

ENVIRONMENTAL ASSESSMENT BOUNDARY CONE ROW

EA Number: DOI-BLM-AZ-C010-2011-0023-EA Lease/Serial Case File No. AZA 21021, AZA 33625

Bureau of Land Management, Kingman Field Office
Proposed Action Title/Type: Flood Control R-O-W Amendment
Location of Proposed Action: Section 27, T. 19 N., R. 20 W.
Applicant: Mohave County

CONFORMANCE WITH APPLICABLE LAND USE PLAN:

This proposed action is in conformance with the Kingman Resource Management Plan approved March 1995: The following KRMP Decision applies:

LR13a/V All other minor rights-of-way would be evaluated through the environmental review process and granted or rejected on a case by case basis. Existing rights-of-way would be used when possible to minimize surface disturbance.

BACKGROUND

Mohave County holds ROW AZA 21021 for a portion of historic Route 66, and ROW AZA 33625 for an Early Alert Flood Monitoring Station where there is a low water wash crossing on Route 66 in the SE¹/₄SW¹/₄NW¹/₄, SW¹/₄SE¹/₄NW¹/₄, NE¹/₄NW¹/₄SW¹/₄, and NW¹/₄NE¹/₄SW¹/₄ of sec. 27, T. 19 N., R. 20 W., G&SRM. The width of AZA 21021 is 100 feet and for many years Mohave County used heavy equipment to shape the drainage and constructed an earthen dike just upstream and to the south of this wash crossing to redirect the water flow to ensure stability of the ford crossing. It is unknown when the dike structure was constructed. ROW AZA 33625 does not include the rights to maintain the wash channel adjacent to the Alert Monitoring Station.

As a result of stream flows at this location, inaccurate flow depths were recorded at the stream sensor at the weather station. Mohave County conducted extensive maintenance outside of the existing ROWs to stabilize the ford crossing and the channel where flows are measurement by the stream sensor. The area of disturbance extends approximately 1500 feet east and 750 feet west of the highway (estimated at 6.46 acres) and resulted in the removal of all vegetation within the drainage. This was considered trespass and was serialized as AZA 35492. Also, the dike structure mentioned above is not within the right-of-way for this portion of Route 66.

In an effort to resolve the trespass and environmental concerns regarding this situation, Mohave County and BLM personnel jointly inspected the site and identified the minimum area necessary (3.02 acres) to adequately maintain the low water crossing and the weather station. Mohave County submitted an application for a ROW for the identified area dated December 16, 2010.

PURPOSE AND NEED FOR PROPOSED ACTION:

The purpose of the action is to amend existing rights-of way for AZA 21021 and AZA 33625 to allow Mohave County to maintain the grade of a portion of the wash that was bladed in August of 2010 which would allow the Alert weather station to provide advanced warning of potential flooding conditions and to safely maintain the wash crossing by preventing sediment accumulation and erosion. The BLM's need for considering the proposed action is to respond to the application filed by Mohave County to amend the rights-of-way.

DECISION TO BE MADE:

The BLM will decide whether or not to amend the rights-of-way AZA 21021 and AZA 33625, and if so, under what terms and conditions.

DESCRIPTION OF PROPOSED ACTION ALTERNATIVE

ROWs for Route 66 (AZA 21021) and the Alert flood monitoring station (AZA 33625) would be amended to include an area located on both sides of the wash crossing of Route 66 in secs. 27, T. 19 N. R. 20 W. Refer to map 1 for the area proposed to be included in these ROWs under the proposed amendments. Amendments to both of these rights-of-way are being considered because the proposed maintenance would be for the operation of both the road and the Alert station. The amendments would authorize Mohave County to maintain the wash within the area shown on map 1, and to maintain a dike structure on the southern bank just upstream of the wash crossing. The amendment for AZA 21021 would add 2.43 acres to the ROW which is outside of the 100 foot width of this ROW. The authorized area for AZA 33625 is 0.002 acres. Under the proposed action 3.02 acres would be added to AZA 33625.

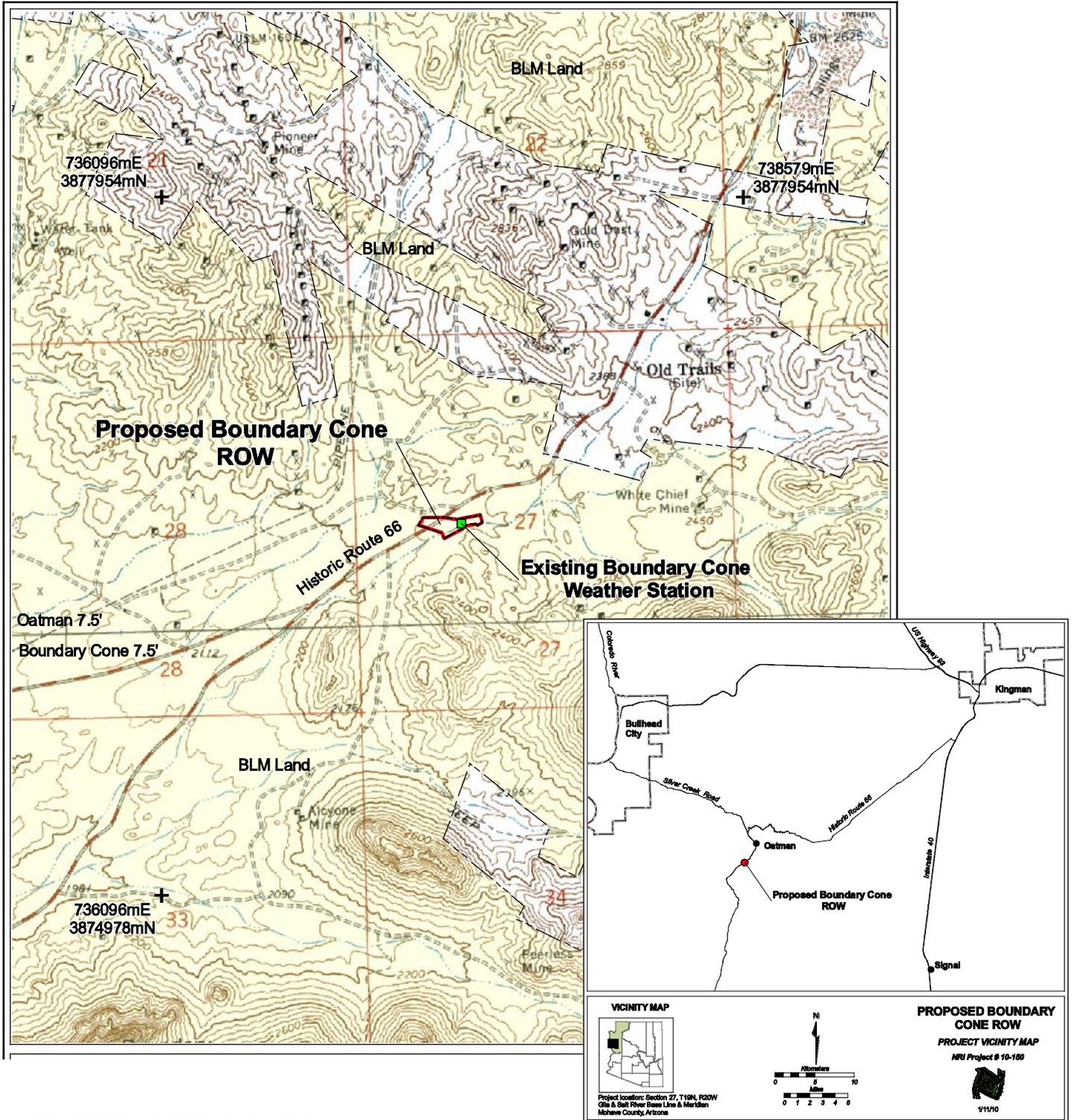
Maintenance activities would entail shaping the drainage to ensure floodwaters will cross the road at the wash crossing to maintain the safety and integrity of Route 66 and to ensure the flows are accurately detected by the stream sensor. Maintenance will be performed on an as needed basis, typically after flood events have affected the wash and dike. Excess material from the wash will be used to reinforce the diversion structure and to restore areas eroded in the wash or along the channel banks. All sediment material will be used on site and in the event material must be removed from the site this would be handled on a case by case basis in compliance with the NEPA. The types of heavy equipment likely to be used include backhoe, front end loader, scraper, D9 bulldozer, motor grader, and a water truck. Typically one or two people would perform this work. Any vegetative material needing to be removed would be disposed of at a landfill unless other arrangements are made. The frequency of maintenance activities is determined by the frequency and intensity of flood events. When drainage maintenance is required, it is anticipated that heavy equipment would be operating within the ROW for several hours to several days.

DESCRIPTION OF NO ACTION ALTERNATIVE

The No Action Alternative would be to not amend ROWs AZA 21021 and AZA 33625. Current authorized maintenance activities for the weather station would only allow maintenance of the station itself including the stream gage sensor but no grading or other earthwork of the wash in the immediate vicinity of the sensor would be allowed. Activities to maintain the wash at the low water crossing in this area would be limited to the 100 foot wide road right-of-way area.

The dike structure would be removed and floodwaters would no longer be directed to the west, but would flow to the southwest in its natural drainage pattern.

Map 1 Project Location



AFFECTED ENVIRONMENT:

The affected environment was considered and analyzed by an interdisciplinary team. Resources of concern that are either not present in the project area or would not be impacted to a degree that requires detailed analysis will not be discussed here. Resources which could be impacted by the proposed action or alternatives are discussed below.

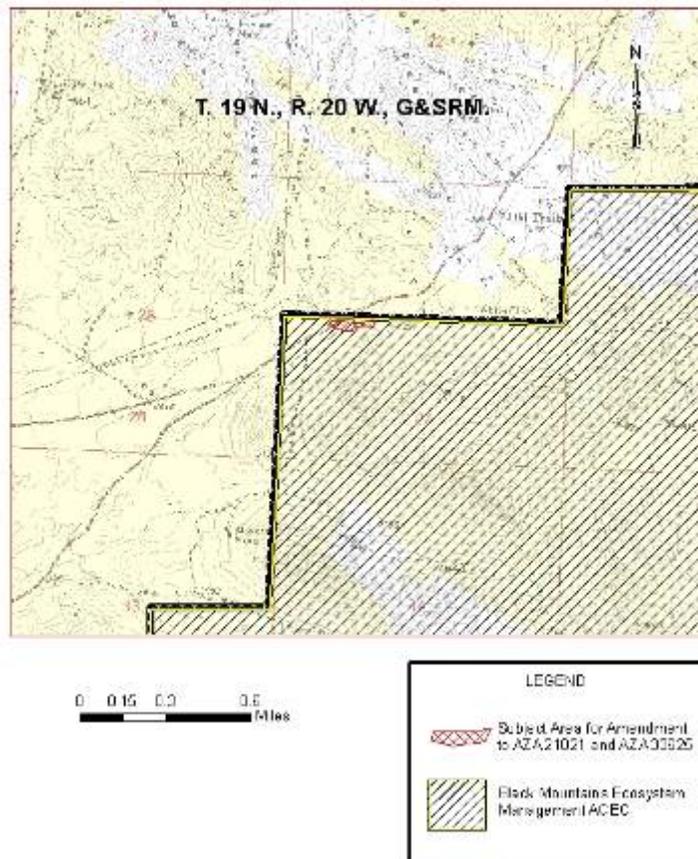
Table 1

PROJECT RESOURCE review			
Resources Considered	Not Present	Present and Not Affected	Present and/or Potentially Affected
Air Quality*			X
Areas of Critical Environmental Concern*			X
Cultural and Historic*	Cultural Resource Survey Completed on September 7, 2010.		
Environmental Justice* / Socioeconomics	X		
Floodplains*		X See below	
Grazing			X
Hazardous or Solid Waste*			X
Invasive and Non-native Species*	X		
Land Use		X Cup of Gold Mining Claim AMC395824 Claimant notified	
Migratory Birds*			X
Native American Religious Concerns*	Nearby Boundary Cone Butte is eligible for inclusion on the National Register of Historic Places for its associative values (National Register Criteria A and B) as a property of traditional, religious, and cultural importance to several Indian tribes. The determination of eligibility was limited to Boundary Cone Butte. No concerns are known specific to the project area.		
Prime and Unique Farmland*	X		
Threatened and Endangered Species*	Wildlife and Botany Report January 29, 2011		
Vegetation			X
Visual Resources			X
Water Quality*	X		
Wetland or Riparian Zones*	X		
Wild and Scenic Rivers*	X		
Wilderness*	X		
Wildlife			X
* Consideration Required By Law or Executive Order			

Area of Critical Environmental Concern – Black Mountain Ecosystem Management

The portion of the proposed areas for amendments to AZA 21021 and AZA 33625 is located within the Black Mountain Ecosystem Management ACEC as displayed on Map 2. Area resource values leading to designation include: bighorn sheep habitat, wild burro area, *Penstemon bicolor var. roseus* habitat (a candidate species for listing under the ESA), outstanding scenic values, open space near major population centers; rare and outstanding cultural resources, and high locatable mineral potential. Objective #3 for this ACEC is to minimize surface disturbance. Management prescription #20 for this ACEC states “Removal of native plants must be compatible with other resource values or limitations or exclusions will be applied.”

Map 2 Proposed Boundary Cone ROW relative to Black Mountain Ecosystem Management ACEC



Floodplains

The area which would be covered under the amendments described in the Proposed Action is located in an unnamed dry wash. The watershed upstream from this location is approximately 4,000 acres. At the location of the Proposed Action the natural drainage pattern transitions from a more or less stable channel confined by topography immediately adjacent to the drainage to the beginnings of a braided channel as it enters into the western bajada of the Black Mountains. The U.S.G.S. Topo Quad for this area (1967) shows the wash draining to the southwest along Route 66. The dike structure which would be included in the rights-of-way under the Proposed Action alternative redirects floodwaters northwest to the confluence with another unnamed wash approximately 800 feet downstream of the wash crossing. The work which has been done in the wash is covered under the Nationwide Permit for maintenance of drainage facilities.

Migratory Birds, Wildlife and Plant Species of Concern

The Wildlife and Botany Report for the Boundary Cone ROW dated January 29, 2011 (Appendix A) provides a detailed analysis of the potential impacts of the project on Migratory Birds, Species of Concern, including desert tortoise, Wildlife Species of Interest, and protected Native Plants. Approximately 5.87 acres of public lands affected by the unauthorized maintenance work provides foraging, nesting, and cover habitat for migratory birds; foraging, burrowing and dispersal habitat for the Sonoran desert tortoise, rosy boa, and banded Gila monster; foraging habitat for bats; and foraging habitat for bighorn sheep.

The proposed Action is in desert tortoise category 3 habitat. This category is the lowest quality habitat, nevertheless the goal for this category is to limit habitat and population declines to the extent possible by mitigating impacts.

Vegetation

Most of the area within the 5.87 acres previously disturbed from unauthorized maintenance activities has been cleared of vegetation. No vegetation remains within the drainage channel. Minor amounts of vegetation occur outside of the channel on the upper banks. Based on vegetation growing in the undisturbed upstream and downstream areas, the removed vegetation was likely to have been typical of washes in the Black Mountains including plants such as burrobush, creosote bush, catclaw, brittlebush, and *Eriogonum inflatum*.

National Back Country Byway

The proposed ROW straddles Historic Route 66 National Back Country Byway. The BLM National Byway program is an effort to open up the less traveled corridors of western public lands. The total length of this byway is 42 miles. It is a popular scenic touring route and is used by tourists to access Oatman in addition to local uses.

Visual Resources

The proposed amendments to ROWs AZA 21021 and AZA 33625 are located within Visual Resource Management Class II (Map 19 of Kingman RMP). The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer.

ENVIRONMENTAL IMPACTS:

Impacts from the Proposed Action

Area of Critical Environmental Concern – Black Mountain

The ROW area has been reduced to the minimum area needed for maintaining the wash crossing in a safe condition and to allow for accurate sensor readings and reducing the amount of area where native plants may need to be removed in the future. Therefore Objective 3, which is to minimize surface disturbance, would be met. Also, by limiting the area which would be disturbed to the minimum, Management Prescription #20, “Removal of native plants must be compatible with other resource values or limitations or exclusions will be applied” would be met.

Floodplains

Work which would be authorized under the Proposed Action will continue to direct the flow to the stream sensor, across the low water crossing, and in a generally western direction. The purpose of the proposed action meets the intent of Executive Order 11988 –Floodplain Management in that the area in which this disturbance has been done would now be reduced to the minimum necessary to achieve maintenance of the channel in a safe manner.

Migratory Birds, Wildlife and Plant Species of Concern

An estimated 3.44 acres of impacted area will eventually become re-vegetated, providing habitat and foraging areas for migratory birds, desert tortoise, rosy boa, banded Gila monster; desert bighorn sheep, bats, and general wildlife within the affected environment. The 2.43 acres within the proposed ROW amendments are expected to receive periodic maintenance activities and are considered a permanent loss of habitat for the above species and general wildlife in the area.

Vegetation

Approximately 3.44 acres of the 5.87 acres disturbed through unauthorized maintenance activities will become re-vegetated. The 3.02 acres within the proposed ROW are expected to receive periodic maintenance activities and are considered a permanent vegetation loss.

National Back Country Byway

The proposed ROW occurs along 300 feet in a wash and will not affect the characteristic features on which the byway designation is based. The continued maintenance of the wash crossing and stream sensor will provide for the safety of the public traveling on this byway.

Visual Resources

Generally, flood events can change the appearance of washes over time. The wash is currently barren of vegetation due to mechanical clearing activities. Vegetation would eventually establish within approximately 3.44 acres of the area in which the unauthorized maintenance occurred. The area which would be included in ROWs AZA 21021 and AZA 33625 as described in the proposed action alternative would not re-vegetate as this area. Vegetation clearing could occur within the ROW if necessary to shape the drainage to protect the wash crossing and ensure stream flows reach the flow sensor. Heavy equipment operating to maintain the ROW will be observed by the public; however this is expected to occur on an infrequent basis. The general traveling public is not expected to be aware of the modified wash vegetative conditions because the wash is located at an angle to the road minimizing time in the observer's view, the duration of the view based on highway speed, the small size of the area, and the expected traveler's focus on the surrounding mountain scenery. The amendments to the ROWs described in the proposed action alternatives would meet the objectives of VRM Class II.

Impacts from the No Action Alternative

No equipment would operate within the channel; therefore, no fugitive dust would be generated and there would be no potential for hazardous material spills.

Channel morphology would likely change with flow events possibly resulting in stream flows either not reaching the stream sensor or being inaccurately recorded. Mohave County would not have accurate and important stream flow data that is used to manage road conditions and warn the public about flood hazards. The public may not receive advance warning of flood conditions and may be at risk.

The change in channel morphology and lack of maintenance on the dike/diversion structure is likely to result in flows crossing Boundary Cone Road and Route 66 in new locations, undermining the stability of these roads. Severe road damage could result in the road being impassable, causing an access issue for the town of Oatman. Repair of this stretch of the highway would be more expensive for Mohave County as compared to the maintenance expense under the proposed action.

Maintaining Route 66 is vital for emergency management and continual operation and survival of the Town of Oatman. If Route 66 to the south and/or Boundary Cone Road to the west became impassable there would be economic and public safety concerns for the town of Oatman. The other access to the town is the portion of

Route 66 to the east toward Kingman. If no traffic were to come from the south, fewer people would visit and spend money in Oatman which would be detrimental to the local economy. The access to and from Kingman is winding and steep. If it became necessary for emergency response to come from Kingman, this would increase the time by approximately 30 minutes.

Vegetation would re-grow on all areas previously disturbed through maintenance activities in the channel with except for the approximate 0.59 acres within the current boundaries of AZA 21021 which would be anticipated to remain denuded of vegetation. Vegetation re-growth would occur within approximately 5.87 acres and would eventually restore habitat for migratory birds, Sonoran desert tortoise, rosy boa, banded Gila monster; foraging habitat for bats; foraging habitat for bighorn sheep, and habitat for other general wildlife species.

Cumulative Impacts

Other past, present, and foreseeable future actions were considered that when combined with the effects of the proposed action would result in cumulative impacts.

Other activities that may generate fugitive dust include: vehicular traffic on dirt roads, mining activities, and construction projects. The small amount of fugitive dust created by this project is of short duration and when combined with other possible fugitive dust would not exceed air quality standards.

Other past, present, and foreseeable future actions that may impact vegetation and associated habitat for migratory birds and wildlife includes clearing of vegetation on private land for development and on public lands for land use projects such as the Boundary Cone Shooting Range, power lines and ancillary facilities such as the proposed Longtin Substation, pipelines, roads, including the proposed re-alignment of SR 95. Off road vehicle use also impacts vegetation and associated habitat.

No cumulative impacts would be anticipated from the No Action Alternative.

DESCRIPTION OF MITIGATION MEASURES AND RESIDUAL IMPACTS:

PERSONS/AGENCIES CONSULTED:

Preparer(s): Sandra Nagiller, Northland Research, Inc., Flagstaff, AZ

Ted Roper	Mohave County Flood Control
Jason Foose	Mohave County Public Works Dept.
Len Marceau	Outdoor Recreation Planner, BLM Kingman Field Office
Tim Watkins	Archaeologist, BLM Kingman Field Office
Ammon Wilhelm	Wildlife Biologist, BLM Kingman Field Office
Andy Whitefield	Environmental Protection Specialist, BLM Kingman Field Office

Environmental Coordinator: Dave Brock

Bureau of Land Management, Kingman Field Office
FINDING OF NO SIGNIFICANT IMPACT

NEPA Document Number: DOI-BLM-AZ-C010-2011-0023-EA

Finding of No Significant Impact: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined that impacts are not expected to be significant and an environmental impact statement is not required.

_____/ s / Ruben A. Sánchez
Field Manager

_____/ 03/15/2011

Date

Kingman Field Office

DECISION RECORD

NEPA Document Number: DOI-BLM-AZ-C010-2011-023-EA

Decision: It is my decision to amend rights-of-way AZA 21021 and AZA 33625 as described in the proposed action alternative.

Rationale for Decision: The areas disturbed by unauthorized maintenance activities must be resolved in accordance with 43 CFR 2808. In considering Mohave County’s need to maintain this area to provide for the public’s safety has been considered and the amount of area to be maintained in a disturbed state has been reduced to the minimum necessary to provide for safe maintenance of the wash crossing and stream sensor.

Stipulations: In addition to the attached terms and conditions, desert tortoise mitigation in the amount of \$1,202 will be required to compensate for residual impacts to desert tortoise habitat in accordance with Instruction Memoranda AZ-92-46, AZ-99-008, and AZ-2009-010, Desert Tortoise Mitigation Policy.

_____/ s / Ruben A. Sánchez
Field Manager

_____/ 03/15/2011

Date

Kingman Field Office

KINGMAN FIELD OFFICE SCOPING FORM

Proposal:

DOI-BLM-AZ-C010-2011-0023-EA
NEPA Document Number

_____ RMP Implementation No.

S:/BLMshare: LANDS/Mohave Co Flood Control
Document Location

Land Description:

Applicant: Mohave County

Authorization: AZA 21021, AZA 33625

INVOLVEMENT: Indicate in the left column which disciplines need to provide information into the EA.

Needed Input (X)	Discipline	Signature
	Lands	
	Minerals	
	Range	
	Wild Horse and Burro	
	General Recreation	
X	Cultural and Paleontological Resources	/s/ Tim Watkins 03/04/2011
	Wilderness	
	Soils	
	Surface and Groundwater Quality/Water Rights	
	Air Quality	
X	Wildlife	/s/ Ammon Wilhelm 03/04/2011
X	Threatened and Endangered Plants and Animals	/s/ Ammon Wilhelm 03/04/2011
X	Migratory Birds	/s/ Ammon Wilhelm 03/04/2011
	Surface Protection	
	Hazardous Materials	
X	Areas of Critical Environmental Concern	/s/ Andy Whitefield 03/09/2011
X	Visual Resources	/s/ Len Marceau 03/04/2011
	Socio-Economics/Environmental Justice	
X	General Botany/Noxious Weeds	/s/ Ammon Wilhelm 03/04/2011
	Energy Policy	

Writer: / s / Andy Whitefield for Sandra Nagiller, Northland Research

Date: 03/04/2011

Environmental Coordinator: / s / David Brock

Date: 03/11/2011

Field Manager: _____

Date: _____

ROAD PLAN OF DEVELOPMENT

1. Purpose and Need for the Facility

The purpose of the ROW is to maintain the diversion structure and the wash to protect the roadway and maintain the grade at the level which exists at the time of this submission. The maintenance of these would allow the ALERT weather station to provide advanced warning about potential flooding conditions both at this location and downstream. In addition to stream flow data, the weather station collects rainfall data which is useful for range management, etc.

 - a. what will be built

The roadway and the ALERT weather station are both existing.
 - b. what is use
 - c. what is size

The area to be maintained is approximately 3 acres.
 - d. does the proposal involve new construction, reconstruction, or improvement of an existing road

The proposed use would be to maintain the existing roadway, drainage infrastructure, and ALERT weather station.
 - e. is the use temporary or permanent

Permanent.
 - f. is this ancillary to an existing right-of-way

The requested ROW supplements the existing ROW for the roadway and the existing ROW for the ALERT weather station.
 - g. type and volume of traffic that is anticipated
 - h. season of use

Year round.
 - i. origination and destination of the road

The roadway provides access to the Oatman area.
 - j. alternative routes or locations, if proposed road not within a designated corridor

The road is existing.
2. Right-of-way Location
 - a. legal description

A legal description will be submitted prior to final approval.
 - b. maps tied to section corners and drawings

same as 2.a.
 - c. road cross sections, and plans and profiles

n/a
3. Facility Design Factors
 - a. minimum and maximum engineering standards

The roadway is existing and has been accepted for maintenance by Mohave County.

 - 1) construction standards of the road

Existing roadway.
 - 2) maximum grade and pitch of the road

n/a
 - 3) requirements and location of drainage ditches, culverts, bridges, and low-water crossings.

The proposed ROW will allow for proper maintenance of the drainage facilities at this location as well as maintenance of the ALERT weather station. This maintenance prevents sediment accumulation or erosion from interfering with the safety of the low water crossing and the proper functioning of the ALERT weather station (this would probably be restating this information from the purpose and need.
 - 4) if the road will be surfaced, what surfacing material will be used

n/a
 - 5) length and width of road

n/a
 - 6) cut and fill diagrams

n/a
 - b. detailed engineering plans and specifications for major structures
 - 1) major culverts, bridges, retaining walls

n/a
 - c. temporary use areas needed

n/a
4. Additional Components
 - a. existing components on and off public land

The drainage facilities exist on public lands. This ROW would allow for maintenance of those facilities without trespass.
 - b. possible future components on and off public land

n/a
 - c. is there a need for sand and gravel supplies from public land

Sediment accumulated on site will be placed on the sides of the channel where erosion has occurred.
 - d. location of equipment storage areas

No equipment will be stored on site other than when immediately related to ongoing maintenance.
5. Government Agencies Involved
 - a. are Corps of Engineers Section 404 permits needed

No. This work falls under Nationwide Permit 3, allowing for maintenance of existing drainage facilities.
 - b. are State or local permits, easements, or dedications needed

No.
6. Construction of facilities

n/a (facilities are existing)

 - a. construction (brief description)

n/a

 - 1) major facilities (including vehicles and number of tons and loads)
 - 2) ancillary facilities (including vehicles and number of tons and loads)
 - 3) methods of construction and types of equipment to be used on the road right-of-way
 - b. work force (number of people and vehicles)

Typical maintenance will be limited to the work required to maintain the existing facilities will be performed.
 - c. flagging or staking of the right-of-way

The proposed ROW has been flagged jointly by BLM and MCFCD personnel and a survey will be provided to document the flagged locations.
 - d. clearing and grading

n/a
 - e. facility construction data

n/a

 - 1) description of construction process

n/a

- f. access to and along right-of-way during construction Access will be from the existing roadway.
 - g. contingency planning n/a
 - 1) holder contacts
 - 2) BLM contacts
 - h. safety requirements Standard County safety measures. This would include the placement of notification signs when work is underway in the ROW. Flaggers may also be used when warranted. Mohave County has standards in place for sign placement, etc. Applicable industry standard safety requirements will also be followed.
 - i. industrial wastes and toxic substances n/a
 - j. seasonal restrictions on various activities n/a
7. Resource Values and Environmental Concerns
- a. address at level commensurate with anticipated impacts no additional impacts are anticipated.
 - 1) location with regard to existing corridors
 - b. anticipated conflicts with resources or public health and safety No impacts are anticipated. There will be minor noise and dust during maintenance of the facilities, but this will be limited to the time of that maintenance.
 - 1) air, noise, geologic hazards, mineral and energy resources, paleontological resources, soils, water, vegetation, wildlife, threatened and endangered species, cultural resources, visual resources, BLM projects, recreation activities, wilderness, etc. The impacts would be the elimination of 3 acres of habitat by the maintenance of the diversion structure and wash bed. If any desert tortoises are observed in this right-of-way during maintenance activities they will be handled in accordance with the protocol of the Arizona Game and Fish Department.
8. Stabilization and Rehabilitation One of the purposes of the maintenance work is to minimize the effects of erosion on the existing facilities.
- a. soil replacement and stabilization
 - b. disposal of vegetation removed during construction (i.e., trees, shrubs, etc.) Any vegetation removed during maintenance activities will be properly disposed of at a county landfill facility unless other arrangements are approved on a case by case basis.
 - c. seeding specifications n/a
 - d. fertilizer n/a
 - e. limiting access to right-of-way n/a
9. Operation and Maintenance Maintenance will be performed on an as needed basis. The frequency of maintenance will be determined by inspection. Frequency of work in the channel will be identified at that time, or during the inspections triggered by runoff events. Accumulated sediments will first be used to reinforce the diversion structure and restore any areas of erosion along the channel banks. It is anticipated that all sediment will be able to be relocated on site, within the requested ROW. Maintenance crews will typically be one or two people using county road maintenance equipment (road graders, loaders, etc.) All work will take place within the requested ROW limits.
- a. minimum maintenance and maintenance schedule Inspection will take place as part of the regularly scheduled roadway and drainage facility maintenance programs.
 - b. placement of control, warning, and directional traffic signs Per Mohave County and MUTCD standards. Warning signs and road closure barricades will be placed when warranted by hazardous crossing conditions. Warning signs notifying motorists of work in the roadway or right-of-way will be placed any time maintenance work is underway which could impact traffic.
 - c. maintenance of special needs such as snow removal, seasonal closure, and controlled access n/a
 - d. safety Safety procedures will be per Mohave County and MUTCD standards as stated above. Warning signs and or flaggers will be used as appropriate.
 - e. industrial wastes and toxic substances The only hazardous materials within the BLM right of way will be fuels and oils contained in the construction equipment during maintenance activities. Any accidental spills will be immediately cleaned up.
 - f. inspection and maintenance schedules Normal county inspection and maintenance schedules for the roadway. Inspection and maintenance will occur minimum of twice a year for the ALERT weather station. Additional inspections and maintenance may be triggered by storm events.
 - g. work schedules Normal County work hours with the exception of potential emergency events.
 - h. fire control n/a
 - i. inspections Typically annual or more frequent
 - j. contingency planning n/a
10. Termination and Restoration n/a
- a. determine if the road will be totally obliterated No
 - b. what structures will be left in place or removed Structures are permanent.
 - c. stabilization and re-vegetation of disturbed area n/a

Wildlife and Botany Report for the Proposed Boundary Cone ROW

January 29, 2011



Prepared by:

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Flagstaff, AZ 86001

Prepared for:

Mohave County Flood Control District
P.O. Box 7000
Kingman, AZ 86402-7000

Submitted to:

Bureau of Land Management
Kingman Field Office
2755 Mission Boulevard
Kingman, AZ 86401-5308

I. Threatened, Endangered, and Proposed Species and Designated/Proposed Critical Habitat

All species on the U.S. Fish and Wildlife Service list for Mohave County dated December 13, 2010 (Appendix 1) were considered. No species listed as Threatened, Endangered, or Proposed are known from the project area. Species habitat needs and geographic/elevation distribution ranges were compared to the project location, elevation, soil, and vegetative conditions. No suitable habitat for any federally listed or proposed for listing species is currently present and no suitable habitat has been modified by the previous unauthorized maintenance activities. No designated or proposed critical habitat is present or would be affected.

II. Candidate Species

Candidate species for listing under the Endangered Species Act on the U.S. Fish and Wildlife Service list for Mohave County dated December 13, 2010 were considered. Those species which may occur in the project area are evaluated below.

a. Sonoran Desert Tortoise

i. Status

On December 14, 2010 the U.S. Fish and Wildlife Service determined that listing under the Endangered Species Act of 1973 (ESA) is warranted but is precluded by the need to address other higher priorities. The U.S. Fish and Wildlife Service added the species to the list of candidates for ESA protection. Candidate species receive no statutory protection under the ESA.

The Mohave population of the desert tortoise is listed as Threatened. There are behavioral, ecological, physical, and genetic distinctions among the Mojave and Sonoran populations.

The U.S. Fish and Wildlife Service recognized the Black Mountains (project area) as an area of possible interbreeding between these two populations of the desert tortoise. The tortoises in this area share genotypic, phenotypic, and habitat use characteristics with the Mohave desert tortoises, but due to geographic location the USFWS has classified the area as within the Sonoran population.

ii. Habitat Requirements

The Sonoran desert tortoise usually occurs on rocky slopes in desert scrub to semi-desert grassland, as well as along washes, and extending into creosote bush flats. Adequate shelter is one of the most important habitat requirements. Tortoises escape extreme temperatures in burrows, which stay cooler in the summer and warmer in winter than outside temperatures. Tortoises require loose soil in which to excavate (usually shallow) burrows below rocks and boulders, but they may also

use rock crevices which they may or may not be able to modify. Tortoises occasionally burrow under vegetation, less often dig soil burrows on more or less open slopes, and also use caliche caves in incised wash banks. They will also rest directly under live or dead vegetation without constructing a burrow. Sonoran desert tortoises are largely inactive from mid-October to late February or early March when they overwinter in constructed burrows or rocky cavities or crevices. Washes and valley bottoms may be used in dispersal and in some areas, as all or part of home ranges.

iii. Presence within the Project Area

No tortoises or evidence (carapaces, scat, burrows) were observed within the project area, however the site visit was conducted at a time of year when tortoises are inactive. The project (prior to maintenance activities) and surrounding area is suitable tortoise habitat. The project area is classified as Category III habitat (Map 3 Black Mountain Ecosystem Plan). The Arizona Game and Fish Database lists the tortoise as occurring within three miles of the project.

iv. Project Effects

All of the 6.46 acres previously disturbed from unauthorized maintenance activities are expected to have been suitable tortoise habitat and were adversely impacted through vegetation removal (both food and shelter) and substrate modification (possible burrow collapsing). An estimated 3.44 acres of impacted area will become re-vegetated and with no further ground disturbance from heavy equipment could return to tortoise habitat. The 3.02 acres within the proposed ROW are expected to receive periodic maintenance activities and are considered a permanent loss of habitat, although due to the small area tortoises may be able to travel through the area if dispersing up or down the wash but will be more susceptible to predation due to the lack of cover.

III. BLM Sensitive Species

All species on the 2010 AZ BLM Sensitive Species List (Appendix 2) identified with a verified occurrence or habitat within the Colorado River District were considered on Chart I located in Appendix 3. Species which are or are likely to be present or for which suitable habitat is present within the project are evaluated below:

a. American peregrine falcon

i. Habitat requirements

The peregrine falcon has been de-listed under the Endangered Species Act. It is dependent on steep cliffs for nesting and expansive open areas for hunting. Peregrines are sensitive to human disturbance, particularly when it occurs above the nest or on the cliff face (such as rock climbing, rappelling activities). Nesting

peregrines are also sensitive to loud construction noises such as blasting. Peregrines forage at great distances, up to 14 miles, from eyries.

ii. Presence in Project Area

There is no nesting habitat within or directly adjacent to the project area. The surrounding mountainous areas may contain suitable cliffs for nesting. The estimated nearest suitable nesting habitat is greater than 0.5 miles distant. No peregrine eyries are known from or within 3 miles of the project based on a review of the Arizona Game and Fish Department Database. Due to the expansive foraging distances of peregrines, it is possible that falcons could forage in the project area however the project area does not contain high concentrations of prey.

iii. Effects of the Project

Heavy equipment noise associated with maintenance activities would not disturb any peregrine falcons that may be nesting in the surrounding area due to the distance to the nearest suitable nesting area. The small size of the project area will not affect the availability of food (birds). Peregrine falcons would not be affected by the project.

b. Golden Eagle

i. Habitat Requirements

Golden eagles nest on cliffs, ledges, or in tall trees. The golden eagle is a carnivore that feeds mainly on small mammals like rabbits, and ground squirrels. They may also eat insects, snakes, birds, juvenile ungulates and carrion. It is extremely sensitive to human disturbance during the nesting season.

ii. Presence within the Project Area

There is no nesting habitat within or directly adjacent to the project area. The surrounding mountainous areas may contain suitable cliffs for nesting. The estimated nearest suitable nesting habitat is greater than 0.5 miles distant. No golden eagles are known from or within 3 miles of the project based on a review of the Arizona Game and Fish Department Database. Due to the expansive home ranges of golden eagles, it is possible that eagles could forage in the project area.

iii. Effects of the Project

Heavy equipment noise associated with maintenance activities would not disturb any golden eagles that may be nesting in the surrounding area due to the distance to the nearest suitable nesting area. The small size of the project area will not affect the availability of food (small mammals, birds, snakes). Golden eagles would not be affected by the project.

- c. Bats – BLM sensitive bats and all other bats

No potential bat roosts (caves, abandoned buildings, or mineshafts) are located within or would be affected by the project. Bats are known to forage several miles (4-5 miles) from roost sites. It is possible that bat roosts could occur within 5 miles of the project and bats could forage in the project area. Substantial mining activity has occurred in the area so it is possible that bats could be roosting in the project vicinity in abandoned mines and foraging in the project area. The relatively small acreage of soil and vegetation impacts from maintenance activities will not affect food (insect) availability for bats.

IV. Wildlife of Special Concern (Listed by Arizona Game and Fish Department)

A review of the November 24, 2010 *Special Status Species by County, Taxon, Scientific Name* posted on Arizona Game and Fish Department's website indicates several species classified as Wildlife of Special Concern (WSC) may occur within the project vicinity.

- a. WSC bats - are considered in Section III.
- b. Peregrine falcon – see Section III.
- c. Sonoran desert tortoise – see Section II.

V. Other Wildlife Species of Interest

- a. Desert Rosy Boa - *Charina trivirgata gracia*

- i. Status

USFWS Species of Concern; Previously a BLM Sensitive Species but not on the December 22, 2010 list

- ii. Habitat Requirements

This nocturnal rock dwelling snake is known from the Cerbat Mountains above Kingman south to the Gila Mountains west of Yuma, and east to Cabeza Prieta National Wildlife Refuge. Rosy boas are found in rocky areas in desert ranges, especially in canyons with permanent or intermittent streams. They occur in a variety of vegetation types including desert, cottonwood-willow or pine-oak riparian from seal level to about 5,000 feet elevation.

- iii. Presence within the Project Area

Rosy boas have not been documented from the Black Mountains; however the project area is located within the species range. Rosy boas were not observed on

the project area; however the species is difficult to observe due to its nocturnal and underground habits. The species could occur in or around the project area.

iv. Project Effects

All of the 6.46 acres previously disturbed from unauthorized maintenance activities may have been suitable rosy boa habitat and were adversely impacted through vegetation removal (habitat that supports food sources such as small mammals, birds, lizards). Slightly more than half of this impacted area will become re-vegetated and with no further ground disturbance from heavy equipment could return to rosy boa habitat. The 3.02 acres within the proposed ROW are expected to receive periodic maintenance activities and are considered a permanent loss of habitat.

b. Banded Gila monster - *Heloderma suspectum cinctum*

i. Status

The banded Gila monster is a U.S. Fish and Wildlife Service Species of Concern.

ii. Habitat Requirements

Gila monsters spend most of their time underground but are active during the day. Their highest activity period is from March to June.

The species is a sedentary and long-lived denning reptile that returns year after year to the same cold-season home site. The Gila monsters' preferred winter quarters are in highland rocky outcrops. They leave their winter home sites in late spring when the temperature starts to rise and head to the cooler and moister underground of the lower bajada or valley below. The all-year home range is usually less than a kilometer. Home ranges overlap and they often go in and out of the same burrows, in a loosely knit social system where the long-term residents in the community must know each other well, and are occasionally seen together in successive years

iii. Presence in the project area

Arizona Game and Fish Department's On-line Environmental Tool (Appendix 5) indicates the banded Gila monster occurs within three miles of the project. No Gila monsters were observed during the field visit, however, based on the time of year it is unlikely that Gila monsters would have been detected. No burrow systems were observed in the area adjacent to the project. The project area is suitable habitat for the Gila monster.

iv. Project effects

All of the 6.46 acres previously disturbed from unauthorized maintenance activities may have been suitable Gila monster habitat and were adversely impacted through vegetation removal (habitat that supports food sources such as small mammals, lizards, and eggs of birds and reptiles). Slightly more than half of this impacted area will become re-vegetated and with no further ground disturbance from heavy equipment could return to Gila monster habitat. The 3.02 acres within the proposed ROW are expected to receive periodic maintenance activities and are considered a permanent loss of habitat.

c. Chuckwalla - *Sauromalus obesus* (*Sauromalus ater*)

i. Status

The chuckwalla was previously listed as a BLM Sensitive Species but does not occur on the December 22, 2010 list.

ii. Habitat Requirements

Chuckwallas are predominantly found near cliffs, boulders or rocky slopes, where they use rocks as basking sites and rock crevices for shelter. When frightened, a chuckwalla will retreat into a rocky crevice and wedge itself in sideways by inflating its body. They can be found in rocky desert, lava flows, hillsides and outcrops. Chuckwallas are known from boulder-strewn hillsides and washes in the Black Mountain Ecosystem area.

iii. Presence within the Project Area

Although chuckwallas may be found in the rocky slopes in the vicinity, the project area is located in a wash that does not contain the required rock crevices.

Chuckwallas are therefore not expected to be in or directly adjacent to the project area.

iv. Effects of Project

The project would not affect chuckwallas because they are not expected to occur in or directly adjacent to the project area.

d. Bighorn Sheep

The Black Mountain Ecosystem Management Plan recognized the mountains in the vicinity of the project as supporting one of the largest desert bighorn sheep populations on the continent. According to Map 2 of that plan, the project area appears to be just outside of high value habitat located to the east and southeast of the Oatman Road and the project area. Medium value habitat is found to the north of the project. Project activities are not expected to disturb bighorn as the activities are located in proximity to the

existing highway. Some forage for bighorn sheep, such as brittlebush, was lost on 6.46 acres from previously unauthorized maintenance activities and will continue to be lost on the 3.02 acres of the proposed ROW but constitutes a minor amount of forage available to the sheep. The project area is in a drainage that could be used by sheep for moving between mountains. Sheep movement will not be impeded by the project.

VI. Migratory Birds

Executive Order 13186 (January 10, 2001) requires federal agencies to consider management impacts to migratory birds to further the purposes of the Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and other laws. Federal agencies need to identify whether unintentional take will occur, and if so, whether such take would have a measurable negative effect on migratory bird populations. Take is defined to mean "... to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect" (50 CFR 10.12). Removal or destruction of vegetation is not considered a taking.

No designated Important Bird Areas are located in or near the project. The previous removal of the vegetation on 6.46 acres and the future removal of vegetation on 3.02 acres may result in unintentional take for migratory birds. During the field visit in January 2011, an unknown bird's nest was observed in a shrub just outside the proposed ROW. The nest was located approximately one foot off the ground in a shrub no more than three feet in height. However, the small amount of unintentional take from vegetation removal will not have a measurable negative effect on migratory bird populations.

VII. Plants Protected under the Arizona Native Plant Law

Most of the vegetation has been cleared from the proposed ROW as a result of previous unauthorized maintenance activities. An estimated 6.46 acres has been denuded of vegetation. No vegetation remains within the drainage channel. Some vegetation occurs outside of the channel on the upper banks. No plants protected under the Arizona Native Plant Law were observed within the proposed ROW. Based on an inspection of the vegetation growing in the undisturbed upstream and downstream areas and the known preferred habitat of protected plants, no plants protected under this law have been impacted as a result of previous activities or would be impacted by the proposed action. One yucca was observed growing on the bank directly above the previously unauthorized ground disturbance but is located outside of the area where future maintenance will occur. No plants protected under the Native Plant law are believed to have been impacted by previous activities. No protected plants would be impacted from the proposed ROW because none are located within the area.

References

Arizona Game and Fish Department. 2001. *Gopherus agassiz*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. 11 pp.

Arizona Game and Fish Department. 2002. *Heloderma suspectum cinctum*. Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. 5 pp.

U.S. Fish and Wildlife Service. 2010. Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the Sonoran Population of the Desert Tortoise as Endangered or Threatened; Federal Register 75(239): 78094-78144. December 14, 2010.

Appendices

Appendix 1 – U.S. Fish and Wildlife Species List for Mohave County

Appendix 2 – BLM Sensitive Species List (2010)

Appendix 3 – Evaluation of BLM Colorado River District Sensitive Species to Determine Potential for Presence within the Boundary Cone ROW Project

Appendix 4- Wildlife Species of Concern for Mohave County: Pages 25-28 (Specific to Mohave County) from November 24, 2010 Special Status Species by County, Taxon, Scientific Name; Arizona Game and Fish Department

Appendix 5 – Arizona Game and Fish Department On-Line Environmental Tool for the Boundary Cone ROW

Appendix 1

U.S. Fish and Wildlife Species List for Mohave County

Mohave County

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Arizona cliffrose	<i>Purshia subintegra</i>	Endangered	Evergreen shrub of the rose family (Roseaceae). Bark pale gray and shreddy. Young twigs covered with dense hairs. Leaves have 1-5 lobes and edges curl downward (revolute). Flowers: 5 petals, white or yellow <0.5 inches long.	Graham, Maricopa, Mohave, Yavapai	< 4,000 ft	White limestone soils derived from tertiary lakebed deposits.	Occurs in central Arizona at Horseshoe Lake, in the Burro Creek drainage, and near Cottonwood in the Verde Valley.
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Large, adults have white head and tail. Height 28-38 inches; wingspan 66-96 inches. Dark with varying degrees of mottled brown plumage. Feet bare of feathers.	Gila, Graham, La Paz, Maricopa, Mohave, Pinal, Yavapai, Yuma	Varies	Large trees or cliffs near water (reservoirs, rivers, and streams) with abundant prey.	Some birds are nesting residents while a larger number winters along rivers and reservoirs. Once endangered (32 FR 4001, 03-11-1967; 43 FR 6233, 02-14-78) because of reproductive failures from pesticide poisoning and loss of habitat, this species was downlisted to threatened on August 11, 1995, and delisted August 8, 2007. Threatened status reinstated for Desert nesting bald eagles.
Bonytail chub	<i>Gila elegans</i>	Endangered	Large (12-14 up to 24 inches) minnow characterized by small head, large fins, slightly humped back and long thin caudal peduncle.	La Paz, Mohave	< 4,000 ft	Warm, swift, turbid mainstem rivers of the Colorado River basin, reservoirs in lower basin.	Endemic to Colorado River Basin. Rarest of Colorado River fish. Population augmentation is ongoing in Lake Mohave and Lake Havasu. Critical habitat includes the Colorado River from Hoover Dam to Davis Dam and another section of the Colorado River from the northern boundary of Havasu National Wildlife Refuge to Parker Dam including Lake Havasu in Mohave County, Arizona. Additional critical habitat is located in Colorado, Utah, Nevada, and California.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
California condor	<i>Gymnogyps californianus</i>	Endangered	Very large vulture (47 in., wingspan to 9 1/2 ft, weight to 22 lbs); adult plumage blackish, immature more brownish; adult wing linings white, immature mottled; head and upper parts of neck bare; yellow-orange in adults, grayish in mature.	Apache, Coconino, Mohave, Navajo, Yavapai	Varies	High desert canyons and plateaus.	Recovery program has reintroduced condors to Northern Arizona, with the first release (6 birds) in December 1996. The release site is located at the Vermillion Cliffs (Coconino County), with an experimental/nonessential area designated for most of Northern Arizona and Southern Utah. The area in Arizona is within a polygon formed by Hwy 191, Interstate 40, and Hwy 93, and extends north of the Arizona-Utah and Nevada borders. Breeding is documented in Arizona.
California Least Tern	<i>Sterna antillarum browni</i>	Endangered	Smallest of the North American Terns. Body length is 21 to 24 cm (8 to 9 inches) with a wingspan of 45 to 51cm (18 to 20 inches). Has black crown and loreal stripe on head, snowy white forehead and underside, and gray upperparts. Outer two primaries black, yellow or orange bill with black tip, and orange legs. Males have a wider dark loreal stripe but sexes mostly distinguished by behavior.	Maricopa, Mohave, Pima	< 2,000 ft	Open, bare or sparsely vegetated sand, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, or drainage systems.	Breeding occasionally documented in Arizona; migrants may occur more frequently. Feeds primarily on fish in shallow waters and secondarily on invertebrates. Nests in a simple scrape on sandy or gravelly soil.
Desert tortoise, Mohave population	<i>Gopherus agassizii (Xerobates)</i>	Threatened	Large herbivorous reptile with domed shell and round stumpy hind legs. Most active during the spring when plants are most abundant. Some activity in late summer following monsoons. Remainder of year spent in burrows.	Mohave	< 4,000 ft	Mohave desertscrub (north and west of the Colorado River) in basins and bajadas but also found on rocky slopes.	Habitat ranges from flatlands to rocky slopes and Bajadas. Species still found throughout range, but populations are fragmented and declining.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Holmgren (Paradox) milk vetch	<i>Astragalus holmgreniorum</i>	Endangered	Stemless herbaceous (non-woody) perennial that produces leaves and small purple flowers in the spring, both of which die back to its root after the flowering season. Compound leaves, blue-green below and yellowish-green above arise directly from the root crown.	Mohave	2,700-2,800 ft.	Just under limestone ridges and along draws in gravelly clay hills.	Critical habitat occurs in Mohave County, Arizona and Washington County, Utah (71 FR 77971-78012, December 27, 2006). Two additional populations known near St. George, Utah. Species also known as Paradox Milk-Vetch.
Hualapai Mexican vole	<i>Microtus mexicanus hualpaiensis</i>	Endangered	Small, cinnamon-brown and mouse-sized; has short tail and long fur that nearly covers its small round ears.	Mohave	3,500-7,000 ft.	Moist, grass/sedge habitats along permanent or semi-permanent waters (springs or seeps).	Also found in pinyon-juniper and pine oak associations with a variety of shrubs and grasses. Species confirmed only in the Hualapai Mountain Range and possible in the Prospect Valley and Music Mountains. Ongoing research suggests that populations may occur in the Hualapai Nation, Aubrey Cliffs, Chino Wash, Santa Maria Mountains, Bradshaw Mountains, Round Mountain, and Sierra Prieta Mountains. The taxon may ultimately be renamed.
Humpback chub	<i>Gila cypha</i>	Endangered	Large (18 inches) minnow with flattened head, long fleshy snout, large fins, and a very large hump between the head and the dorsal fin.	Coconino, Mohave	< 4,000 ft.	Large, warm turbid rivers especially canyon areas with deep fast water.	Species found in the Upper Colorado River basin in Utah and Colorado, and in the Little Colorado and Colorado Rivers in Marble and Grand Canyons, Arizona. Critical habitat designated in Colorado, Utah, and Arizona.
Jones cycladenia	<i>Cycladenia humilis var. jonesii</i>	Threatened	A long lived perennial herb in the dogbane family (Apocynaceae) with pinkish-rose flowers. Plants reach 4-6 inches tall and have orbicular, wide-oval or elliptical leaves. Plants over winter as subterranean rhizomes (roots)..	Coconino, Mohave	4,390-6,000 ft.	Mixed desert scrub, juniper, or wild buckwheat-mormon tea..	It is found on gypsiferous, saline soils of the Cutler, Summerville, and Chinle formations

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Threatened	Medium sized with dark eyes and no ear tufts. Brownish and heavily spotted with white or beige.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai	4,100-9,000 ft	Nests in canyons and dense forests with multi-layered foliage structure.	Generally nest in older forests of mixed conifer or ponderosa pine/gambel oak type, in canyons, and use variety of habitats for foraging. Sites with cool microclimates appear to be of importance or are preferred. Critical habitat was finalized on August 31, 2004 (69 FR 53182) in Arizona in Apache, Cochise, Coconino, Gila, Graham, Greenlee, Maricopa, Navajo, Pima, Pinal, Santa Cruz, and Yavapai counties.
Razorback sucker	<i>Xyrauchen texanus</i>	Endangered	Large, up to 3 feet long and up to 6 lbs, high sharp-edged keel-like hump behind the head. Head flattened on top. Olive-brown above to yellowish below. .	Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Pinal, Yavapai, Yuma	< 6,000 ft	Riverine and lacustrine areas, generally not in fast moving water and may use backwaters.	Big River fish also found in Horseshoe reservoir (Maricopa County). Critical habitat includes the 100-year floodplain of the river through the Grand Canyon from confluence with Paria River to Hoover Dam; Hoover Dam to Davis Dam; Parker Dam to Imperial Dam. Also Gila River from Arizona/New Mexico border to Coolidge Dam; and Salt River from Hwy 60/SR77 Bridge to Roosevelt Dam; Verde River from FS boundary to Horseshoe Lake.
Siler pincushion cactus	<i>Pediocactus sileri</i>	Threatened	Small solitary or clustered cactus globose shaped about 5 inches tall and 3-4 inches in diameter. Flowers: yellow with maroon veins.	Coconino, Mohave	2,800-5,400 ft	Desertscrub transitional areas of Navajo, sagebrush and Mohave Deserts.	Grows on gypsiferous clay and sandy soils of Moenkopi formation.
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Small passerine (about 6 inches) grayish-green back and wings, whitish throat, light olive-gray breast and pale yellowish belly. Two wingbars visible. Eye-ring faint or absent.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	< 8,500 ft	Cottonwood/willow and tamarisk vegetation communities along rivers and streams.	Migratory riparian-obligate species that occupies breeding habitat from late April to September. Distribution within its range is restricted to riparian corridors. Difficult to distinguish from other members of the Empidonax complex by sight alone. Training seminar required for those conducting flycatcher surveys. Critical habitat was finalized on October 19, 2005 (50 CFR 60886). In Arizona there are critical habitat segments in Apache, Cochise, Gila, Graham, Greenlee, Maricopa, Mohave, Pima, Pinal, and Yavapai counties.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Virgin River chub	<i>Gila seminuda</i>	Endangered	Slender, silvery minnow (8-18 inches) with small embedded scales giving a smooth appearance to the body.	Mohave	< 4,500 ft	Deep swift waters but not turbulent, occurs over sand and gravel substrates in water less than 86 degrees F. Tolerant of high salinity and turbidity.	Critical habitat designated in the 100- year floodplain of the Virgin River. Presently found in the Moapa River and mainstem Virgin River. Species also occurs in Washington County, UT and Clark County, NV.
Woundfin	<i>Plagopterus argentissimus</i>	Endangered	Small (4 inches) silver minnow with fairly large fins and a sharp dorsal fin spine.	Maricopa, Mohave	< 4,500 ft	Inhabits shallow, warm, turbid, fast-flowing water. Tolerates high salinity.	Native population only in Virgin River. Designated critical habitat includes the Virgin River and its 100-year floodplain. Experimental non-essential populations (50 FR 30193, 07-24-1985) designated in portions of the Verde, Gila, San Francisco, and Hassayampa rivers and Tonto Creek. Species also occurs in Washington County, UT and Clark County, NV.
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	Endangered	Water bird with long legs and short tail. Long, slender decurved bill. Mottled brown or gray on its rump. Flanks and undersides are dark gray with narrow vertical stripes producing a barring effect.	Gila, La Paz, Maricopa, Mohave, Pinal, Yuma	< 4,500 ft	Fresh water and brackish marshes.	Species is associated with dense emergent riparian vegetation. Requires wet substrate (mudflat, sandbar) with dense herbaceous or woody vegetation for nesting and foraging. Channelization and marsh destruction are primary sources of habitat loss.
Desert tortoise, Sonoran population	<i>Gopherus agassizii</i>	Candidate	Large herbivorous reptile with domed shell and round stumpy hind legs. The carapace is a dull brown or grey color and the plastron is unhinged, often pale yellow in coloration. Sonoran desert tortoises generally have a flatter carapace than tortoises in the Mohave population. Active in spring and during the monsoon; dormant in winter and mid-summer months.	Cochise, Gila, Graham, La Paz, Maricopa, Mohave, Pima, Pinal, Santa Cruz, Yavapai, Yuma	< 7,800 ft	Primarily rocky (often steep) hillsides and bajadas of Mohave and Sonoran desertscub but may encroach into desert grassland, juniper woodland, interior chaparral habitats, and even pine communities. Washes and valley bottoms may be used in dispersal.	Desert tortoises that occur east and south of the Colorado River in Arizona are referred to as the Sonoran population. Individuals are found throughout their historic range; but populations are becoming increasingly fragmented due to threats to their habitat in valley bottoms, which are used for dispersal and exchange of genetic material.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Fickeisen plains cactus	<i>Pediocactus peeblesianus</i> var. <i>fickeiseniae</i>	Candidate	Very small (3 inches tall and 1.5 inches in diameter), unbranched cactus that retreats into gravelly soils after flowering and fruiting. Tubercles form a spiral pattern around plant. Central spine 3/8 inch long flowers cream/yellow.	Coconino, Mohave	4,000-5,000 ft	Shallow soils derived from exposed layers of Kaibab limestone. Found on canyon margins, well-drained hills in Navajoan Desert, or Great Plains grassland.	Widely scattered small populations occur in the vicinity of Gray Mountain, north and west to the Arizona Strip. May also occur near Joseph City in Navajo County.
Gierisch mallow	<i>Sphaeralcea gierischii</i>	Candidate	Perennial plant, up to 3.5 ft tall, with reddish stems and orange flowers.	Mohave	< 5,000 ft	Found only on gypsum outcrops associated with Harrisburg member of Kaibab Formation.	Plant has limited distribution in northern Mohave County and in adjacent Washington County (UT). Known populations restricted to less than 60 acres total.
Relict leopard frog	<i>Lithobates (Rana) onca</i>	Candidate	Medium-sized brownish grey frog in the family Ranidae.	Mohave	< 1,968 ft	Permanent streams, springs, and spring-fed wetlands with open shorelines and available pools.	Considered extinct in the wild in 1950 but re-discovered in 1991. A few scattered individuals observed at Willow Beach hatchery in Arizona. Small, isolated populations may also occur in Lake Mead NRA and in springs below Hoover Dam in Nevada.
Roundtail chub	<i>Gila robusta</i>	Candidate	Member of the minnow family Cyprinidae and characterized by streamlined body shape. Color usually olive gray with silvery sides and a white belly. Breeding males develop red or orange coloration on the lower half of the cheeks and on the bases of paired fins. Individuals may reach 49.0 cm (19.3 in) but usually average 25-30 cm (9.8 - 11.8 in).	Apache, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pinal, Yavapai	1,000-7,500 ft.	Cool to warm waters of rivers and streams, often occupy the deepest pools and eddies of large streams.	Historical range of roundtail chub included both the upper and lower Colorado River basins. A 2009 status review determined that the lower Colorado River basin roundtail chub population segment (Arizona and New Mexico) qualifies as a distinct vertebrate population segment (DPS). Populations in the Little Colorado, Bill Williams, and Gila River basins are considered candidate species.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Candidate	Medium-sized bird with a slender, long-tailed profile, slightly down-curved bill that is blue-black with yellow on the lower half. Plumage is grayish-brown above and white below, with rufous primary flight feathers.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	< 6,500 ft	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk galleries).	Neotropical migrant that winters primarily in South America and breeds primarily in the U.S. (but also in southern Canada and northern Mexico). As a migrant it is rarely detected; can occur outside of riparian areas. Cuckoos are found nesting statewide, mostly below 5,000 feet in central, western, and southeastern Arizona. Concern for cuckoos is primarily focused upon alterations to its nesting and foraging habitat. Nesting cuckoos are associated with relatively dense, wooded, streamside riparian habitat, with varying combinations of Fremont cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk. Some cuckoos have also been detected nesting in velvet mesquite, netleaf hackberry, Arizona sycamore, Arizona alder, and some exotic neighborhood shade trees.
Virgin spinedace	<i>Lepidomeda mollispinis mollispinis</i>	Conservation Agreement	Small fish (2 to 5 inches in length), broad and flattened silvery body with brassy sheen; rounded head and belly; large terminal mouth with two large spines at front of dorsal fin; sooty speckles on dorsal half and dark blotches on sides.	Mohave	< 4,500 ft	Found in small streams; prefer cool, clear tributaries and inflow areas at large streams.	Found in several tributaries of the Virgin River. Species also occurs in Washington County, UT and Clark County, NV. A Conservation Agreement between the Service, Utah Division of Wildlife Resources, Washington County Water Conservancy District, and others finalized in 1995.
American peregrine falcon	<i>Falco peregrinus anatum</i>	Delisted	A crow-sized falcon with slate blue-gray on the back and wings, and white on the underside; a black head with vertical "bandit's mask" pattern over the eyes; long pointed wings; and a long wailing call made during breeding. Very adept flyers and hunters, reaching diving speeds of 200 mph.	Apache, Cochise, Coconino, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Navajo, Pima, Pinal, Santa Cruz, Yavapai, Yuma	3,500-9,000 ft	Areas with rocky, steep cliffs, primarily near water, where prey (primarily shorebirds, songbirds, and waterfowl) concentrations are high. Nests are found on ledges of cliffs, and sometimes on man-made structures such as office towers and bridge abutments..	Species recovered with over 1,650 breeding birds in the US and Canada.

COMMON NAME	SCIENTIFIC NAME	STATUS	DESCRIPTION	COUNTY	ELEVATION	HABITAT	COMMENTS
California brown pelican	<i>Pelecanus occidentalis californicus</i>	Delisted	Large, dark gray-brown water bird with webbed feet, pouch underneath its long bill, and wingspan of 7 ft. Adults have a white head and neck, brownish black breast, and silver gray upper parts.	Gila, La Paz, Maricopa, Mohave, Pinal, Yuma	Varies	Coastal land and islands; species found occasionally around Arizona's lakes and rivers.	Considered an uncommon transient in Arizona. Most observations recorded along the Colorado River and in the Gila Valley. Individuals known to wander up from Mexico in summer and fall. No breeding has been documented in Arizona. Delisted on December 17, 2009.

Appendix 2

BLM Sensitive Species List (2010)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Arizona State Office
One North Central Avenue, Suite 800
Phoenix, Arizona 85004-4427

December 22, 2010

In Reply Refer To:
6840 (932) P

EMS TRANSMISSION 12/29/10
Instruction Memorandum No. AZ-2011-005
Expires: Until Cancelled or Superseded

To: All Field Offices

From: State Director

Subject: Updated Bureau of Land Management (BLM) Sensitive Species List for Arizona

Purpose: The purpose of this Instruction Memorandum (IM) is to identify the BLM sensitive plant and animal species on BLM-administered lands in Arizona in compliance with Manual Section 6840 and to clarify requirements regarding Sensitive Species.

Policy/Action: The BLM Sensitive Species List for Arizona is attached. Because of the dynamic nature of candidate species designation by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service, we recognize that candidate species cannot all be kept up to date on any BLM Sensitive Species List. As such, they will not be separately acknowledged on the Arizona BLM Sensitive Species list. It is incumbent upon each office to keep current with the status of candidate species in Arizona. The USFWS species list for the State can be accessed through the Arizona Ecological Services Home Page listed below and provides the current list of candidate, proposed and listed species:

<http://www.fws.gov/southwest/es/arizona/Documents/CountyLists/Statewide.pdf>

Currently, candidate species which occur on public lands in Arizona or that may be affected by actions on public lands in Arizona are:

Acuna Cactus, *Echinomastus erectocentrus* var. *acunensis*
Fickeisen Plains Cactus, *Pediocactus peeblesianus* var. *fickeiseniae*
Gierisch Mallow, *Sphaeralcea gierischii*
Headwater Chub, *Gila nigra*
Northern Mexican Gartersnake, *Thamnophis eques megalops*

Relict Leopard Frog, *Lithobates onca*
 Roundtail Chub, *Gila robusta*
 Sonoran Desert Tortoise, *Gopherus agassizii*
 Sprague's Pipit, *Anthus spragueii* (wintering)
 Tucson Shovel-Nosed Snake, *Chionactis occipitalis klauberi*
 Yellow-Billed Cuckoo, *Coccyzus americanus*

In addition to the species identified in the attached list and the candidate species listed above, all species identified by California BLM as BLM Sensitive, which occur on public lands in California administered by the Lake Havasu and Yuma Field Offices, are to be managed as BLM Sensitive in California. The lists of California BLM Sensitive wildlife and plant species can be found on the California BLM public website pages listed below:

<http://www.blm.gov/style/medialib/blm/ca/pdf/pa/wildlife.Par.13499.File.dat/BLM%20Sensitive%20Animal%20Update%20SEP2006.pdf>

http://www.blm.gov/style/medialib/blm/ca/pdf/pdfs/pa_pdfs/biology_pdfs.Par.0216dd51.File.pdf/SensitivePlants.pdf

Time frame: This list is in effect until the list is updated.

Background: Under the revised manual Section 6840, the criteria for BLM sensitive species have changed. The guidance provided in the manual for listing BLM sensitive species is:

In compliance with existing laws, including the BLM multiple use mission as specified in the Federal Land Policy and Management Act, the BLM shall designate BLM sensitive species and implement measures to conserve these species and their habitats, including Endangered Species Act (ESA) proposed critical habitat, to promote their conservation and reduce the likelihood and need for such species to be listed pursuant to the ESA. All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as BLM sensitive species.

A. State Directors shall designate species within their respective states as BLM sensitive using the following criteria. For species inhabiting multiple states, State Directors shall coordinate with one another in the designation of BLM sensitive species, so that species status is consistent across the species' range on BLM-administered lands, where appropriate.

Species designated as BLM sensitive must be native species found on BLM-administered lands for which the BLM has the capability to significantly affect the conservation status of the species through management, and either:

- (1) There is information that a species has recently undergone, is undergoing, or is predicted to undergo a downward trend such that the viability of the species or a distinct population segment of the species is at risk across all or a significant portion of the species range, or;
- (2) The species depends on ecological refugia or specialized or unique habitats on BLM-administered lands, and there is evidence that such areas are threatened with alteration such that the continued viability of the species in that area would be at risk.

The Arizona BLM Sensitive Species List was developed following the criteria described above using data from the 2010 Revised Arizona Game and Fish Department (AGFD) Species of Greatest Conservation Need (SGCN) list. Additional information was gathered from interviews with AGFD Nongame Program Specialists, BLM Field Office Biologists/Botanists, and comments received from USFWS Arizona Ecological Services Field Office (March 2009). Additional resources considered include the 2010 California BLM Sensitive lists, 2007 Forest Service Southwest Regional Lists, 2006 *Species at Risk Report for New Mexico and Arizona*, and discussions with New Mexico State Office staff.

Manual/Handbook Sections Affected: Manual Section 6840 is affected.

Contact: If you have any questions, please contact Tim Hughes, Endangered Species Coordinator, at 602-417-9356 or contact John Anderson, Botanist, at 623-580-5520.

SIGNED BY
Michael A. Taylor
for James G. Kenna

AUTHENTICATED BY
Susan Williams
Staff Assistant

1 Attachment:
1 - [Arizona BLM Sensitive Species List](#) (5 pp)

cc: WO230

Arizona Bureau of Land Management Sensitive Species List – December 2010

Common Name	Scientific Name	Colorado River District	Phoenix District	Arizona Strip District	Gila District	Unique Habitat
All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as Bureau sensitive species.						
<u>AMPHIBIANS</u>						
Great Plains Narrow-mouthed Toad	<i>Gastrophryne olivacea</i>		v		v	healthy grasslands
Lowland Burrowing Treefrog	<i>Smilisca fodiens</i>		v			healthy grasslands
Lowland Leopard Frog	<i>Lithobates yavapaiensis</i>	v	v		v	wetlands
Northern Leopard Frog	<i>Lithobates pipiens</i>	v	h	v	h	wetlands
Plains Leopard Frog	<i>Lithobates blairi</i>				h	wetlands
Sonoran Green Toad	<i>Bufo retiformis</i>		v		v	healthy grasslands
<u>BIRDS</u>						
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	v	v	v	v	cliffs
Arizona Botteri's Sparrow	<i>Peucaea botterii arizonae</i>				v	healthy grasslands
Arizona Grasshopper Sparrow	<i>Ammodramus savannarum ammodramus</i>				v	healthy grasslands
Bald Eagle (non-listed DPS)	<i>Haliaeetus leucocephalus</i>	v	v	h	v	undisturbed foraging/nesting areas
Cactus Ferruginous Pygmy-Owl	<i>Glaucidium brasilianum cactorum</i>		v		v	dense Sonoran scrub washes
California Black Rail	<i>Laterallus jamaicensis coturniculus</i>	v	h		h	marshes along Colorado River
Desert Purple Martin	<i>Progne subis hesperia</i>	h	v		v	saguaro cacti
Ferruginous Hawk (breeding population only)	<i>Buteo regalis</i>	v	v	v	v	healthy grasslands
Gilded Flicker	<i>Colaptes chrysoides</i>	v	v		h	saguaro cacti
Golden Eagle	<i>Aquila chrysaetos</i>	v	v	v	v	significant cliffs, large undeveloped areas
Le Conte's Thrasher	<i>Toxostoma lecontei</i>	v	v		h	remote creosote scrub
Northern Goshawk	<i>Accipiter gentilis atricapillus</i>	v	v	v	h	healthy forests
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	v	v	v	v	healthy pinyon pine
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>	v	v	v	v	grasslands, undeveloped valley bottoms

FISH						
Bluehead Sucker	<i>Catostomus discobolus</i>			v	h	aquatic
Desert Sucker	<i>Catostomus clarki</i>	v	v	v	v	aquatic
Flannelmouth Sucker	<i>Catostomus latipinnis</i>			v		aquatic
Little Colorado Sucker	<i>Catostomus</i> sp.				v	aquatic
Longfin Dace	<i>Agosia chrysogaster</i>	v	v		v	aquatic
Sonora Sucker	<i>Catostomus insignis</i>	v	v		v	aquatic
Speckled Dace	<i>Rhinichthys osculus</i>	v	v	v	v	aquatic
Virgin Spinedace	<i>Lepidomeda mollispinis mollispinis</i>			v		aquatic
INVERTEBRATES						
Arizona Cave Amphipod	<i>Stygobromus arizonensis</i>				h	caves
Bylas Springsnail	<i>Pyrgulopsis arizonae</i>				h	springs
Desert Springsnail	<i>Pyrgulopsis deserta</i>			v		springs
Gila Tryonia	<i>Tryonia gilae</i>				h	springs
Grand Wash Springsnail	<i>Pyrgulopsis bacchus</i>			h		springs
Hydrobiid Spring Snails	all species in genus <i>Pyrgulopsis</i>	v	h	v	v	springs
Kingman Springsnail	<i>Pyrgulopsis conica</i>	v				springs
Succineid Snails	all species in family <i>Succineidae</i>	h	h	h	h	springs
MAMMALS						
Allen's Big-eared Bat	<i>Idionycteris phyllotis</i>	v	h	h	v	caves, mines
Arizona Myotis	<i>Myotis occultus</i>	h	h	h	v	caves, mines
Banner-tailed Kangaroo Rat	<i>Dipodomys spectabilis</i>		h		v	healthy grasslands
Black-tailed Prairie Dog	<i>Cynomys ludovicianus</i>				v	healthy grasslands
California Leaf-nosed Bat	<i>Macrotus californicus</i>	v	v	v	v	caves, mines
Cave Myotis	<i>Myotis velifer</i>	v	v	h	v	caves, mines
Greater Western Mastiff Bat	<i>Eumops perotis californicus</i>	v	v	h	v	caves, mines
Gunnison's Prairie Dog	<i>Cynomys gunnisoni</i>	h	h	h	v	healthy grasslands

Houserock Valley Chisel-toothed Kangaroo Rat	<i>Dipodomys microps leucotis</i>			v		Atriplex scrub
Mexican Long-tongued Bat	<i>Choeronycteris mexicana</i>				v	caves, mines
Spotted Bat	<i>Euderma maculatum</i>	h	h	v	h	caves, mines
Townsend's Big-eared Bat	<i>Corynorhinus (=Plecotus) townsendii</i>	v	v	v	v	caves, mines
REPTILES						
Arizona Striped Whiptail	<i>Aspidoscelis arizonae</i>				h	healthy grasslands, north end of Wilcox Playa
Mohave Fringe-toed Lizard	<i>Uma scoparia</i>	v				sand
Desert Ornate Box Turtle	<i>Terrapene ornata</i>				v	healthy grasslands
Slevin's Bunchgrass Lizard	<i>Sceloporus slevini</i>				h	healthy grasslands
Sonora Mud Turtle	<i>Kinosternon sonoriense sonoriense</i>	v	v		v	riparian
Yuman Desert Fringe-toed Lizard	<i>Uma rufopunctata</i>	v				sand
PLANTS						
Aquarius Milkvetch	<i>Astragalus newberryi</i> var. <i>aquaria</i>	v				narrow range, limestone deposits, Burro Creek area
Aravaipa Sage	<i>Salvia amissa</i>				v	narrow range, floodplain terraces in shady canyons
Aravaipa Woodfern	<i>Thelypteris puberula</i> var. <i>sonorensis</i>	v			v	few scattered springs
Arizona Sonoran Rosewood	<i>Vauquelinia californica</i> ssp. <i>sonorensis</i>		v			relict species in shady canyons
Bartram Stonecrop	<i>Graptopetalum bartramii</i>				v	narrow range, rocky outcrops in canyons w/Madrean Woodland
Blue Sand Lily	<i>Triteleopsis palmeri</i>	v				sand dunes and sandy soils
California Flannelbush	<i>Fremontodendron californica</i>	v	v			relict populations in shady canyons
Chihuahua Breadroot	<i>Pediomelum pentaphyllum</i>				v	Healthy grasslands
Clifton Rock Daisy	<i>Perityle ambrosiifolia</i>				v	narrow range, cliff faces of Gila Conglomerate
Dalhouse Spleenwort	<i>Asplenium (=Ceterach) dalhousiae</i>				v	cliff face seeps, Mule Mts.

Diamond Butte Milkvetch	<i>Astragalus toanus</i> var. <i>scidulus</i>			v		narrow range, Moenkopi Formation badlands w/red soils
Fish Creek Fleabane	<i>Erigeron piscaticus</i>				h	narrow range, floodplain terraces in shady canyons
Gentry Indigo Bush	<i>Dalea tentaculoides</i>				h	narrow range, floodplain terraces in shady canyons
Giant Sedge	<i>Carex spissa</i> var. <i>ultra</i>		v		v	springs
Grand Canyon Rose	<i>Rosa stellata</i> var. <i>abyssa</i>			v		narrow range, limestone cliff rims
Huachuca Golden Aster	<i>Heterotheca rutteri</i>				v	narrow range, Plains Grassland, LCNCA
Huachuca Milkvetch	<i>Astragalus hypoxylus</i>				h	narrow range
Kaibab Pincushion [Plains] Cactus	<i>Pediocactus paradinei</i>			v		narrow range
Kearney Sumac	<i>Rhus kearneyi</i> ssp. <i>kearneyi</i>	v				relict species in shady canyons
Kofa Mt. Barberry	<i>Berberis harrisoniana</i>	h	h			relict species in shady canyons
Marble Canyon Indigo Bush	<i>Psoralea arborescens</i> var. <i>pubescens</i>			v		narrow range, red soils of Moenkopi Formation Marble Canyon
Marble Canyon Milkvetch	<i>Astragalus cremnophylax</i> var. <i>hevronii</i>			v		narrow range, limestone cliff rims, Marble Canyon
Mt Trumbull Beardtongue	<i>Penstemon distans</i>			v		narrow range, limestone soils
Murphey Agave	<i>Agave murpheyi</i>		v			low numbers, desert foothills, central AZ
Paria Plateau Fishhook Cactus	<i>Sclerocactus sileri</i>			v		narrow range, sandy soils, Paria Plateau
Parish Phacelia	<i>Phacelia parishii</i>	v				narrow range, limestone deposits, Burro Creek area, dry lake beds, Red Lake
Parish Wild Onion	<i>Allium parishii</i>	v				narrow range, higher elevation desert mts, Mohave Mts.
Pima Indian Mallow	<i>Abutilon parishii</i>				v	rocky slopes, good condition desert mts.
Pinto Beardtongue	<i>Penstemon bicolor</i>	v				narrow range, desert washes, Black Mts.
Purple-spike Coralroot	<i>Hexalectris warnockii</i>				v	few populations, leaf litter under Madrean Woodland
Round-leaf Broom	<i>Errazurizia rotundata</i>				v	narrow range, Shinarump Hills, Holbrook area
San Pedro River Wild Buckwheat	<i>Eriogonum terrenatum</i>				v	narrow range, limestone and clay soils of St. David Formation, SPRNCA

Sand Food	<i>Pholisma sonora</i>	v				sand dunes, Yuma
Scaly Sand Food	<i>Pholisma arenaria</i>	v				sand dunes, Cactus Plain
Schott Wire-lettuce	<i>Stephanomeria schottii</i>	v				sand dunes, sandy soils, Yuma area
September 11 Stickleaf	<i>Mentzelia memorabilis</i>			v		narrow range, gypsum soils of Harrisburg Formation
Silverleaf Sunray	<i>Enceliopsis argophylla</i>			v		narrow range, gypsum soils of Moenkopi Formation
Smooth Catseye	<i>Crypthantha semiglabra</i>			v		extremely narrow range
Sticky Wild Buckwheat	<i>Eriogonum viscidulum</i>			v		narrow range, sandy loam soils, Virgin River Valley
Three-cornered Milkvetch	<i>Astragalus geyeri</i> var. <i>triquetrus</i>			v		narrow range, sandy loam soils, Virgin River Valley
Tumamoc Globeberry	<i>Tumamoca macdougalii</i>		v		v	few populations, Sonoran Desert plains
White-margined Penstemon	<i>Penstemon albomarginatus</i>	v				narrow range, sandy loam soils, Dutch Flat

All federally designated candidate species, proposed species, and delisted species in the 5 years following their delisting shall be conserved as Bureau sensitive species. See U.S. Fish and Wildlife Service list for current candidates.

v=Known Occurrence, h=Probable, Potential or Hypothetical Occurrence, CA=Conservation Agreement, D=Delisted

Appendix 3

Evaluation of BLM Colorado River District Sensitive Species to Determine Potential for Presence within the Boundary Cone ROW Project

Evaluation of BLM Colorado River District Sensitive Species to Determine Potential for Presence
Within the Boundary Cone ROW Project

Species	Species or habitat present?	Notes
Plants		
Aquarius milkvetch <i>Astragalus newberryi</i> <i>var. aquarii</i>	No	Known only from Burro Creek, limestone soils w <i>Purshia subintegra</i> . No limestone soils present
Aravaipa woodfern <i>Thelypteris puberula</i> <i>var. sonorensis</i>	No	Found in moist soil in the shade of boulders in mesic canyons. On riverbanks, seepage areas, and meadow habitats. No springs present.
Blue sand lily <i>Triteleiopsis palmeri</i>	No	Found on sand dunes/sandy soils. No sand present.
California flannelbush <i>Fremontodendron californica</i>	No	Found dry, north slopes in canyons from 3,500 to 6,500 feet. Project below elevation range. No suitable shady habitat present.
Kearney Sumac <i>Rhus kearneyi</i> ssp. <i>Kearneyi</i>	No	Relict species in shady canyons. No suitable habitat present.
Kofa Mt. Barberry <i>Berberis harrisoniana</i>		
Parish phacelia <i>Phacelia parishii</i>	No	Found on alkaline playas in the desert, and sometimes on barren, alkaline knolls. Substrate not found in project area.
Parish Wild Onion <i>Allium parishii</i>	No	Unlikely to be present because outside of narrow range (Kofa and Mohave Mtn.s)
Pinto beardtongue <i>Penstemon bicolor</i>	No	Unlikely to be present because outside of known range (northern portion of Black Mtn. Ecosystem Area).
Sand Food <i>Pholisma sonora</i>	No	Found in sand dunes. No suitable habitat present.
Scaly Sand Food <i>Pholisma arenaria</i>		
Schott Wire-lettuce <i>Stephanomeria schotii</i>		
White-margined penstemon <i>Penstemon albomarginatus</i>	No	Coarse sandy and silty soil in Mohave Desertscrub communities. Known from Yucca, AZ . Outside known range.
Invertebrates		
Spring snails (all species in genus <i>Pyrgulopsis</i> and all species in family <i>Succineidae</i>)	No	Occupy springs in the desert regions. No springs in project area.
Fish		
Longfin dace <i>Agosia chrysogaster</i>	No	Water present only during flood events
Desert sucker <i>Catostomus [Pantosteus] clarki</i>	No	Water present only during flood events

Evaluation of BLM Colorado River District Sensitive Species to Determine Potential for Presence
Within the Boundary Cone ROW Project

Species	Species or habitat present?	Notes
Sonora sucker <i>Catostomus insignis</i>	No	Water present only during flood events
Speckled dace <i>Rhinichthys osculus</i>	No	Water present only during flood events
Amphibians & Reptiles		
Lowland Leopard Frog <i>Lithobates yavapaiensis</i>	No	No wetlands present
Northern leopard frog		
Mohave fringe-toed lizard <i>Uma scoparia</i>	No	Lives in sand.
Sonora mud turtle <i>Kinosternon sonoiense</i>	No	Needs riparian area; insufficient moisture present in drainage to support.
Yuman Desert fringe-toed lizard <i>Uma rufopunctata</i>	No	Lives in sand.
Birds		
American peregrine falcon <i>Falco peregrines</i>	Possible foraging	Suitable cliffs for nesting in surrounding mountains.
Bald Eagle (non-listed DPS) <i>Haliaeetus leucocephalus</i>	No	Non listed bald eagles winter in Arizona and range widely in search of food but tend to concentrate around water where they feed on fish and waterfowl. No key foraging areas present
California black rail <i>Lateralus jamaicensis coturniculus</i>	No	Found in marshes along the Colorado River. No marshes affected by project.
Desert purple martin <i>Progne subis hesperia</i>	No	Nests in Saguaro cacti – none present
Ferruginous hawk <i>Buteo regalis</i> Breeding population only	No	Hawk of grassland areas – no suitable habitat present.
Gilded flicker <i>Colaptes chrysoides</i>	No	Nests in Saguaro cacti – none present
Golden eagle <i>Aquila chrysaetos</i>	Possible Foraging	Suitable cliffs for nesting in surrounding mountains.
Le conte's Thrasher <i>Toxostoma lecontei</i>	Unlikely	Due to this birds sensitivity to disturbance, it is unlikely that it would be found in the project area containing a paved highway
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	No	Pinyon pine forests. No suitable vegetation present.

Evaluation of BLM Colorado River District Sensitive Species to Determine Potential for Presence
Within the Boundary Cone ROW Project

Species	Species or habitat present?	Notes
Western burrowing owl <i>Athene cunicularia hypugea</i>	No	Found in open, well-drained grasslands, steppes, deserts, prairies, and agricultural lands, often associated with burrowing mammals
Mammals		
Allen's (Mexican) big-eared bat <i>Idionycteris phyllotis</i>	Foraging Habitat only	No caves, abandoned buildings, or mineshafts on project area that would provide roosting habitat. Bats could be roosting in the project vicinity and forage in the general area.
Arizona myotis <i>Myotis occultus</i>		
California leaf-nosed bat <i>Macrotus californicus</i>		
Cave myotis <i>Myotis velifer</i>		
Greater western mastiff bat <i>Eumops perotis californicus</i>		
Spotted bat <i>Euderma maculatum</i>		
Townsend's Big-eared bat <i>Corynorhinus townsendii</i>		
Gunnison's prairie dog <i>Cynomys gunnisoni</i>	No	No grassland habitat present.

Appendix 4

Wildlife Species of Concern for Mohave County: Pages 25-28 (Specific to Mohave County) from November 24, 2010 Special Status Species by County, Taxon, Scientific Name; Arizona Game and Fish Department

Special Status Species by County, Taxon, Scientific Name

Arizona Game and Fish Department, Heritage Data management System

Updated: November 24, 2010

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ELCODE	ESA	BLM	USFS	NESL	MEXFED	STATE	GRANK	SRANK
Apache	AMPHIBIAN	Anaxyrus microscaphus	Arizona Toad	AAABB01110	SC		S				G3G4	S3S4
Apache	AMPHIBIAN	Rana chiricahuensis	Chiricahua Leopard Frog	AAABH01080	LT				A	WSC	G3	S2
Apache	AMPHIBIAN	Rana pipiens	Northern Leopard Frog	AAARH101170		S	S	2		WSC	G5	S2
Apache	AMPHIBIAN	Rana yavapaiensis	Lowland Leopard Frog	AAABH01250	SC	S	S		PR	WSC	G4	S3
Apache	BIRD	Accipiter gentilis	Northern Goshawk	ABNKC12060	SC	S	S	4	A	WSC	G5	S3B
Apache	BIRD	Athene cucularia hypugaea	Western Burrowing Owl	ABNSB10012	SC	S	S	4	A		G4T4	S3
Apache	BIRD	Catharus fuscescens	Veery	ABPBJ18080						WSC	G5	S1
Apache	BIRD	Charadrius montanus	Mountain Plover	ABNNB03100	PT			4			G2	S1B, S2N
Apache	BIRD	Coccyzus americanus	Yellow-billed Cuckoo (West US DPS)	ABNRB02020	C		S	2		WSC	G5	S3
Apache	BIRD	Dolichonyx oryzivorus	Bobolink	ABPBXA9010						WSC	G5	S3
Apache	BIRD	Dumetella carolinensis	Gray Catbird	ABPBK01010			S			WSC	G5	S1
Apache	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	ABPAE33043	LE			2		WSC	G5T1T2	S1
Apache	BIRD	Falco peregrinus anatum	American Peregrine Falcon	ABNKD06071	SC	S	S	4	A	WSC	G4T4	S4
Apache	BIRD	Haliaeetus leucocephalus	Bald Eagle	ABNKC10010	SC	S	S	2	P	WSC	G5	S2S3B, S4N
Apache	BIRD	Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	ABNKC10015	SC	S	S	2	P	WSC	G5TNR	S4N
Apache	BIRD	Megaceryle alcyon	Belted Kingfisher	ABNXD01020				4		WSC	G5	S2B, S5N
Apache	BIRD	Pandion haliaetus	Osprey	ABNKC01010		S				WSC	G5	S2B, S4N
Apache	BIRD	Pica hudsonia	Black-billed Magpie	ABPAV09010						WSC	G5	S3
Apache	BIRD	Pinicola enucleator	Pine Grosbeak	ABPBY03010						WSC	G5	S1
Apache	BIRD	Setophaga ruticilla	American Redstart	ABPBX06010						WSC	G5	S1
Apache	BIRD	Strix occidentalis lucida	Mexican Spotted Owl	ABNSB12012	LT			3	A	WSC	G3T3	S3S4
Apache	FISH	Catostomus clarkia	Desert Sucker	AFCJC02040	SC	S	S				G3G4	S3S4
Apache	FISH	Catostomus discobolus discobolus	Bluehead Sucker	AFCJC02072			S	4			G4T4	S3
Apache	FISH	Catostomus discobolus yarrowi	Zuni Bluehead Sucker	AFCJC02071	C		S	4		WSC	G4T1	S1
Apache	FISH	Catostomus insignis	Sonoran Sucker	AFCJC02100	SC	S	S	4	P		G3	S3
Apache	FISH	Catostomus (sp. 3)	Little Colorado Sucker	AFCJC02250	SC	S	S			WSC	G2	S2
Apache	FISH	Gila robusta	Roundtail Chub	AFCJB13150	C	S	S	2	PR	WSC	G3	S2

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ELCODE	ESA	BLM	USFS	NESL	MEXFED	STATE	GRANK	SRANK
Maricopa	REPTILE	Heloderma suspectum suspectum	Reticulate Gila Monster	ARACE01012			S		A		G4T4	S4
Maricopa	REPTILE	Lichanura trivirgata gracia	Desert Rosy Boa	ARADA01021	SC	S					G4GST3	S3S4
Maricopa	REPTILE	Lichanura trivirgata trivirgata	Mexican Rosy Boa	ARADA01023	SC	S					G4GST3	S1S2
Maricopa	REPTILE	Phyllorhynchus browni	Saddled Leaf nosed Skink	ARADB25010			PS		PR		G5	S5
Maricopa	REPTILE	Plestiodon "gilberli" arizonensis	Arizona Skink	ARACH01061	SC				PR	WSC	G5TIQ	S1
Maricopa	REPTILE	Sauromalus ater (Arizona Population)	Arizona Chuckwalla	ARACF13013	SC	S			A		G5T4Q	S4
Maricopa	REPTILE	Sauromalus ater (Western Population)	Western Chuckwalla	ARACF13012	SC	S		4	A		G5T4Q	S4
Maricopa	REPTILE	Thamnophis eques megalops	Northern Mexican Garter snake	ARADB36061	C	S			A	WSC	G5T5	S1
Mohave	AMPHIBIAN	Anaxyrus microscaphus	Arizona Toad	AAABB01110	SC	S					G3G4	S3S4
Mohave	AMPHIBIAN	Rana onca	Relict Leopard Frog	AAABH01150	C					WSC	G1	S1
Mohave	AMPHIBIAN	Rana pipiens	Northern Leopard Frog	AAABH01170		S	S	2		WSC	G5	S2
Mohave	AMPHIBIAN	Rana yavapaiensis	Lowland Leopard Frog	AAABH01250	SC	S	S		PR	WSC	G4	S3
Mohave	BIRD	Accipiter gentilis	Northern Goshawk	ABNKC12060	SC	S	S	4	A	WSC	G5	S3B
Mohave	BIRD	Aechmophorus clarki	Clark's Grebe	ABNCA04020		S	S	4		WSC	G5	S3
Mohave	BIRD	Athene cucinulalia hypugaea	Western Burrowing Owl	ABNSB10012	SC	S	S	4	A		G4T4	S3
Mohave	BIRD	Buteo albonotatus	Zone-tailed Hawk	ABNKC19090			S				G4	S4
Mohave	BIRD	Buteo regalis	Ferruginous Hawk	ABNKC19120	SC	S	S	3		WSC	G4	S2B, S4N
Mohave	BIRD	Buteo swainsoni	Swainson's Hawk	ABNKC19070		S	S				G5	S3
Mohave	BIRD	Buteogallus anthracinus	Common Black-Hawk	ABNKC15010		S	S		A	WSC	G4GS	S3
Mohave	BIRD	Coccyzus americanus	Yellow-billed Cuckoo (West US DPS)	ABNRB02020	C		S	2		WSC	G5	S3
Mohave	BIRD	Empidonax traillii extimus	Southwestern Willow Flycatcher	ABPAE33043	LE			2		WSC	G5T1T2	S1
Mohave	BIRD	Falco peregrinus anatum	American Peregrine Falcon	ABNKD06071	SC	S	S	4	A	WSC	G4T4	S4
Mohave	BIRD	Haliaeetus leucocephalus (wintering pop.)	Bald Eagle - Winter Population	ABNKC10015	SC	S	S	2	P	WSC	G5TNR	S4N
Mohave	BIRD	Haliaeetus leucocephalus (pop. 3)	Bald Eagle - Sonoran Desert area Pop.	ABNKC10014	LT.DPS	S	S	2	P	WSC	G5TNR	S2S3
Mohave	BIRD	Laterallus jamaicensis coturniculus	California Black Rail	ABNME03041	SC	S			PR	WSC	G4T1	S1
Mohave	BIRD	Rullus longirostris ywnanensis	Yuma Clapper Rail	ABNME0501A	LE				P	WSC	G5T3	S3
Mohave	BIRD	Strix occidentalis Iucida	Mexican Spotted Owl	ABNSB12012	LT				A	WSC	G3T3	S3S4
Mohave	FISH	Agosia chrysoguster cruysoguster	Gila Longfin Dace	AFCJCB37151	SC	S	S		A		G4T3T4	S3S4
Mohave	FISH	Catostomus clarkii	Desert Sucker	AFCJC02040	SC	S	S				G3G4	S3S4

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ELCODE	ESA	BLM	USFS	NESL	MEXFED	STATE	GRANK	SRANK	
Mohave	FISH	Catostomus insignis	Sonora Sucker	AFCJC02100	SC	S	S			P	G3	S3	
Mohave	FISH	Catostomus Jatipinnis	Flannelmouth Sucker	AFCJC02110	SC	S	S				G3G4	S2	
Mohave	FISH	Cyprinodon macularius	Desert Pupfish	AFCNB02060	LE					P	WSC	G1	S1
Mohave	FISH	Gila cypha	Humpback Chub	AFCJB13080	LE			2			WSC	G1	S1
Mohave	FISH	Gila elegans	Bonytail	AFCJBI3100	LE			1		P	WSC	G1	S1
Mohave	FISH	Gila robusta	Roundtail Chub	AFCJB13150	C	S	S	2		PR	WSC	G3	S2
Mohave	FISH	Gila seminude	Virgin River Chub	AFCJB13170	LE						WSC	G1	S1
Mohave	FISH	Lepitidomeda mollispinis mollispinis	Spinedace	AFCJB20031	SC	S					WSC	G1G2T1	S1
Mohave	FISH	Plagopterus argentissimus	Woundfin	AFCJB33010	LE, XN						WSC	G1	S1
Mohave	FISH	Rhinichthys osculus	Speckled Dace	AFCJB37050	SC	S				P		G5	S3S4
Mohave	FISH	Xyrauchen texanus	Razorback Sucker	AFCJC11010	LE			2		P	WSC	G1	S1
Mohave	INVERTEBRATE	Cicindela oregona maricopa	Maricopa Tiger Beetle	IICOL02362	SC							G5T3	S3
Mohave	INVERTEBRATE	Pyrgulopsis bacchus	Grand Wash Springsnail	IMGASJ0150	SC	S						G1	S1
Mohave	INVERTEBRATE	Pyrgulopsis conica	Kingman Springsnail	IMGASJ0160	SC	S						G1	S1
Mohave	INVERTEBRATE	Pyrgulopsis deserta	Desert Springsnail	IMGASJ0390		S						G2	S1
Mohave	MAMMAL	Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	AMACC08014	SC	S	S	4				G4T4	S3S4
Mohave	MAMMAL	Eudcrma maculatum	Spotted Bat	AMACC07010	SC	S	S			PR	WSC	G4	S1S2
Mohave	MAMMAL	Eumops perotis californicus	Greater Western Bonneted Bat	AMACD02011	SC	S	S					G5T4	S3
Mohave	MAMMAL	Idionycteris phyllotis	Allen's Lappet-browed Bat	AMACC09010	SC	S						G3G4	S2S3
Mohave	MAMMAL	Lasiurus blossevillii	Western Red Bat	AMACC05060		S	S				WSC	G5	S3
Mohave	MAMMAL	Macrotus californicus	California Leaf-nosed Bat	AMACB01010	SC	S	S				WSC	G4	S3
Mohave	MAMMAL	Microtus mexicanus hualpaiensis	Hualapai Mexican Vole	AMAFF11212	LE						WSC	G5T1Q	S1
Mohave	MAMMAL	Myotis ciliolabrum	Western Small-footed Myotis	AMACC01140	SC							G1	S3S4
Mohave	MAMMAL	Myotis occultus	Arizona Myotis	AMACC01160	SC							G3G4	S3
Mohave	MAMMAL	Myotis thysanodes	Fringed Myotis	AMACC01090	SC							G4G5	S3S4
Mohave	MAMMAL	Myotis velifer	Cave Myotis	AMACC01050	SC							G5	S3S4
Mohave	MAMMAL	Myotis volans	Long-legged Myotis	AMACC01110	SC							G5	S3S4
Mohave	MAMMAL	Myotis yumanensis	Yuma Myotis	AMACC01020	SC							G5	S3S4
Mohave	MAMMAL	Nyctinomops femorosaccus	Pocketed Free-tailed Bat	AMACD04010			S					G4	S3
Mohave	MAMMAL	Nyctinomops macrotis	Big Free-tailed Bat	AMACD04020	SC							G5	S3

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ELCODE	ESA	BLM	USFS	NESL	MEX	FED	STATE	GRANK	SRANK		
Mohave	PLANT	Allium bigelovii	Bigelow Onion	PMLIL02070								SR	G3	S2S3	
Mohave	PLANT	Arctomecon californica	Las Vegas Bearpoppy	PDPAP02010	SC							SR	G3	S2	
Mohave	PLANT	Astragalus ampullarius	Gumbo Milk-vetch	PDFAB0F0L0	SC		S						G2	S1	
Mohave	PLANT	Astragalus geyeri (var. triquetus)	Beaver Dam Milk-vetch	PDFAB0F3M2	SC	S							G4T2T3	S1	
Mohave	PLANT	Astragalus holmgreniorum	Holmgren (Paradox) Milk-vetch	PDFAB0F9Z0	LE						HS		G1	SI	
Mohave	PLANT	Astragalus lentiginosus (var. ambiguus)	Freckled Milk-vetch	PDFAB0FB91	SC								G5T1Q	S1	
Mohave	PLANT	Astragalus newberryi (var. aquarii)	Aquarius Milk-vetch	PDFAB0F5Y5			S						G5T1	S1	
Mohave	PLANT	Astragalus toanus (var. scidulus)	Diamond Butte Milk-vetch	PDFAB0F8Z1			S						G4G5T1T3	S1	
Mohave	PLANT	Camissonia brevipes	Golden Suncup	PDONA03070	SC								G4G5	SI	
Mohave	PLANT	Camissonia exilis	Slender Evening-primrose	PDONA030J0	SC								G1	S1	
Mohave	PLANT	Camissonia specuicola ssp. hesperia	Grand Canyon Evening-primrose	PDONA031J1	SC								G2T1	S1	
Mohave	PLANT	Coryphantha missouriensis	Missouri Corycactus	PDCAC0X020								SR	G5	S3	
Mohave	PLANT	Cycladenia humilis (var. jonesii)	Jones' Cycladenia	PDAP009012	LT							HS	G3G4T2	S1	
Mohave	PLANT	Echinocactus polycephalus (var. polycephalus)	Clustered Ban-cl Cactus	PDCAC05033								SR	G3G4T3T4	S2	
Mohave	PLANT	Echinocactus polycephalus (var. xeranthemoides)	Grand Canyon Cottontop Cactus	PDCAC05032								SR	G3G4T1T3	S2S3	
Mohave	PLANT	Enceliopsis argophylla	Silverleaf Sunray	PDAST3G010		S							G2G3	S2	
Mohave	PLANT	Eriogonum mortonianum	Morton Wild-buckwheat	PDPGN083Z0	SC			S					SR	G1	S1
Mohave	PLANT	Eriogonum thompsoniae (var. atwoodii)	Atwood Wild-buckwheat	PDPGN085T2	SC			S				SR	G4T1	S1	
Mohave	PLANT	Eriogonum viscidulun	Sticky Buckwheat	PDPGN08690	SC	S							G2	S1	
Mohave	PLANT	Escobaria vivipara (var. rosea)	Viviparous Foxtail Cactus	PDCAC0X0G8								SR	G5T3	S3	
Mohave	PLANT	Flaveria mcdougallii	Grand Canyon Flaveria	PDAST3V070								SR	G2	S2	
Mohave	PLANT	Fremontodendron californicum	Flannel Bush	PDSTE03010		S						SR	G4	S2S3	
Mohave	PLANT	Lupinus latifolius (ssp. leucanthus)	Broadleaf Lupine	PDFAB2B29D				S					G5T1T2	S1	
Mohave	PLANT	Mammillaria viridiflora	Varied Fishhook Cactus	PDCAC0A0D0								SR	G4	S4	
Mohave	PLANT	Mentzelia memorabalis	September 11 Stickleaf	PDLOA03290		S							G1	S1	
Mohave	PLANT	Opuntia basilaris (var. aurea)	Yellow Beavertail	PDCAC0D300									G3	S3	
Mohave	PLANT	Opuntia basilaris (var. longiareolata)	Grand Canyon Beavertail Cactus	PDCAC0D054								SR	G5T2Q	S2	
Mohave	PLANT	Opuntia echinocarpa	Straw-top Cholla	PDCAC0D2W0								SR	G3	S5	

COUNTY	TAXON	SCIENTIFIC NAME	COMMON NAME	ELCODE	ESA	BLM	USFS	NESL	MEX	FED	STATE	GRANK	SRANK	
Mohave	PLANT	Opuntia nicholii	Navajo Bridge Cactus	PDCAC0D0W0								SR	G4Q	S4
Mohave	PLANT	Opuntia superbospina	Kingman's Prickly-pear	PDCAC0DIQ0								SR	GHQ	SH
Mohave	PLANT	Opuntia whipplei (var. multigeniculata)	Blue Diamond Cholla	PDCAC0D1N1	SC							SR	G4?T1Q	S1
Mohave	PLANT	Opuntia whipplei (var. whipplei)	Whipple Cholla	PDCAC0D1N3								SR	G4?T4?	S1
Mohave	PLANT	Pediocactus peeblesianus (var.fickeiseniae)	Fickeisen Plains Cactus	PDCAC0E051	C		S	3				HS	GIG2T1T2	S1 S2
Mohave	PLANT	Pediocactus sileri	Siler Pincushion Cactus	PDCAC0E060	LT	S						HS	G3	S3
Mohave	PLANT	Pediomelum castoreum	Beaver Dam Scarf Pea	PDFAB5L050	SC								G3	S1
Mohave	PLANT	Pediomelum epipsilum	Kane Scurf-pea	PDFAB5L0F1	SC								G4?T1	S1
Mohave	PLANT	Penstemon albomarginatus	White-margined Penstemon	PDSCR1L070	SC	S						SR	G2	S2
Mohave	PLANT	Penstemon bicolor (ssp. Roseus)	Cerbat Beardtongue	PDSCR1L0S2	SC	S						SR	G3?T3Q	S2
Mohave	PLANT	Penstemon distans	Mt. Trumbull Beardtongue	PDSCR1L6W0	SC	S						SR	G2	S2
Mohave	PLANT	Phacelia parishii	Parish's Phacelia	PDHYD0C3G0		S							G2G3	S1
Mohave	PLANT	Polygala rusbyi	Hualapai Milkwort	PDPGL021HO			S						G3	SJ
Mohave	PLANT	Psorothamnus arborescens (var. pubescens)	Mohave Indigo Bush	PDFAB3C013		S		4					G5T2	S2
Mohave	PLANT	Purshia subintegra	Arizona Cliff Rose	PDR0S1E080	LE							HS	GNA	S1
Mohave	PLANT	Rosa stellata ssp. abyssa	Grand Canyon Rose	PDR0S1J153	SC	S	S					SR	G4T2	S2
Mohave	PLANT	Sclerocactus parviflorus (ssp. intermedius)	Intermediate Fishhook Cactus	PDCAC03041								SR	G4T3?	S2
Mohave	PLANT	Sphaeralcea gierischii	Gierisch mallow	PDMAL140T0	C								G1	S1
Mohave	PLANT	Thelypteris puberula (var. sonorensis)	Aravaipa Wood Fern	PPTHE05192		S	S						G5T3	S2
Mohave	PLANT	Yucca whipplei	Our Lords Candle	PMAGA0B0X0								SR	G4G5	S3S4
Mohave	REPTILE	Gopherus agassizii (Mohave Population)	Mohave Desert Tortoise	ARAAF01012	LT					A	WSC		G4T3Q	S2
Mohave	REPTILE	Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	ARAAF01013	SC	S	S			A	WSC		G4T4	S4
Mohave	REPTILE	Heloderma suspectum cinctum	Banded Gila Monster	ARACE01011	SC					A			G4T4	S4
Mohave	REPTILE	Lichanura trivirgata gracia	Desert Rosy Boa	ARADA01021	SC	S							G4G5T3	S3S4
Navajo	AMPHIBIAN	Anaxyrus microscaphus	Arizona Toad	AAABB01110	SC		S						G3G4	S3S4
Navajo	AMPHIBIAN	Rana chiricahuensis	Chiricahua Leopard Frog	AAABH01080	LT					A	WSC		G3	S2
Navajo	AMPHIBIAN	Rana pipiens	Northern Leopard Frog	AAARH011170		S	S	2			WSC		G5	S2
Navajo	BIRD	Accipiter gentilis	Northern Goshawk	ABNKC12060	SC	S	S	4	A	WSC			G5	S3B
Navajo	BIRD	Athene cunicularia hypugaea	Western Burrowing Owl	ABNSB10012	SC	S	S	4	A				G4T4	S3

Appendix 5

Arizona Game and Fish Department On-Line Environmental Tool for the
Boundary Cone ROW

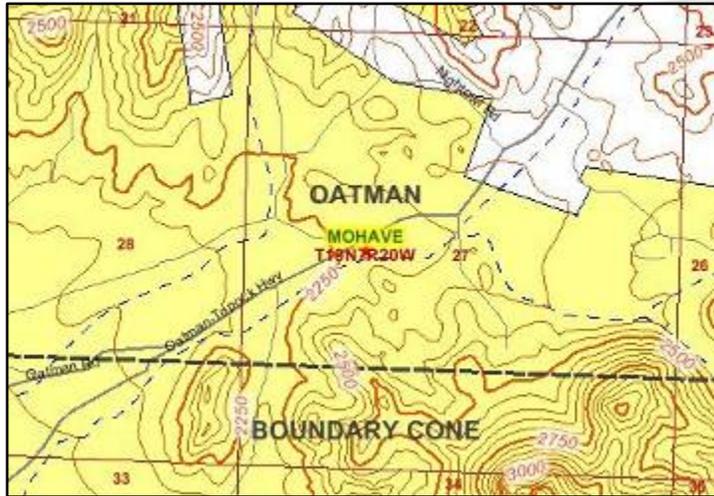
Arizona's On-line Environmental Review Tool

Search ID: 20101210013944

Project Name: Boundary Cone

Date: 12/10/2010 11:02:2

Project Location



The Department appreciates the opportunity to provide in-depth comments and project review when additional information or environmental documentation becomes available.

Special Status Species Occurrences/Critical Habitat/Tribal Lands within 3 miles of Project Vicinity:

Name	Common Name	FWS	USFS	BLM	State
Gopherus agassizii (Sonoran Population)	Sonoran Desert Tortoise	SC	S	S	WSC
Heloderma suspectum cinctum	Banded Gila Monster	SC			

Project Name: Boundary Cone

Submitted By: Sandra Nagiller

On behalf of: CONSULTING

Project Search ID: 20101210013944

Date: 12/10/2010 11:02:15 AM

Project Category: Water Use, Transfer, and Channel Activities, Dredging; reservoir/channel maintenance

Project Coordinates (UTM Zone 12-NAD 83): 189797.733, 3878755.909 meter

County: MOHAVE

USGS 7.5 Minute Quadrangle ID: 694

Quadrangle Name: OATMAN

Project locality is currently being scoped

Location 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 Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

Arizona's On-line Environmental Review Tool

Search ID: 20101210013944

Project Name: Boundary Cone

Date: 12/10/2010 11:02:2

Please review the entire receipt for project type recommendations and/or species or location information and retain a copy for future reference. If any of the information you provided did not accurately reflect this project, or if project plans change, another review should be conducted, as this determination may not be valid.

Arizona's On-line Environmental Review Tool:

1. This On-line Environmental Review Tool inquiry has generated recommendations regarding the potential impacts of your project on Special Status Species (SSS) and other wildlife of Arizona. SSS include all U.S. Fish and Wildlife Service federally listed, U.S. Bureau of Land Management sensitive, U.S. Forest Service sensitive, and Arizona Game and Fish Department (Department) recognized species of concern.

2. These 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). These recommendations are preliminary in scope, designed to provide early considerations for all species of wildlife, pertinent to the project type you entered.

3. This receipt, generated by the automated On-line Environmental Review Tool does not constitute an official project review by Department biologists and planners. Further coordination may be necessary as appropriate under the National Environmental Policy Act (NEPA) and/or the Endangered Species Act (ESA).

The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over all federally listed species under the ESA. Contact USFWS Ecological Services Offices: <http://arizonaes.fws.gov/>.

Phoenix Main Office
2321 W. Royal Palm Road, Suite 103
Phoenix, AZ 85021
Phone 602-242-0210
Fax 602-242-2513

Tucson Sub-Office
201 North Bonita, Suite 141
Tucson, AZ 85745
Phone 520-670-6144
Fax 520-670-6154

Flagstaff Sub-Office
323 N. Leroux Street, Suite 101
Flagstaff, AZ 86001
Phone 928-226-0614
Fax 928-226-1099

Disclaimer:

1. 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.
2. The Department's 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.
3. 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. HDMS data contains information about species occurrences that have actually been reported to the Department.

Arizona Game and Fish Department Mission

To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and

management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.

Project Category: Water Use, Transfer, and Channel Activities, Dredging; reservoir/channel maintenance

Project Type Recommendations:

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

Based on the project type entered; coordination with Arizona Department of Water Resources may be required (<http://www.water.az.gov/adwr/>)

Based on the project type entered; coordination with County Flood Control districts may be required.

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

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

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 - http://www.azgfd.gov/inside_azgfd/agency_directory.shtml.

During planning and construction, minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g. microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g. livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before and after project activities to reduce the spread of invasive species. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants (<http://www.azda.gov/PSD/quarantine5.htm>). Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control: (<http://www.usda.gov/wps/portal/usdahome>). The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information http://www.azgfd.gov/h_f/hunting_rules.shtml.

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

Arizona's On-line Environmental Review Tool

Search ID: 20101210013944

Project Name: Boundary Cone

Date: 12/10/2010 11:02:20 AM

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.

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 (including 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.

Project Location and/or Species recommendations:

Heritage Data Management System records indicate that Sonoran desert tortoise have been documented within the vicinity of your project area (refer to the species list on page 1 of the receipt). Please review the Tortoise Handling Guidelines found on the Environmental Review Home Page: <http://www.azgfd.gov/hgis/guidelines.azpx>.

Recommendations Disclaimer:

1. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project.
2. These recommendations are proposed actions or guidelines to be considered during **preliminary project development**.

3. Additional site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

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. The Department is interested in the conservation of all fish and wildlife resources, including those Special Status Species listed on this receipt, and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.

6. **Further coordination requires the submittal of this initialed and signed Environmental Review Receipt 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).**

7. Upon receiving information by AZGFD, please allow 30 days for completion of project reviews. Mail 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**

Terms of Use

By using this site, you acknowledge that you have read and understand the terms of use. Department staff may revise these terms periodically. If you continue to use our website after we post changes to these terms, it will mean that you accept such changes. If at any time you do not wish to accept the Terms, you may choose not to use the website.

Arizona's On-line Environmental Review Tool

Search ID: 20101210013944

Project Name: Boundary Cone

Date: 12/10/2010 11:02:20 AM

1. This Environmental Review and project planning website was developed and intended for the purpose of screening projects for potential impacts on resources of special concern. By indicating your agreement to the terms of use for this website, you warrant that you will not use this website for any other purpose.
2. Unauthorized attempts to upload information or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act .
3. The Department reserves the right at any time, without notice, to enhance, modify, alter, or suspend the website and to terminate or restrict your access to the website.
4. This Environmental Review is based on the project study area that was entered. The review must be redone if the project study area, location, or the type of project changes. If additional information becomes available, this review may need to be reconsidered.
5. A signed and initialed copy of the Environmental Review Receipt indicates that the entire receipt has been read by the signer of the Environmental Review Receipt.

Security:

The Environmental Review and project planning web application operates on a complex State computer system. This system is monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials. Unauthorized attempts to upload or change information; to defeat or circumvent security measures; or to utilize this system for other than its intended purposes are prohibited.

This website maintains a record of each environmental review search result as well as all contact information. This information is maintained for internal tracking purposes. Information collected in this application

will not be shared outside of the purposes of the Department.

If the Environmental Review Receipt and supporting material are not mailed to the Department or other appropriate agencies within six (6) months of the Project Review Receipt date, the receipt is considered to be null and void, and a new review must be initiated.

Print this Environmental Review Receipt using your Internet browser's print function and keep it for your records. Signature of this receipt indicates the signer has read and understands the information provided.

Signature: _____

Date: _____

Proposed Date of Implementation: _____

Please provide point of contact information regarding this Environmental Review.

Application or organization responsible for project implementation

Agency/organization: _____

Contact Name: _____

Arizona's On-line Environmental Review Tool

Search ID: 20101210013944

Project Name: Boundary Cone

Date: 12/10/2010 11:02:20 AM

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Person Conducting Search (if not applicant)

Agency/organization: _____

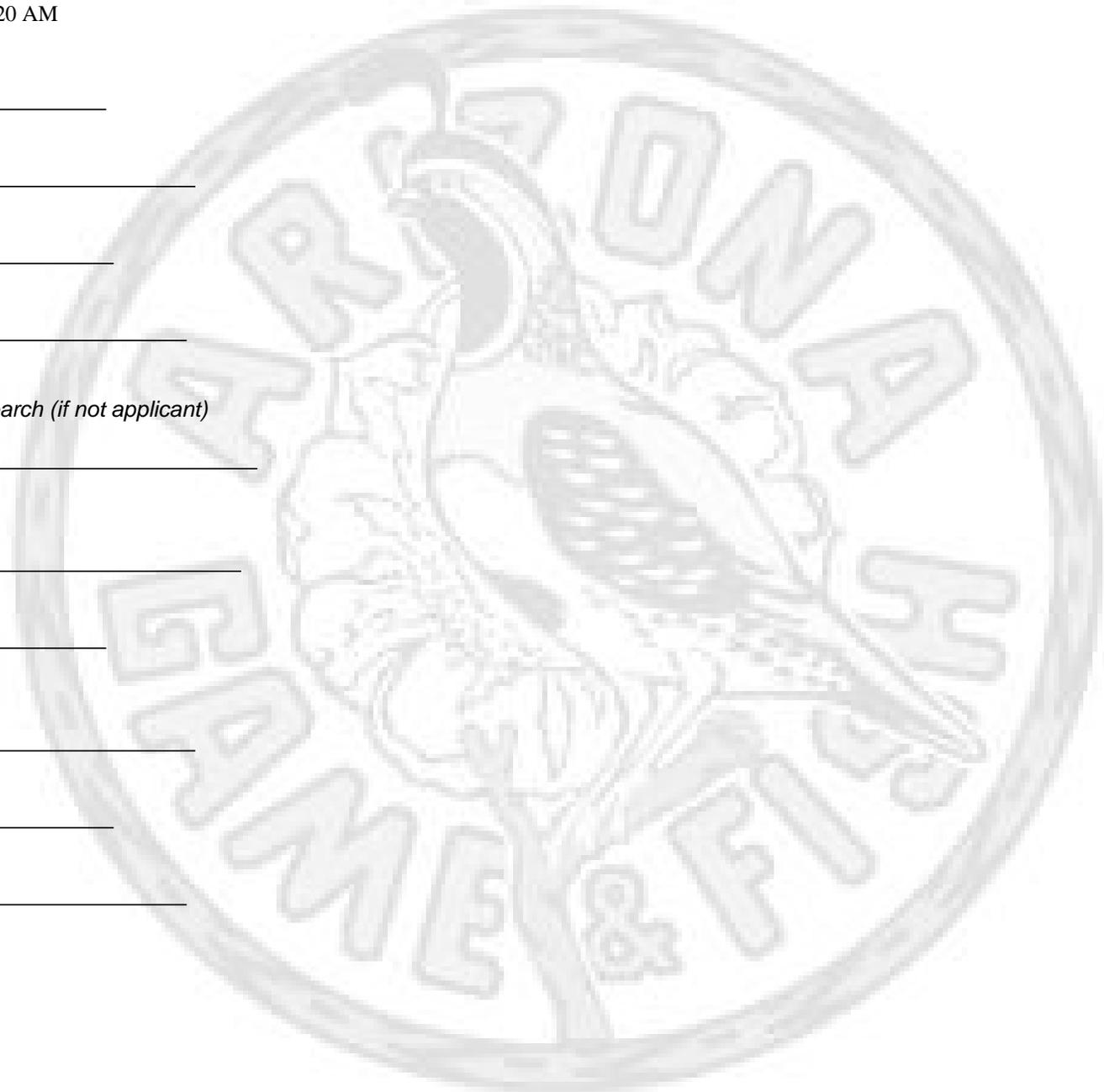
Contact Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____



March 3, 2011

Memo for Record

AZA 21021,AZA 33625

From: Andy Whitefield

Re: Desert Tortoise Compensation

As part of the resolution for trespass case AZA 35492, Mohave County has applied for authorization to maintain the bed of an unnamed wash and earthen dike structure adjacent to Route 66 in sec. 27, T. 19 N., R. 20 W., G&SRM. The area in which the county has designated as the minimum necessary to maintain the wash crossing in a safe manner and to allow the stream sensor on its Early Alert flood monitoring device is 3.02 acres as shown on the survey map prepared for the application to authorize these activities. Of this 3.02 acres, 0.59 is within the right-of-way for Route 66. Therefore the adjusted area is 2.43 acres of desert tortoise category 3 habitat.

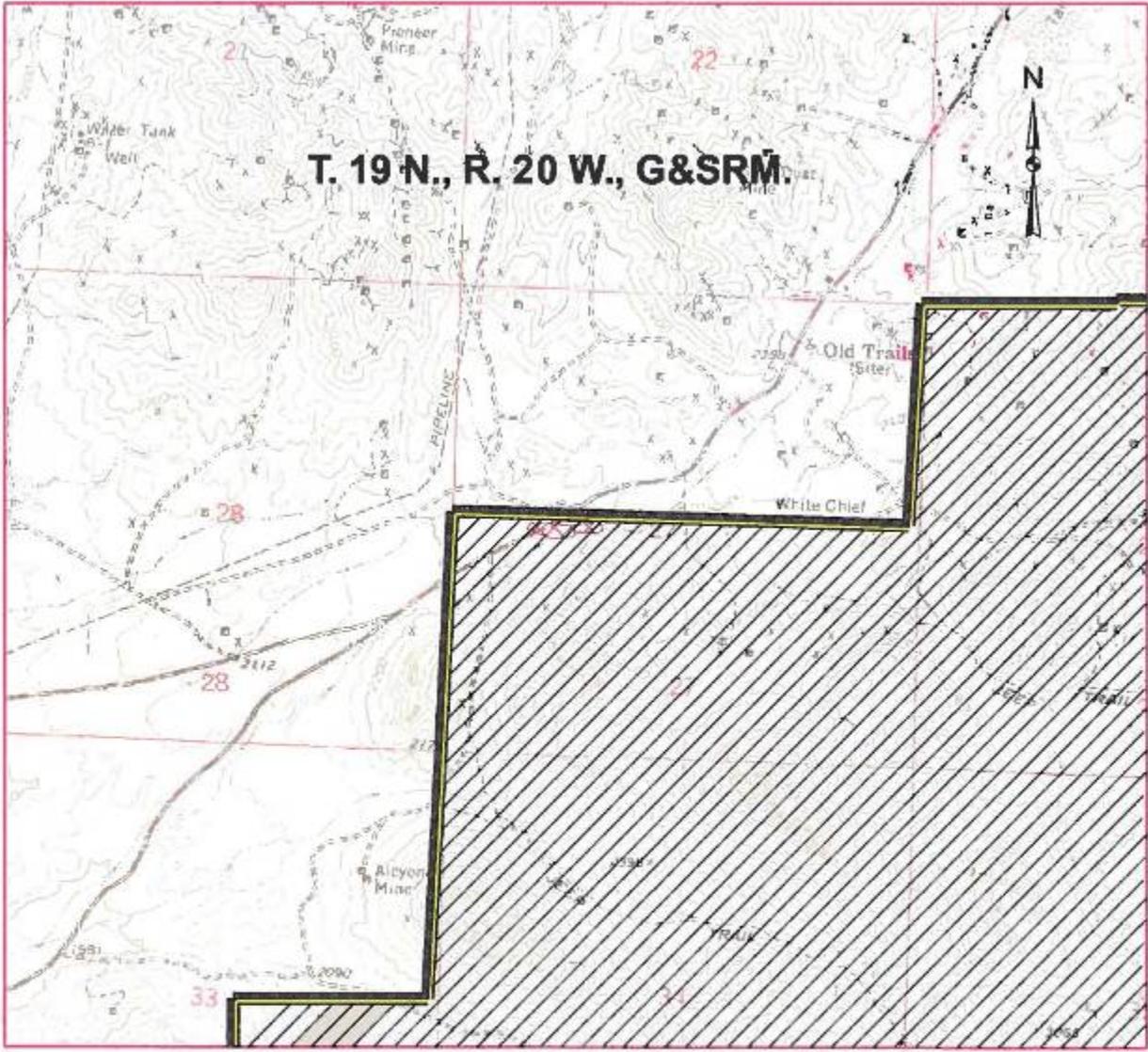
Therefore, in accordance with BLM's policy to compensate for residual unmitigated impacts to desert tortoise habitat as required under Instruction Memoranda AZ-92-46, AZ-99-008, and AZ-2009-010, compensation for this will be as follows:

Land Compensation Rate per acre (LCR) = \$348

Operations Costs (OC) = 25%

Administrative Overhead Surcharge (AOS) = 17.1%

Therefore the amount of compensation is $\$348 \times 1.421(\text{OC} + \text{AOS}) \times 2.43 \text{ acres} = \$1,201.65$, rounded to \$1,202.



LEGEND

-  Subject Area for Amendment to AZA 21021 and AZA 33625
-  Black Mountains Ecosystem Management ACEC

Terms and Conditions
AZA 21021 Amendment #1, AZA 33625 Amendment #1

1. If any desert tortoise are observed in this right-of-way during construction or maintenance activities they will be handled in accordance with the protocol as outlined on Exhibit B, entitled “Desert Tortoise Handling Procedures”, attached hereto.
2. The Holder recognizes the existing rights of mining claimants on public lands which may be coincident with the road and Alert Flood Warning Station right-of-way. The Holder assumes all risk and financial liability should the exploration or development within mining claim(s) affect the operation of the right-of-way. The Holder recognizes that the right-of-way, or portion thereof, may be terminated if it interferes with the exploration or production activities on a mining claim(s) or if the mining claim(s) is conveyed out of Federal ownership. The Holder would provide appropriate measures for public safety in the event of exploration activities.
3. The Holder will remove only the minimum amount of vegetation necessary for the maintenance of Route 66’s wash crossing and stream sensor for the Alert Flood Warning System weather station authorized under AZA 33625.
4. The Holder will protect all survey monuments. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments and civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of these by the Holder or anyone operating on his behalf, the Holder will immediately report the incident to the authorized officer and the respective installing agency (if known) in writing. The Holder will be responsible for the restoration of the monument(s) in a manner suitable to the authorized officer after consultation with all parties involved. If Bureau cadastral or other Federal surveyors are used to restore the monument(s), the Holder will be liable to the United States for the costs.
5. Any cultural or paleontological resource (historic or prehistoric site or object) discovered by the Holder, or any person working on his behalf, on public or Federal land will be immediately reported to the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The Holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the Holder.
6. Construction sites will be maintained in a sanitary condition at all times; waste materials at those sites will be disposed of promptly at an appropriate waste disposal site. “Waste” means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

7. The Holder will conduct all activities associated with the construction, operation, and termination of the right-of-way area authorized under this amendment to rights-of-way AZA 21021 and AZA 33625 within the authorized limits of the rights-of-way as shown on that map entitled "Record of Survey A Tract of Land Situated in Section 27, Township 19 North, Range 20 West of the Gila and Salt River Meridian, County of Mohave, State of Arizona", filed with the Mohave County Recorders Office on January 21, 2011, fee number 2011003696, and as described on Exhibit A, attached hereto.

8. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release of spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

9. The Holder will not use excess mineral materials from this right-of-way area for borrow material for uses at other locations. Any excess material will be disposed of at the direction of the Authorized Officer.

Mohave County agrees to be bound by and comply with the above terms and conditions.

Holder

Date

Exhibit A

Land Description

A tract of land situated in Section 27, Township 19 North, Range 20 West of the Gila and Salt River Meridian, County of Mohave, State of Arizona.

Commencing at a 2" pipe with a 2¼" brass cap stamped "General Land Office 1915" found at the southwest corner of said Section 27, herein identified with coordinate values y-1,454,770.28;x-504,190.17;Arizona State Plane West Zone, NAD 83,International Feet, from which a 1" pipe with a 2 V4" brass cap stamped "General Land Office 1915" found at the east one-quarter corner of Section 27 bears on the grid N 63°57'44" E, a grid distance of 5,883.69'.

Thence on the grid bearing N 19°10'52" E, a grid distance of 2,735.22' to a point herein identified by said datum with coordinate values y-1,457,353.65, x-505,088.84, being monumented on the ground with a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185" and being the point of beginning of the tract described herein.

Thence, N 28°32'22" E, along the ground at an elevation of 2,250', distance of 145.54' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 87°01'19" E, along the ground at an elevation of 2,250', distance of 183.51' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 79°32'01" E, along the ground at an elevation of 2,250', distance of 109.04' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 84°19'41" E, along the ground at an elevation of 2,250', distance of 150.05'to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, N 83°05'05" E, along the ground at an elevation of 2,250', distance of 235.13' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, N 76°17'02" E, along the ground at an elevation of 2,250', distance of 117.47' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 19°15'03" E, along the ground at an elevation of 2,250', distance of 116.90' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 58°43'03" W, along the ground at an elevation of 2,250', distance of 76.52' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, N 71°16'34" W, along the ground at an elevation of 2,250', distance of 45.10' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 84°25'37" W, along the ground at an elevation of 2,250', distance of 161.76' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 41°38'42" W, along the ground at an elevation of 2,250', distance of 54.41' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 68°47'20" W, along the ground at an elevation of 2,250', distance of 119.77' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, S 89°39'33" W, along the ground at an elevation of 2,250', distance of 152.92' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, N 71°58'12" W, along the ground at an elevation of 2,250', distance of 191.56' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185".

Thence, N 75°30'02" W, along the ground at an elevation of 2,250', distance of 148.15' to a #5 rebar and 2" aluminum cap stamped "Mohave County Survey Dept. R.L.S. 43185" and the point of beginning.

The above described tract contains 3.02 acres (131,551 square feet) more or less calculated at a ground surface of 2,250 feet.

The above description was prepared on November 30th, by Jason E. Foose, Arizona R.L.S. 43185, from fieldwork performed under my direct supervision, for and on behalf of the Mohave County Public Works Department.



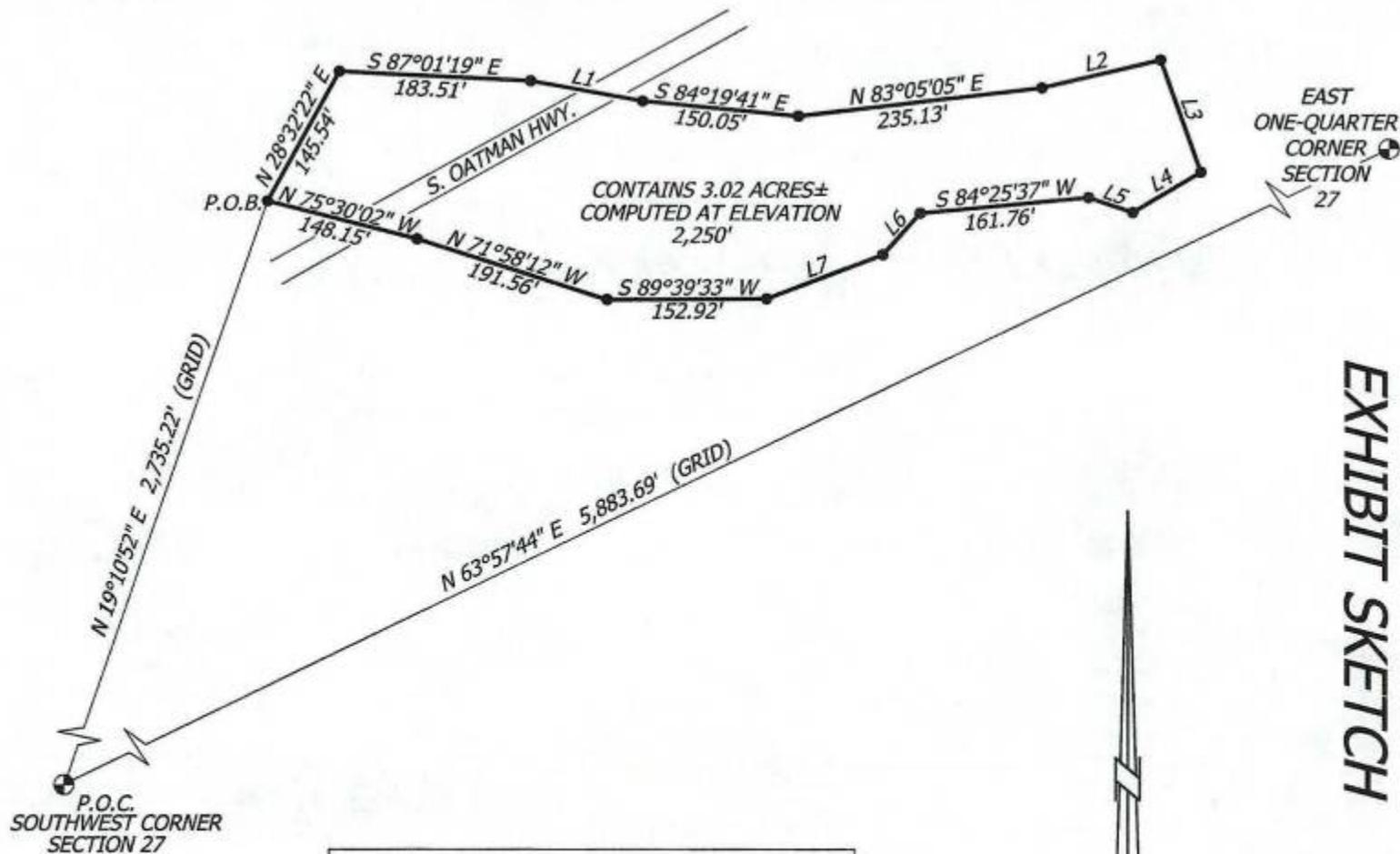


EXHIBIT SKETCH

LINE DATA	
L1	S 79°32'01" E 109.04'
L2	N 76°17'02" E 117.47'
L3	S 19°15'03" E 116.90'
L4	S 58°43'03" W 76.52'
L5	N 71°16'34" W 45.10'
L6	S 41°38'42" W 54.41'
L7	S 68°47'20" W 119.77'

NOT TO SCALE

SECTION 27,
TOWNSHIP 19 NORTH,
RANGE 20 WEST,
G. & S. R. M.

*ALL DISTANCES ALONG
GROUND AT ELEVATION
2,250' UNLESS OTHERWISE NOTED*



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Kingman Field Office
2755 Mission Boulevard
Kingman, Arizona 86401
www.az.blm.gov



AZA 21021 Amendment #1, AZA 33625 Amendment #1 Exhibit B

GUIDELINES FOR HANDLING DESERT TORTOISE ENCOUNTERED ON ROADS AND VEHICLE WAYS

1. Stop your vehicle and allow the tortoise to move off the road.
2. If the tortoise is not moving, gently** pick up the tortoise and move it approximately 200 feet off the road to a shaded location.
 - a. **Do not** turn the tortoise over.
 - b. Move the tortoise in the direction it was traveling. If it was crossing the road, move it in the direction it was crossing.
 - c. Keep the tortoise within 12-18 inches of the ground, move slowly so as not to cause it to become alarmed.
 - d. Release the tortoise under the shade of a bush or rock.

** Tortoise store water in their bladder. If a tortoise becomes alarmed its defense is to void its bladder onto the captor. This could lead to dehydration of the tortoise and potentially to death.

3. Prior to moving any parked vehicle or equipment at the project site check for tortoise under the vehicles.

