</i> | Northern Goshawk | SC | S | S | | 2 |
| <i>Antilocapra americana americana</i> | American Pronghorn | | | | | 2 |
| <i>Aquila chrysaetos</i> | Golden Eagle | | | S | | 2 |
| <i>Asio otus</i> | Long-eared Owl | | | | | 2 |
| <i>Athene cunicularia hypugaea</i> | Western Burrowing Owl | SC | S | S | | 2 |
| <i>Baeolophus ridgwayi</i> | Juniper Titmouse | | | | | |
| <i>Buteo regalis</i> | Ferruginous Hawk | SC | | S | | 2 |
| <i>Cardellina rubrifrons</i> | Red-faced Warbler | | | | | |
| <i>Catharus ustulatus</i> | Swainson's Thrush | | | | | 2 |
| <i>Chordeiles minor</i> | Common Nighthawk | | | | | 2 |
| <i>Corynorhinus townsendii pallescens</i> | Pale Townsend's Big-eared Bat | SC | S | S | | 1 |
| <i>Elgaria kingii</i> | Madrean Alligator Lizard | | | | | 2 |
| <i>Empidonax wrightii</i> | Gray Flycatcher | | | | | 2 |
| <i>Euderma maculatum</i> | Spotted Bat | SC | S | S | | 2 |
| <i>Eumops perotis californicus</i> | Greater Western Bonneted Bat | | | | | |
| <i>Falco mexicanus</i> | Prairie Falcon | | | | | 2 |
| <i>Falco peregrinus anatum</i> | American Peregrine Falcon | | | | | |
| <i>Falco sparverius</i> | American Kestrel | | | | | 2 |
| <i>Glaucidium gnoma californicum</i> | Northern Pygmy-owl | | | | | |
| <i>Gymnorhinus cyanocephalus</i> | Pinyon Jay | | | S | | 2 |
| <i>Haemorhous cassinii</i> | Cassin's Finch | | | | | 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 |
|---------------------------|-----------------------------|-------|------|-----|-----|------|
| Icterus bullockii | Bullock's Oriole | | | | | 2 |
| Idionycteris phyllotis | Allen's Lappet-browed Bat | SC | S | S | | 2 |
| Lasiurus blossevillii | Western Red Bat | | S | | | 2 |
| Lasiurus cinereus | Hoary Bat | | | | | 2 |
| Lithobates pipiens | Northern Leopard Frog | | S | S | | 1 |
| Megascops kennicottii | Western Screech-owl | | | | | |
| Melanerpes uropygialis | Gila Woodpecker | | | | | 2 |
| Melospiza lincolni | Lincoln's Sparrow | | | | | 2 |
| Mustela nigripes | Black-footed Ferret | LE,XN | | | | 1 |
| Myadestes townsendi | Townsend's Solitaire | | | | | 2 |
| Myotis auriculus | Southwestern Myotis | | | | | 2 |
| Myotis thysanodes | Fringed Myotis | SC | | | | 2 |
| Myotis yumanensis | Yuma Myotis | SC | | | | 2 |
| Neotamias cinereicollis | Gray-collared Chipmunk | | | | | |
| Neotoma stephensi | Stephen's Woodrat | | | | | 2 |
| Nyctinomops femorosaccus | Pocketed Free-tailed Bat | | | | | 2 |
| Nyctinomops macrotis | Big Free-tailed Bat | SC | | | | 2 |
| Passerculus sandwichensis | Savannah Sparrow | | | | | 2 |
| Perognathus amplus | Arizona Pocket Mouse | | | | | 2 |
| Peromyscus nasutus | Northern Rock Deermouse | | | | | |
| Peucedramus taeniatus | Olive Warbler | | | | | |
| Poocetes gramineus | Vesper Sparrow | | | | | 2 |
| Psilosops flammeolus | Flammulated Owl | | | | | 2 |
| Rallus limicola | Virginia Rail | | | | | |
| Setophaga nigrescens | Black-throated Gray Warbler | | | | | 2 |
| Spizella breweri | Brewer's Sparrow | | | | | 2 |
| Strix occidentalis lucida | Mexican Spotted Owl | LT | | | | 1 |
| Tadarida brasiliensis | Brazilian Free-tailed Bat | | | | | |
| Troglodytes pacificus | Pacific Wren | | | | | 2 |
| Vireo vicinior | Gray Vireo | | | | | |

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

| Scientific Name | Common Name | FWS | USFS | BLM | NPL | SGCN |
|----------------------|--------------------|-----|------|-----|-----|------|
| Cervus elaphus | Elk | | | | | |
| Odocoileus hemionus | Mule Deer | | | | | |
| Patagioenas fasciata | Band-tailed Pigeon | | | | | |
| Pecari tajacu | Javelina | | | | | |
| Puma concolor | Mountain Lion | | | | | |
| Sciurus aberti | Abert's Squirrel | | | | | |

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

| Scientific Name | Common Name | FWS | USFS | BLM | NPL | SGCN |
|------------------|---------------------|-----|------|-----|-----|------|
| Ursus americanus | American Black Bear | | | | | |
| Zenaida macroura | Mourning Dove | | | | | |

Project Type: Forest, Woodland, Vegetation Management, Thinning

Project Type Recommendations:

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.

Habitat restoration recommendations are dependent on habitat communities, target species, species located within the project area, site history, restoration goals, and treatment types. General project scoping should include defined project goals with measurable success criteria, site evaluation (e.g., soil conditions, local and watershed hydrological conditions and regimes), pre-project fish and wildlife surveys to determine project impacts and baseline data for post-project evaluation, established plan and methods for site preparation and revegetation (plant species evaluation based on current or expected site environmental conditions), consideration/incorporation of wildlife habitat features that may be secondary to project objectives (e.g., retaining snags for roost sites) and effects to habitat and wildlife at landscape scales (broader than project area), post-project monitoring plans and funding commitments, and an adaptive management plan. We recommend early coordination with Department personnel on project designs. Contact information can be found at <https://www.azgfd.com/Agency/Offices> or email our Project Evaluation Program at PEP@azgfd.gov

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/>).

Consider incorporating project components that may allow for the inclusion to promote, enhance, create, or restore wildlife habitat. Contact Project Evaluation Program for further information and opportunities, PEP@azgfd.gov or (623) 236-7600 or <https://www.azgfd.com/agency/offices/>

Based on the project type entered, coordination with U.S. Fish and Wildlife Service (Migratory Bird Treaty Act) may be required (<https://www.fws.gov/office/arizona-ecological-services>).

Project Location and/or Species Recommendations:

Analysis indicates that your project is located in the vicinity of an identified **wildlife habitat connectivity feature**. The **County-level Stakeholder Assessments** contain five categories of data (Barrier/Development, Wildlife Crossing Area, Wildlife Movement Area- Diffuse, Wildlife movement Area- Landscape, Wildlife Movement Area- Riparian/Washes) that provide a context of select anthropogenic barriers, and potential connectivity. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: <https://www.azgfd.com/wildlife/planning/habitatconnectivity/identifying-corridors/>.

Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

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 <https://www.fws.gov/office/arizona-ecological-services> or:

Phoenix Main Office
9828 North 31st Avenue #C3
Phoenix, AZ 85051-2517
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

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Coconino County, Arizona



Local office

Arizona Ecological Services Field Office

☎ (602) 242-0210

📅 (602) 242-2513

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

| NAME | STATUS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Mexican Wolf <i>Canis lupus baileyi</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3916 | Endangered |

Birds

| NAME | STATUS |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Mexican Spotted Owl <i>Strix occidentalis lucida</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8196 | Threatened |
| Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3911 | Threatened |

Reptiles

| NAME | STATUS |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Northern Mexican Gartersnake <i>Thamnophis eques</i> <i>megalops</i> Wherever found There is final critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7655 | Threatened |

Insects

| NAME | STATUS |
|------|--------|
|------|--------|

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date

range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

| NAME | BREEDING SEASON |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| <p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> | Breeds Oct 15 to Jul 31 |
| <p>Evening Grosbeak <i>Coccothraustes vespertinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> | Breeds May 15 to Aug 10 |
| <p>Pinyon Jay <i>Gymnorhinus cyanocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420</p> | Breeds Feb 15 to Jul 15 |
| <p>Rufous-winged Sparrow <i>Aimophila carpalis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> | Breeds Jun 15 to Sep 30 |

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

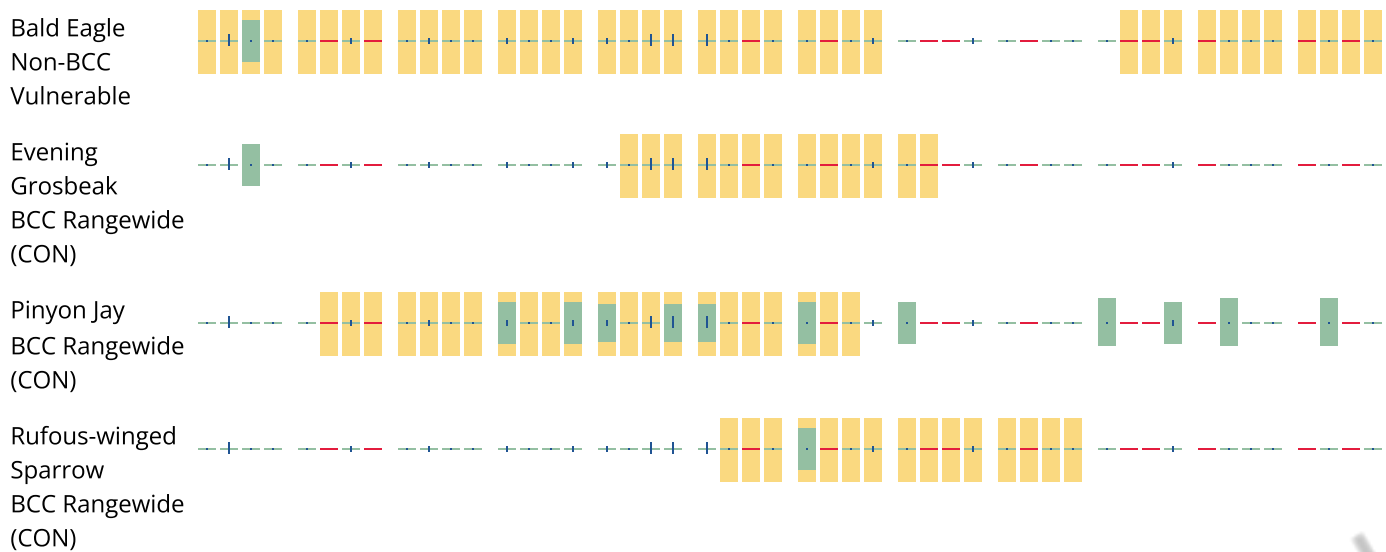
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory

(NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should

seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

Appendix C: Cultural Resource Concerns Documentation





Katie Hobbs
Governor

SHPO-2023-0169 (170821)

Rec: 08-07-23

Office of the State Forester

**Arizona Department of Forestry
and Fire Management**



Tom Torres
State Forester

August 7, 2023

Ms. Kathryn Leonard, State Historic Preservation Officer
State Historic Preservation Office
1100 West Washington Street
Phoenix, Arizona 85007

ATTN: Erin Davis

RE: Red Lake WUI Phase 1 Class III Survey

Dear Ms. Leonard:

The Arizona Department of Forestry and Fire Management (ADFFM) is proposing to conduct a fuels treatment on up to 1,697 acres of State Trust Land near Red Lake (north of Williams), Coconino County, Arizona. For implementation purposes, the project has been divided into Phase 1 and Phase 2. The Phase 1 project location is T23N, R2W, Sec 22 and 28, G&SRB&M. As the proposed project involves State Trust lands, it is subject to compliance with the Arizona State Historic Preservation Act (A.R.S. §41-861 et seq.) and the Arizona Antiquities Act (A.R.S. §41-841 et seq.).

The goal of the project is to reduce fire risk to unincorporated subdivision and developments in the area of Red Lake, as well as public and private infrastructure. The proposed treatment for the project involves hand thinning/mechanical harvesting, lop and scatter/pile burning/chipping of slash. The entire area will be broadcast burned in the future.

A targeted Class III inventory of a 20 percent sample (survey area) of the total Project area was completed by PaleoWest (now Chronicle Heritage) in fall of 2022. Per that survey, SHPO determined a No Historic Properties Impacted for hand-thinning treatments in the Phase 1 project area (See SHPO-2023-0169 [167735]). The scope of work of the project changed when it was determined that implementation would utilize mechanical mastication within the interior portion of the parcels, with a 300-ft buffer around the edges where hand-thinning only will still proceed. Therefore it was decided that the perimeter hand-thinning would proceed under the initial concurrence for the targeted Class III, and DFFM would complete the Class III survey within the remainder of the Phase 1 project area.

Duty Respect Integrity

1110 West Washington Street, Suite 500 ☎Phoenix, Arizona 85007 ☎Main: (602) 771-1400 ☎Fax: (602) 771-1421



AZDFFM Cultural Resources Specialist Sara Cullen conducted a Class III survey of 321 acres of the Phase 1 project area to fulfill compliance with the AAA and the Arizona State Historic Preservation Act.

During the current survey, a total of four new archaeological sites (23A1S-RL1-01, 23A1S-RL1-02, 23A1S-RL1-03, 23A1S-RL1-04) and 108 IOs were recorded. Three sites (23A1S-RL1-02, 23A1S-RL1-03, and 23A1S-RL1-04) are recommended as eligible for the National Register of Historic Places (NRHP) under Criteria D. 23A1S-RL1-01 is recommended as not eligible for ARHP/NRHP inclusion. Arizona State Museum (ASM) site numbers are pending at the time of this consultation, and the report will be edited appropriately when the site numbers are received.

All sites will be flagged with a 50-ft buffer around the boundary and will be avoided during project implementation activities. DFFM recommends a determination of No Adverse Impact to Historic Properties.

If any additional sites are found within the project area, DFFM will cease operations at that location and SHPO and ASLD will be consulted.

Please review the enclosed report and provide any comments you may have within 30 days. If you have any questions about this project, please contact me directly at 602-859-3001 or scullen@dffm.az.gov.

Sincerely,

Sara Cullen

Digitally signed by Sara Cullen
Date: 2023.08.07 12:49:03 -07'00'

Sara Cullen

Archaeology Program Manager
Arizona Department of Forestry and Fire Management

Enclosures

Report with Maps, Figures
Historic In-Use Structure Summary and Forms (2)

The fieldwork and report meet current standards. SHPO concurs that the IOs and site 23A1S-RL1-01 are ineligible for inclusion in the Arizona or National Registers of Historic Places. Sites 23A1S-RL1-02, 23A1S-RL1-03, and 23A1S-RL1-04 are eligible under Criterion D for their potential to yield important data. As all sites will be avoided by the proposed project, a finding of No Adverse Impacts is appropriate. We look forward to receiving a final report with ASM site numbers for our files.



Erin Davis
Arizona State Historic Preservation Office
August 28, 2023

