

KINGMAN FIELD OFFICE SCOPING FORM

Proposal: Capture up to 40 bighorn sheep in the Black Mountains, west of Kingman, Arizona in Game Management Unit (GMU) 15D south and north of Route 66 in November, 2013. These same bighorn would be released from an existing road north of Arrastra Mtn. wilderness in GMU 16A. Up to 10 of the bighorn would be radio collared and monitored at the release location. The capture operation would take 205 days to complete. The net-gun method would be used to capture bighorn sheep.

DOI-BLM-AZ-C010-2013-0038-DNA _____

S:/BLMshare:\nepa\ea_eis\wildlife\DOI AZ CO10
2013 DNA BlackMtnCapture&Release

NEPA Document Number

RMP Implementation No.

Document Location

Land Description: Capture: Game Management Unit 15D, south and north of Rt. 66

Release: GMU 16A, north of Arrastra Mtn. Wilderness, near Peoples Canyon.

Applicant: ADFG

Authorization:

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

Needed Input (X)	Discipline	Signature
	Lands	
	Minerals	
X	Range	/s/ Mike Blanton 09/04/2013; /s/ Celeste Mimnaugh 09/04/2013
X	Wild Horse and Burro	/s/ Chad Benson 09/04/2013
	General Recreation	
X	Cultural and Paleontological Resources	/s/ Tim Watkins 09/04/2013
X	Wilderness	/s/ Ramone B. McCoy 09/04/2013
	Soils	
	Surface and Groundwater Quality/Water Rights	
	Air Quality	
X	Wildlife	/s/ Rebecca L. Peck 09/04/2013
X	Threatened and Endangered Plants and Animals	/s/ Rebecca L. Peck 09/04/2013
X	Migratory Birds	/s/ Rebecca L. Peck 09/04/2013
	Surface Protection	
	Hazardous Materials	
X	Areas of Critical Environmental Concern	/s/ Rebecca L. Peck 09/04/2013
	Visual Resources	
	Socio-Economics/Environmental Justice	
	General Botany/Noxious Weeds	
	Energy Policy	

Writer: /s/ Rebecca L. Peck

Date: 06/17/2013

Environmental Coordinator: /s/ Ramone B. McCoy

Date: 06/17/2013

Field Manager: /s/ Don McClure

Date: 06/17/2013

Worksheet
Determination of NEPA Adequacy (DNA)
U.S. Department of the Interior
Bureau of Land Management

OFFICE: Kingman Field Office (KFO), AZ-310

NEPA DOCUMENT NUMBER: DOI-BLM-AZ-C010-2013-0038-DNA

CASE FILE NUMBER: None

PROPOSED ACTION TITLE/TYPE: Black Mountains and Poachie Mountains Bighorn Capture and Release 2013.

LOCATION/LEGAL DESCRIPTION: Capture Area: Black Mountains, Mohave County, Arizona, Game Management Units (GMU)15D; Release Area: Poachie Mountains, GMU 16A (Maps 1 and 2).

APPLICANT (if any): Arizona Game and Fish Department, Region III.

Description of the Proposed Action and any applicable mitigation measures:

The proposed action is to capture desert bighorn sheep in the Black Mountains, south and north of Route 66, in Game Management Unit (GMU) 15D and relocate them to GMU 16A, in the Poachie Mountains (Maps 1 and 2). Capture and translocation of the desert bighorn sheep would take place in November 2013, with estimated dates of November 4-10.

Capture: The proposed project would involve the capture of up to 40 bighorn sheep. The desired transplant ratio is one ram per 3 ewes or, 10 rams and 30 ewes. Only Class I and II rams would be removed for transplant. If possible, all 40 sheep will be moved at one time; however it may be done in two different releases.

The capture operation would take 2-5 days to complete, assuming no weather or logistical delays. The fall time frame would provide suitable conditions for a successful capture as air temperatures are low, bighorn sheep are not in late stages of pregnancy, and lambs are no longer dependent on ewes.

The net-gun method would be used to capture bighorn. The net-gun method involves using a gun to shoot a net at bighorn during low-level helicopter overflights. This may be done with the assistance of spotters located on the ground. Once captured the helicopter would land, or, capture personnel would exit the aircraft while it is hovering. The captured animals would immediately be blindfolded, hobbled and if possible, the capture net would be removed. The bighorn would be transported by helicopter, either carried inside, or slung underneath, from the capture location to the capture staging area. At the staging areas the bighorn would be processed. Each bighorn would receive an ear tag, a blood and genetic sample may be taken. If available up to ten bighorn would receive a tan-colored GPS or VHS collar. All bighorn would be loaded into the transport boxes. Captures would be conducted by the AGFD and volunteers. Capture operations would be scheduled to occur during weekdays, however there is potential that capture during a weekend day may occur due to weather or scheduling problems.

The bighorn would be captured in GMU 15D (Map 1) which is comprised of non-wilderness and wilderness public lands. Approximately 70% of the capture area is within the Mount Nutt and Warm Springs wildernesses. Whenever possible capture would occur outside of wilderness and landing in wilderness would be avoided when possible. Depending upon where individual bighorn are net-gunned, there may be as few as 25 landings of the helicopter, or as many as 40 landings within wilderness. All other landings would take place outside of wilderness. The capture areas include BLM, Arizona State Trust land and private land however capture operations would not occur or affect any private land. If needed the helicopter may land on Arizona State Trust land.

Release: Bighorn would be released in the Poachie Mountains, into GMU 16A (Map 2) from an existing road outside of wilderness. No helicopter would be needed for the release. Bighorn would be released the same day as capture or held overnight and then transported to the release location the next day (Map 2). Bighorn would be released with at least two hours of daylight remaining or at daybreak. Bighorn are expected to head west towards escape terrain and into the Arrastra Mountain Wilderness located 2 miles away.

Staging and Camping: There may be up to three staging areas needed for the capture area (Map 3) however it is likely that only one staging area would be needed. Up to 30 people (agency and volunteers) may be present at each staging area. At the capture staging areas, dry camping would occur for up to 3 nights. Anywhere from 10-15 people may camp at one of the staging areas as local people would go to their homes for the evening. Camping and staging areas have been selected in areas that are already disturbed, along dirt or maintained roads, or within washes. The staging areas would be left free of trash.

Monitoring: If funds are available up to 10 of the bighorn sheep would be radio collared at the capture staging area and monitored at the release location. Following the capture and translocation the AGFD would monitor the released bighorn either through satellite uplink, primarily from a remote computer (GPS collars), or from monthly telemetry flights (VHS collars).

GPS: Since the GPS collars being deployed have satellite uplink capability, there would be no regular telemetry flights over wilderness or non-wilderness. After approximately two years, the collars would drop-off the bighorn at which point AGFD personnel would recover the collars by hiking or riding horseback in from the ground. Under rare, extenuating circumstances (up to four times annually) a telemetry flight may be scheduled for monitoring problematic collars. During such a flight, the plane would remain 2,000 feet above ground level. If mortality signals are received, AGFD personnel would hike or horseback ride to the signal within approximately 48 hours.

VHS: If VHS collars are used there would be monthly telemetry flights by fixed-wing aircraft for the first 6-12 months. After approximately two years, the collars would drop off and AGFD personnel would recover them by hiking or riding horseback to the collar location. During flights the plane would remain 2,000 feet above ground level. If mortality signals are received, AGFD personnel would hike or horseback ride to the signal within approximately 48 hours.

Notifications: The livestock grazing permittees for the Black Mountain, Boriana B, Happy Jack Wash, and Santa Maria Ranch allotments would be notified of the capture and release dates

B. Land Use Plan (LUP) Conformance

LUP Name: *Kingman Resource Management Plan/EIS*
Date Approved: March 1995

The proposed action is in conformance with the LUP, even though it is not specifically provided for, because it is clearly consistent with the following LUP decisions (objectives, terms, and conditions):

Remarks: RMP Decision number and narrative:

SM*02/II Special Management- Manage the twelve "Areas of Critical Environmental Concern" designation according to the goals and objectives in the RMP pages 95 to 111. Evaluate land use authorizations, including all existing activity plans, for compatibility with goals and objectives of the area of critical environmental concern.

WL*01/VIB Wildlife - Continue implementation and revision of Habitat Management Plans in coordination and cooperation with the state wildlife agency and interested publics (page 79, Objectives and Planned Actions section).

BM*21/VIC Black Mountain ACEC - Promote opportunities for scientific research of ecological and cultural resources (page 99, Objectives section).

BM14/I Black Mountain ACEC -Maintain balanced resource development while providing for public demand and sensitive resource needs. Protect and enhance special status species habitat. Protect cultural resources. Manage wilderness to maintain wilderness values and characteristics (page 99, Goals).

BM15/I Black Mountain ACEC - Improve and maintain habitat while providing for the needs of wild burros, desert bighorn sheep, and other wildlife species and livestock (page 99, Objectives).

* SM= Special Management Areas; WL= Wildlife; BM=Black Mountain

Identify applicable National Environmental Policy Act (NEPA) documents and other related documents that cover the proposed action.

Black Mountain Ecosystem Management Plan and Environmental Assessment (AZ-025-95-032), 1996 (BME Plan)

-pg. 36, #4. BME Plan: Initiate coordination with agencies and individuals that are responsible for management of land adjacent to the Black Mountain ecosystem to delineate and designate movement corridors between the Black Mountain and other ecosystems.

-pg. 49, #4, BME Plan: Discusses procedures for wildlife population and capture of wildlife in wilderness. Capture may occur as often as every year. Two methods may be used: net-gun, and remote chemical injection. Methods described in Appendix 4 (Capture methodologies for Bighorn Sheep) pg. 102 BME Plan.

-pg. 102, Appendix 4, BME Plan: Capture sites: discussed: wherever bighorn occur, inside or outside of wilderness.

Programmatic Environmental Assessment for the Reintroduction and Supplemental Releases of Desert Bighorn Sheep in Mohave, Yavapai, Coconino, and La Paz counties. Environmental Assessment No. AZ-030-2001-0035. BLM Kingman Field Office, Arizona: This document analyzes capture and release of bighorn sheep within the Kingman Field Office, BLM.

Transplant of desert bighorn sheep into the Artillery Mountains, 1994. Environmental Assessment No: AZ-025-94-057. BLM Kingman Field Office, Arizona: This document analyzes transplant and capture of bighorn sheep within the Kingman Field Office, BLM.

NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?

Documentation of answer and explanation:

The proposed action is the same as analyzed in *Programmatic Environmental Assessment for the Reintroduction and Supplemental Releases of Desert Bighorn Sheep in Mohave, Yavapai, Coconino, and La Paz counties. Environmental Assessment No. AZ-030-2001-0035* as the EA evaluated multiple releases per area over a 20 years period (pg. 6). Telemetry which is proposed in the new action was also proposed in the existing NEPA document. If GPS collars are available telemetry in the new action would occur via satellite downlink versus overflights as proposed in the original EA. If GPS collars are unavailable then telemetry would be conducted using VHS collars as described in the existing NEPA document. Telemetry via satellite downlinks would be less obtrusive to wilderness values than was originally proposed as it is done remotely from an office via a computer versus wilderness overflights. The number of captures in the new proposal (up to 40 bighorn) would be smaller (up to 70 bighorn) than proposed in the existing NEPA document. This results in fewer hours of flight, fewer overflights, and landings.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?

Documentation of answer and explanation: Yes, the range of alternatives remains the same given current environmental concerns, interests, and resource values.

1.) Capturing animals outside and inside of wilderness, and, 2.) Capturing animals outside of wilderness only, and 3.) The No Action alternative. The current environmental concerns, interests, and resources values are unchanged from 1994.

3. Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?

Documentation of answer and explanation: There are no new circumstances or information that would change the analysis of the proposed action (MRDG_2013).

4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?

Documentation of answer and explanation: Yes, bighorn sheep would still be affected by capture and release. There would still be the direct effects of capture and release and indirect effects from wearing the

collars. Data from the collars would be used to determine movements, movement areas, habitat use, and mortality events (the collars give off a mortality signal). Part of the capture area is within the Black Mountain Ecosystem Management Area of Critical Environmental Concern. The Black Mountain Ecosystem Management Plan and EA evaluated the impacts of bighorn capture and monitoring. Impacts are the same. Wilderness values of naturalness and opportunities for solitude and primitive recreation would still be temporarily impaired by the use of aircraft during the capture. The original proposal evaluated impacts for up to 50 helicopter landings. This proposal would have as few as 25 landings and as many as 40 landings, thus fewer landings. Bighorn would be released from an existing road outside of wilderness therefore *no* helicopter would be needed for the release as described in the original EA. Impacts associated with telemetry activities could be less than the original project if GPS telemetry via remote satellite downlink is used. Telemetry flights with aircraft would rarely occur with GPS telemetry. If GPS telemetry is not used then the impacts from monitoring would be the same as those analyzed under the existing NEPA document.

5. Are the public involvement and interagency review associated with existing NEPA document(s) adequate for the current proposed action?

Documentation of answer and explanation: Yes, the original NEPA document was sent out to over 500 individuals and groups which represented those concerned with wilderness impacts, wildlife impacts, and grazing management impacts. There have been no issues or complaints from these individuals or groups following implementation of the original proposed action as well as following subsequent captures that have occurred in years 1995, 1999, 2002, 2004, 2008, and 2009, and 2010, and 2012.

E. Persons/Agencies/BLM Staff Consulted

<u>Name</u>	<u>Title</u>	<u>Resource/Agency Represented</u>
Chad Benson	Wild Horse and Burro Specialist	Bureau of Land Management
Mike Blanton	Range Specialist	Bureau of Land Management
Erin Butler	Big Game Specialist	Arizona Game and Fish Dept.
Ramone McCoy	Outdoor Recreation Planner, Wilderness	Bureau of Land Management
Rebecca Peck	Wildlife Biologist	Bureau of Land Management
Tim Watkins	Archaeologist	Bureau of Land Management

Conclusion

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitute BLM’s compliance with the requirements of the NEPA.

/s/ Rebecca L. Peck _____ 09/06/2013 _____
 Signature of Project Lead Date
 Rebecca Peck, Wildlife Biologist

/s/ Ramone B. McCoy _____ 09/06/2013 _____
 Signature of NEPA Coordinator Date
 Ramone McCoy

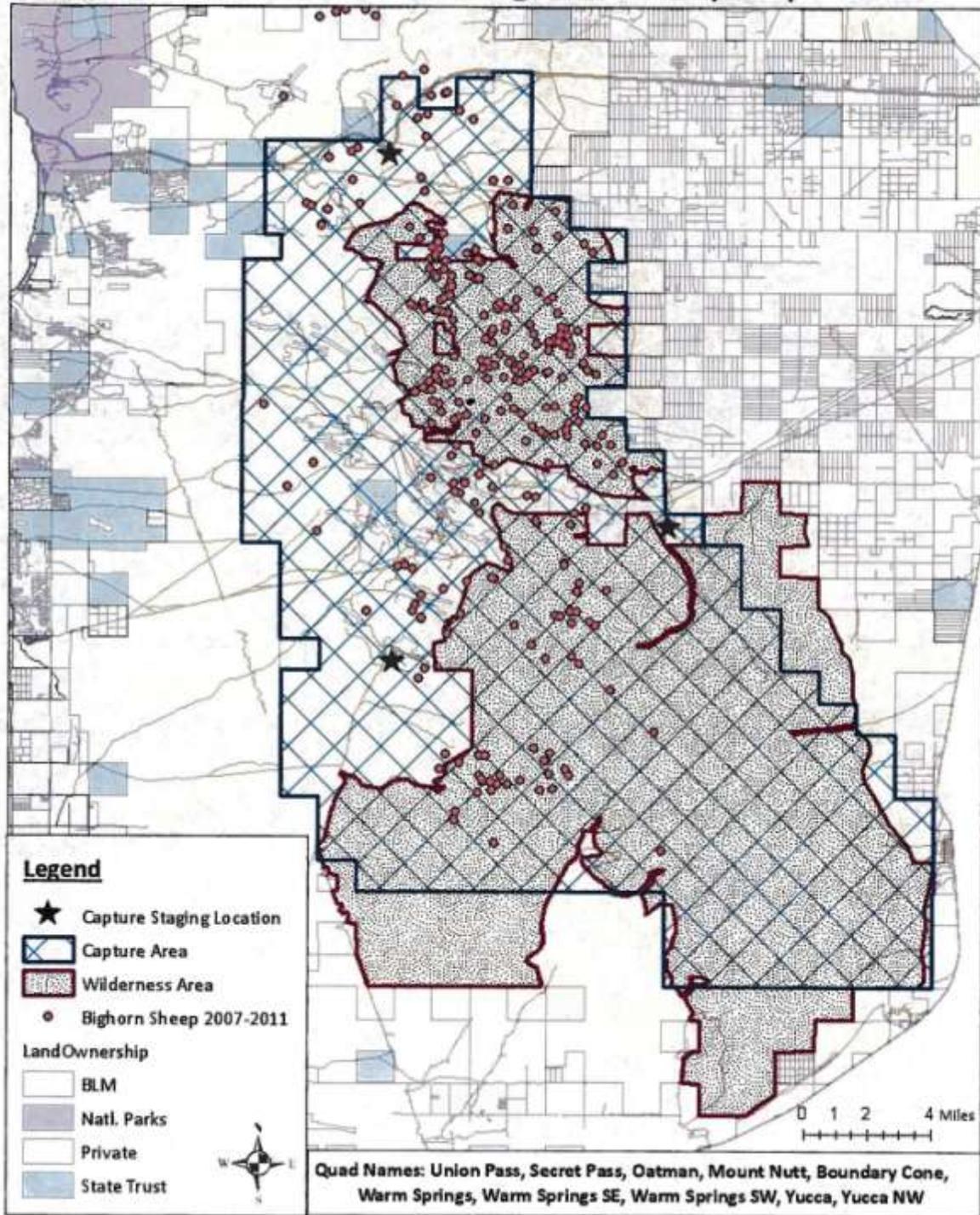
/s/ Ruben A. Sánchez _____ 09/06/2013 _____
 Signature of the Responsible BLM Official Date
 Ruben Sanchez, Field Manager, Kingman Field Office

References

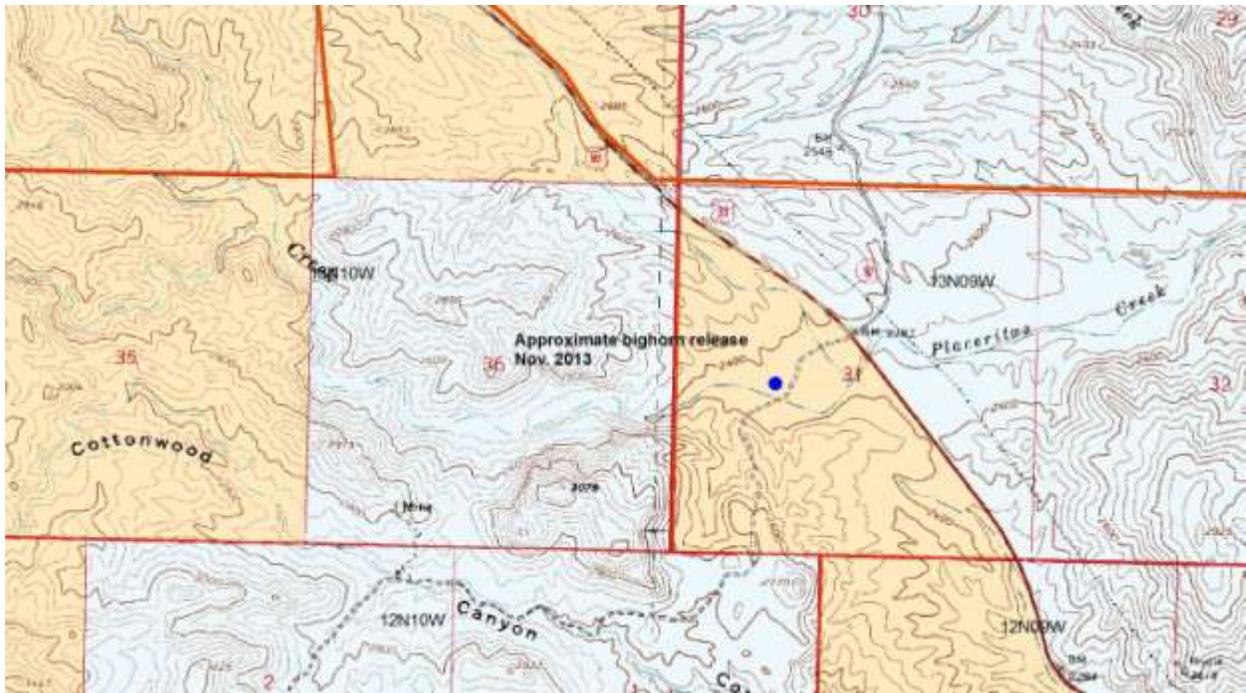
Peck, Rebecca 2009. Biological Evaluation for Federally Listed Species, State Listed Species, and Migratory Birds. Bureau of Land Management, Kingman Field Office, Arizona.

Bureau of Land Management 2013. Minimum Requirements Decision Guide for the Black Mountain and Poachie Mountains Bighorn Capture and Release. Bureau of Land Management, Kingman, Arizona.

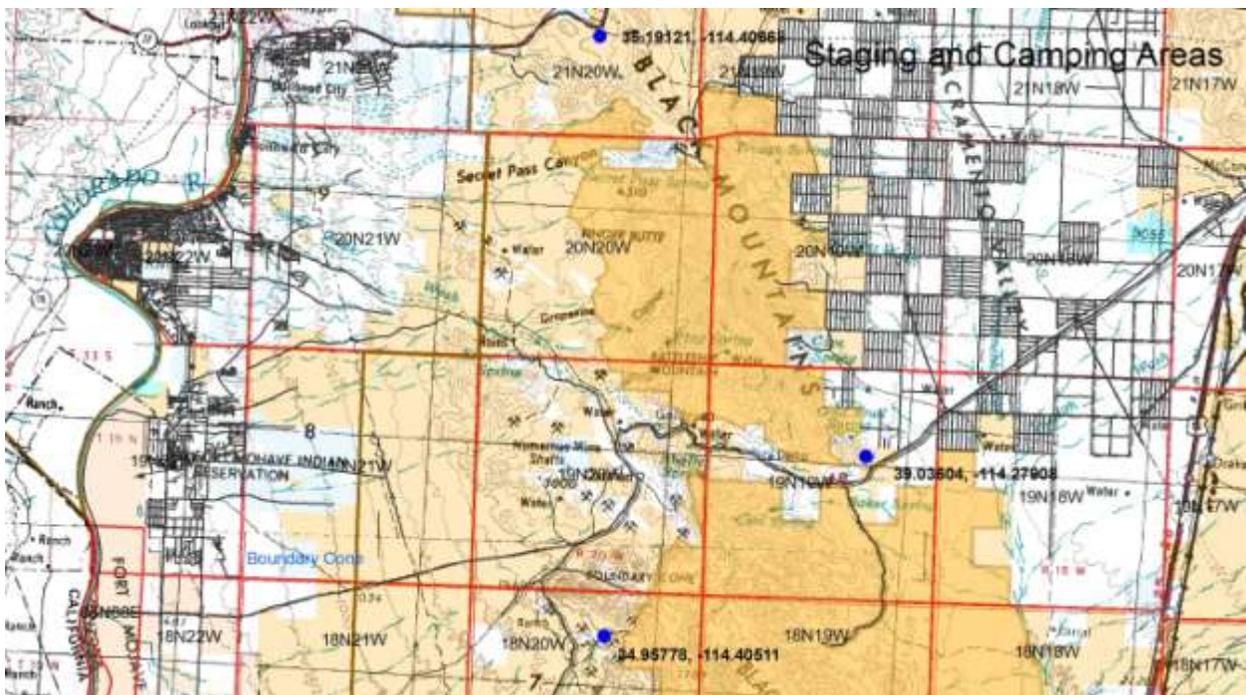
Map #1: Black Mountains Bighorn Sheep Capture Area



Map 1. Proposed capture areas for the 2013 bighorn capture in the Black Mountains, AZ.



Map 2. Proposed bighorn release area in the Poachie Mountains, Arizona for the 2013 bighorn release.



Map 3. Proposed staging and camping areas for the 2013 bighorn capture and release.



MINIMUM REQUIREMENTS DECISION GUIDE

WORKBOOK

"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

-- The Wilderness Act of 1964

Project Title: Black Mountains and Poachie Mountains Bighorn Capture and Release

MRDG STEP 1

Determine if Administrative Action is Necessary

Description of the Situation

What is the situation that may prompt administrative action?

The BLM developed the Black Mountain Ecosystem Management Plan and EA (1996) to address management of this ecosystem. Capture and study of the desert bighorn sheep was addressed and evaluated in this document. Capture of bighorn, methods of capture, and monitoring were evaluated and determined to be actions necessary to maintain bighorn in the State of Arizona. The AGFD captures and transplants bighorn to augment existing populations. States have jurisdiction and responsibilities for the protection and management of wildlife and fish populations in wilderness. The desert bighorn is considered a wilderness character and the BLM cooperates and works closely with State wildlife and fish authorities in all aspects of wildlife and fish management.

Options Outside of Wilderness

Can action be taken outside of wilderness that adequately addresses the situation?

YES

NO

EXPLAIN & COMPLETE STEP 1 OF THE MRDG

Explain:

No, the majority of high quality bighorn sheep habitat is found in wilderness. Approximately 70% of the habitat area which includes the capture area is within the Mount Nutt and Warm Springs wildernesses. This same action would also take place outside of wilderness as well however many of the bighorn will be in wilderness the day of the capture.

Criteria for Determining Necessity

Is action necessary to meet any of the criteria below?

A. Valid Existing Rights or Special Provisions of Wilderness legislation

*Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that **requires** action? Cite law and section.*

 YES NO

Explain:

B. Requirements of Other Legislation

Is action necessary to meet the requirements of other federal laws? Cite law and section.

 YES NO

Explain:

C. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: Untrammeled, Undeveloped, Natural, Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation, or Unique Attributes or Other Features?

UNTRAMMELED

 YES NO

Explain:

UNDEVELOPED

 YES NO

Explain

NATURAL

 YES NO

Explain:

Naturalness of the wilderness would be enhanced by preserve the unique attribute of desert bighorn sheep. Augmenting bighorn in the Arrastra Mountain wilderness will help to ensure the continued existence of bighorn within this wilderness.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

 YES NO

Explain:

The proposed action will temporarily impact the opportunity for solitude, but will have no long term affects.

OTHER FEATURES OF VALUE

 YES NO

Explain:

This proposed action supports the wilderness public purposes of conservation and scientific research. It supports the public purpose of conservation by augmenting the bighorn population within the Arrastra Mountain Wilderness. This action also allows the AGFD to study the success and failures of augmenting an existing population of bighorn. Currently the population of bighorn in the Poachie Mountains and Arrastra Mountain Wilderness is very low.

Step 1 Decision

Is administrative action necessary in wilderness?

Decision Criteria

- A. Existing Rights or Special Provisions
- B. Requirements of Other Legislation
- C. Wilderness Character
 - Untrammeled
 - Undeveloped
 - Natural
 - Outstanding Opportunities
 - Other Features of Value

Summary Responses

Action IS NOT necessary to meet this criterion.

Action IS necessary to meet this criterion.

Action IS necessary to meet this criterion.

Action IS necessary to meet this criterion.

Is administrative action necessary in wilderness?

 YES

EXPLAIN & PROCEED TO STEP 2 OF THE MRDG

 NO

Explain:

This project is proposed to support desert bighorn sheep management by the Arizona Game and Fish Department. Approximately 70% of the capture area is within the Mount Nutt and Warm Springs wildernesses. The wildernesses contain the majority of the bighorn habitat and the highest densities of bighorn found within the Black Mountains.

Bighorn in the Poachie Mountains (within Arrastra Mountain Wilderness) are rare. They were historically severely reduced by hunting pressures to supply meat to mine workers along the Big Sandy River.

Project Title: Black Mountains and Poachie Mountains Bighorn Capture and
MRDG STEP 2
Determine the Minimum Activity

Other Direction

Is there "special provisions" language in legislation (or other Congressional direction) that explicitly allows consideration of a use otherwise prohibited by Section 4(c)?

AND/OR

Has the issue been addressed in agency policy, management plans, species recovery plans, or agreements with other agencies or partners?

 YES

DESCRIBE DOCUMENTS & DIRECTIONS BELOW

 NO

Describe Documents & Direction:

Black Mountain Ecosystem Management Plan and EA (1996). Comply with BME management plan. The BLM developed the Black Mountain Ecosystem Management Plan and EA (1996) to address management of this ecosystem. Capture and study of the desert bighorn sheep was addressed and evaluated in this document. Capture of bighorn, methods of capture, and monitoring were evaluated and determined to be actions necessary to maintain bighorn in the State of Arizona. The AGFD captures and transplants bighorn to augment existing populations. States have jurisdiction and responsibilities for the protection and management of wildlife and fish populations in wilderness. The desert bighorn is considered a wilderness character and the BLM cooperates and works closely with State wildlife and fish authorities in all aspects of wildlife and fish management.

[Policies and Guidelines for Fish and Wildlife Management in National Forest and Bureau of Land Management Wilderness \(as amended June, 2006\).](#)

[Memorandum of Understanding Between the United States Department of the Interior Bureau of Land Management Arizona State Office and State of Arizona Game and Fish Commission. Agreement Number AZ- 930-0703. October, 2007.](#)

Components of the Action

What are the discrete components or phases of the action?

Component X	<i>Example: Transportation of personnel to the project site</i>
Component 1	Find and capture bighorn.
Component 2	Prepare bighorn to be transported to the staging area (outside of wilderness) for processing.
Component 3	Transport to the release site (outside of wilderness).
Component4	

Proceed to the alternatives.

Refer to the [MRDG Instructions](#) regarding alternatives and the effects to each of the comparison criteria

Project Title: Black Mountains and Poachie Mountains Bighorn Capture and Release, 2013

MRDG Step 2: Alternatives

Alternative 1: Proposed Action - Motorized

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

The proposed action is to capture desert bighorn sheep in the Black Mountains, south and north of Route 66, in Game Management Unit (GMU) 15D and relocate them to GMU 16A, in the Poachie Mountains (Maps 1 and 2). Capture and translocation of the desert bighorn sheep would take place in November 2013, with estimated dates of November 4-10.

Capture: The proposed project would involve the capture of up to 40 bighorn sheep. If possible, all 40 sheep will be transplanted at one time; however it may be done in two different releases. The capture operation would take 2-5 days to complete, assuming no weather or logistical delays. The fall time frame would provide suitable conditions for a successful capture as air temperatures are low, bighorn sheep are not in late stages of pregnancy, and lambs are no longer dependent on ewes.

The net-gun method would be used to capture bighorn. The net-gun method involves using a gun to shoot a net at bighorn during low-level helicopter over flights. This may be done with the assistance of spotters located on the ground. Once captured the helicopter would land, or, capture personnel would exit the aircraft while it is hovering. The captured animals would immediately be blindfolded, hobbled and if possible, the capture net would be removed. The bighorn would be transported by helicopter, either carried inside or slung underneath, from the capture location to the capture staging area. At the capture staging areas each bighorn would be processed. Each bighorn would receive an ear tag, and a blood and genetic sample may be taken. If available up to ten bighorn would receive a tan-colored GPS or VHS collar. All bighorn would be loaded into the transport boxes. Captures would be conducted by the AGFD and volunteers. Capture operations would be scheduled to occur during weekdays; however there is potential that capture during a weekend day may occur due to weather or scheduling problems.

The bighorn would be captured in GMU 15D (Map 1) which is comprised of non-wilderness and wilderness public lands. Approximately 70% of the capture area is within the Mount Nun and Warm Springs wildernesses. Whenever possible capture would occur outside of wilderness and landing in wilderness would be avoided when possible. Depending upon where individual bighorn are net-gunned, there may be as few as 25 landings of the helicopter, or as many as 40 landings within wilderness. All other landings would take place outside of wilderness. The capture areas include BLM Arizona State Trust land and private land however capture operations would not occur or affect any private land. If needed the helicopter may land on Arizona State Trust land.

Release: Bighorn would be released in the Poachie Mountains, into GMU 16A (Map 2) from an existing road outside of wilderness. No helicopter would be needed for the release. Bighorn would be released the same day as capture or held overnight and then transported to the release location the next day (Map 2). Bighorn would be released with at least two hours of daylight remaining or at daybreak.

The proposed action is to capture desert bighorn sheep in the Black Mountains, south and north of Route 66, in Game Management Unit (GMU) 15D and relocate them to GMU 16A, in the Poachie Mountains (Maps 1 and 2). Capture and translocation of the desert bighorn sheep would take place in November 2013, with estimated dates of November 4-10.

Capture: The proposed project would involve the capture of up to 40 bighorn sheep. If possible, all 40 sheep will be transplanted at one time; however it may be done in two different releases.

The capture operation would take 2-5 days to complete, assuming no weather or logistical delays. The fall time frame would provide suitable conditions for a successful capture as air temperatures are low, bighorn sheep are not in late stages of pregnancy, and lambs are no longer dependent on ewes.

The net-gun method would be used to capture bighorn. The net-gun method involves using a gun to shoot a net at bighorn during low-level helicopter over flights. This may be done with the assistance of spotters located on the ground. Once captured the helicopter would land or, capture, personnel would exit the aircraft while it is hovering. The captured animals would immediately be blindfolded, hobbled and if possible, the capture net would be removed. The bighorn would be transported by helicopter, either carried inside or slung underneath, from the capture location to the capture staging area. At the capture staging areas each bighorn would be processed. Each bighorn would receive an ear tag and a blood and genetic sample may be taken. If available up to ten bighorn would receive a tan-colored GPS or VHS collar. All bighorn would be loaded into the transport boxes. Captures would be conducted by the AGFD and volunteers. Capture operations would be scheduled to occur during weekdays, however there is potential that capture during a weekend day may occur due to weather or scheduling problems.

The bighorn would be captured in GMU 15D (Map 1) which is comprised of non-wilderness and wilderness public lands. Approximately 70% of the capture area is within the Mount Nun and Warm Springs wildernesses. Whenever possible capture would occur outside of wilderness and landing in wilderness would be avoided when possible. Depending upon where individual bighorn are net-gunned, there may be as few as 25 landings of the helicopter, or as many as 40 landings within wilderness. All other landings would take place outside of wilderness. The capture areas include BLM Arizona State Trust land and private land however capture operations would not occur or affect any private land. If needed the helicopter may land on Arizona State Trust land.

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Find and capture bighorn.	A helicopter would fly over wilderness and a bighorn is net-gunned.
2	Prepare bighorn to be transported to the staging area (outside of wilderness) for processing.	The helicopter lands and the bighorn is sling loaded to the staging area.
3	Transport to the release site (outside of wilderness).	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.
4		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.			✓
2	The helicopter lands and the bighorn is sling loaded to the staging area.		✓	
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4				
Totals		0	1	NE
Untrammeled Total Rating		-1		

Explain:

Landing a helicopter in wilderness could leave temporary skid marks. These marks would be expected to disappear within a year or less following the captures.

UNDEVELOPED

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.			✓
2	The helicopter lands and the bighorn is sling loaded to the staging area.			✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4				
Totals		0	0	NE
Undeveloped Total Rating		0		

Explain:

There would be no development in wilderness as a result of the proposed action.

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.			✓
2	The helicopter lands and the bighorn is sling loaded to the staging area.	✓	✓	✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		✓
4				NE
Totals		2	1	
Natural Total Rating		1		

Explain:

Bighorn sheep are part of the natural historical ecosystem. Wildlife and fisheries are recognized as an integral part of wilderness and contribute significantly to overall biodiversity. The proposed action will temporarily impact the natural character of the wilderness.

The positive effects of removing bighorn from these two wildernesses would reduce the number of bighorn temporarily (over 3-5 years) but allow for more forage and habitat to be available to the remaining bighorn. The bighorn sheep population in the Black Mountains is robust enough to support transplant of individuals to augment populations in other areas. The continued presence of bighorn within these wildernesses assures that naturalness would be preserved. The negative effects of motorized equipment and mechanical transport would be temporary in nature and last no more than 2 to 5 days for each capture effort. There may be up to two capture efforts conducted for this project.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.		✓	
2	The helicopter lands and the bighorn is sling loaded to the staging area.		✓	✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		1	2	NE
Solitude or Primitive & Unconfined Recreation Total Rating		-1		

Explain:

The negative effects are temporary in nature. The helicopter flights and potential landings would occur over a 2-5 day period. The landings would not exceed 1/2 hour and typically not more than 5 minutes for each landing. The positive effects are reducing bighorn in the wildernesses and thus allowing for more forage and habitat available for the remaining bighorn. There are also positive off-site affects as the bighorn herd in the release area would be augmented thus helping to ensure the long-term viability of bighorn. Although the bighorn in the release site would be outside of wilderness, the released bighorn are expected to join up with indigenous bighorn in the Arrastra Mountain Wilderness. The presence of bighorn in the Arrastra Mountain Wilderness would enhance the visitors' experience of unconfined recreation and primitive recreation. These projects would assure that bighorn would remain in wilderness. The effects on solitude are also temporary in nature. The sounds and sight of the helicopter would be temporary (2-5 days). Since the helicopter would not focus in one area, the sounds and sight may only last 5 minutes to 1/2 hour in any location within wilderness.

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.			✓
2	The helicopter lands and the bighorn is sling loaded to the staging area.	✓		
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		2	0	
Other Features of Value Total Rating		2		

Explain:

This project will conserve the desert bighorn in the wilderness as well as within the State of Arizona. This contributes to the public purposes of conservation and scientific research. The AGFD would monitor these bighorn populations in the three wildernesses and conduct research on these herds.

This project would help to maintain bighorn sheep populations in all parts of the Black Mountain Ecosystem and associated wildernesses. It also would help to maintain bighorn in the Arrastra Mountain Wilderness. The proposed monitoring would help to understand this species use of habitat and movements thus allowing for more informed management decisions within the wildernesses. The project proposes not only to translocate bighorn to another area but to monitor the animal movements. Radio-collaring of bighorn, taking blood samples, and monitoring movements all contribute to understanding this species use of the wilderness. This may ultimately help in the conservation of this species within the Arrastra Mountain Wilderness and in Arizona.

Other Criteria
What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		
1	A helicopter would fly over wilderness and a bighorn is net-gunned.		✓	
2	The helicopter lands and the bighorn is sling loaded to the staging area.	✓	✓	
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		2	2	NE
Maintaining Traditional Skills Total Rating		0		

Explain:

Traditional skills would be maintained by the hunting of bighorn in all three wildernesses.

SPECIAL PROVISIONS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		
1	A helicopter would fly over wilderness and a bighorn is net-gunned.			✓
2	The helicopter lands and the bighorn is sling loaded to the staging area.			✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		1	0	NE
Special Provisions Total Rating		1		

Explain:

The bighorn sheep capture is compatible with Section 4 (d)(B) and the role of the states in managing wildlife populations in wilderness.

ECONOMICS & TIME CONSTRAINTS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.	✓		
2	The helicopter lands and the bighorn is sling loaded to the staging area.	✓		
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		3	0	NE
Economics & Time Constraints Total Rating		3		

Explain:

The long-term economic viability of hunting bighorn would be conserved. Even though the use of a helicopter is expensive it greatly reduces the amount of time required to find and capture bighorn for transplant/augmentation. The use of helicopters is more efficient in locating sheep, accessing the areas, and capture, than other methods. It is estimated that it would take 1 hour per entry/flight and landing: 3 man-hours/sheep (1 for the pilot, 1 for the net-gunner, and 1 for the mugger). If the maximum number (40) of sheep is captured, 120 man-hours would be needed for this action.

The cost of man-hours to accomplish the project would be prohibitive without the use of a helicopter.

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		✓
1	A helicopter would fly over wilderness and a bighorn is net-gunned.		✓	
2	The helicopter lands and the bighorn is sling loaded to the staging area.		✓	
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4				
Totals		3	0	NE
Safety of Visitors & Workers Total Rating		-2		

Explain:

Using a helicopter and landing in unimproved sites has an inherent level of risk to personnel however this risk is offset by the high potential for injury to personnel and wildlife if a helicopter was not used. Using a helicopter to find, capture and then sling-load bighorn to a staging area would reduce the potential for worker and bighorn injury. Research has shown net-gunning to be the safest way to capture bighorn sheep; it results in the fewest, if any, capture related sheep mortality. The proposed action also does not expose AGFD personnel to the hazards of hiking in the rough terrain of the Wildernesses. The action also requires the least amount man-hours. For example, 1 hour per entry/flight and landing: 3 man-hours/sheep {1 for the pilot, 1 for the net-gunner, and 1 for the muggger). If the maximum number {40 of sheep are captured, 120 man-hours would be needed for this action.

Chemical immobilization for bighorn sheep has been shown to result in a 23% mortality rate. In addition, terrain and chemically impaired sheep fleeing make this an unsafe option for personnel. Alternative 2 would require - 12,800 man-hours/40 sheep captured. Bighorn would still have to be flown out as it would be unsafe to carry a bighorn across rough terrain over long distances > 1 mile and it would be stressful for the bighorn to be carried for such a long distance as it would take hours to transport one bighorn by hand {on a stretcher}.

Summary Ratings for Alternative 1

Wilderness Character	
Untrammeled	-1
Undeveloped	0
Natural	1
Solitude or Primitive & Unconfined Recreation	-1
Other Features of Value	2
Wilderness Character Summary Rating	1

Other Criteria	
Maintaining Traditional Skills	0
Special Provisions	1
Economics & Time Constraints	3
Other Criteria Summary Rating	4

Safety	
Safety of Visitors & Workers	-2
Safety Summary Rating	-2

Project Title: Black Mountains and Poachie Mountains Bighorn Capture and Release, 2013

MRDG Step 2: Alternatives

Alternative 2: Non-Motorized

Description of the Alternative

What are the details of this alternative? When, where, and how will the action occur? What mitigation measures will be taken?

Alternative 2 - Capture Bighorn Sheep Without the Use of Mechanical Transport

Chemical immobilization- darting. 4 AGFD employees (3 spotters and 1 dart-gunner) backpack into the area; camp; and dart up to 40 bighorn sheep. Accessing the Wilderness area on foot and attempting to immobilize (dart) bighorn sheep in steep, rocky, and slippery terrain, the sheep's natural habitat, would pose a significant safety hazard to the bighorn sheep and to personnel.

Bighorn sheep, once darted, would still have the ability to flee while the immobilization chemicals took effect. As the chemical gradually entered the sheep's system, their muscle control, balance, and coordination would become increasingly compromised and the likelihood of injury or mortality from falling would become more probable. Bates et al. (1985) found that 34 of 147 (23%) darted bighorn sheep died as a result of the capture method. Personnel attempting to follow the sheep would also be exposed to the increased risk of navigating the steep, rocky, and slippery terrain. In addition, personnel may be faced with the decision of following the drugged sheep over perilous terrain to collar and administer the reversal drug or allowing the sheep to die because it is inaccessible.

Once the bighorn is captured personnel would have to transport the immobilized sheep on a stretcher over rough terrain. This would mean four people would be carrying the stretcher for one plus miles. This could potentially take hours for each bighorn putting extreme stress onto the animal and people involved.

Component Activities

How will each of the components of the action be performed under this alternative?

Component of the Action		Activity for this Alternative
X	<i>Example: Transportation of personnel to the project site</i>	<i>Example: Personnel will travel by horseback</i>
1	Find and capture bighorn.	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize the animal.
2	Prepare bighorn to be transported to the staging area (outside of wilderness) for processing.	Bighorn would be transported on a stretcher on foot to the staging area.
3	Transport to the release site (outside of wilderness).	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.
4		

Wilderness Character

What is the effect of each component activity on the qualities of wilderness character? What mitigation measures will be taken?

UNTRAMMELED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>			✓
1 Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize			✓
2 Bighorn would be transported on a stretcher on foot to the staging area			✓
3 The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4			
Totals	0	0	NE
Untrammeled Total Rating	0		

Explain:

UNDEVELOPED

Component Activity for this Alternative	Positive	Negative	No Effect
X <i>Example: Personnel will travel by horseback</i>			✓
1 Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize			✓
2 Bighorn would be transported on a stretcher on foot to the staging area			✓
3 The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4			
Totals	0	0	NE
Undeveloped Total Rating	0		

Explain:

There would be no development in wilderness as a result of Alternative 2

NATURAL

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize	✓		
2	Bighorn would be transported on a stretcher on foot to the staging area			✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		2	0	NE
Natural Total Rating		2		

Explain:

Bighorn sheep are part of the natural historical ecosystem. Wildlife and fisheries are recognized as an integral part of wilderness and contribute significantly to overall biodiversity. The positive effects of removing bighorn from these two wildernesses would reduce the number of bighorn temporarily (over 3-5 years) but allow for more forage and habitat to be available to the remaining bighorn. The bighorn sheep population in the Black Mountains is robust enough to support transplant of individuals to augment populations in other areas. The continued presence of bighorn within these wildernesses assures that naturalness would be preserved.

SOLITUDE OR PRIMITIVE & UNCONFINED RECREATION

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize			✓
2	Bighorn would be transported on a stretcher on foot to the staging area			✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		1	0	NE
Solitude or Primitive & Unconfined Recreation Total Rating		1		

Explain:

The positive effects are reducing bighorn in the wildernesses and thus allowing for more forage and habitat available for the remaining bighorn. There are also positive off-site effects as the bighorn herd in the release area would be augmented thus helping to ensure the long-term viability of bighorn. Although the bighorn in the release site would be outside of wilderness, the released bighorn are expected to join up with indigenous bighorn in the Arrastra Mountain Wilderness. The presence of bighorn in the Arrastra Mountain Wilderness would enhance the visitors' experience of unconfined recreation and primitive recreation. These projects would assure that bighorn would remain in wilderness

OTHER FEATURES OF VALUE

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>			✓
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize	✓		
2	Bighorn would be transported on a stretcher on foot to the staging area	✓		
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		3	0	
Other Features of Value Total Rating		3		

Explain:

This project will conserve the desert bighorn in the wilderness as well as within the State of Arizona. This contributes to the public purposes of conservation and scientific research. The AGFD would monitor these bighorn populations in the three wildernesses and conduct research on these herds.

This project would help to maintain bighorn sheep populations in all parts of the Black Mountain Ecosystem and associated wildernesses. It also would help to maintain bighorn in the Arrastra Mountain Wilderness. The proposed monitoring would help to understand this species use of habitat and movements thus allowing for more informed management decisions within the wildernesses. The project proposes not only to translocate bighorn to another area but to monitor the animal movements. Radio-collaring of bighorn, taking blood samples, and monitoring movements all contribute to understanding this species use of the wilderness. This may ultimately help in the conservation of this species within the Arrastra Mountain Wilderness and in Arizona.

Other Criteria

What is the effect of each component activity on other comparison criteria? What mitigation measures will be taken?

MAINTAINING TRADITIONAL SKILLS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize	✓		
2	Bighorn would be transported on a stretcher on foot to the staging area	✓		
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4				
Totals		2	0	NE
Maintaining Traditional Skills Total Rating		2		

Explain:

Traditional skills would be maintained by the hunting of bighorn and by people hiking to the capture sites as well as using dart guns and carrying the bighorn on foot.

SPECIAL PROVISIONS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize	✓		
2	Bighorn would be transported on a stretcher on foot to the staging area			✓
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.	✓		
4				
Totals		2	0	NE
Special Provisions Total Rating		2		

Explain:

The bighorn sheep capture is compatible with Section 4 (d)(S) and the role of the states in managing wildlife populations in wilderness..

ECONOMICS & TIME CONSTRAINTS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		✓
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize		✓	
2	Bighorn would be transported on a stretcher on foot to the staging area		✓	
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4				
Totals		03	2	NE
Economics & Time Constraints Total Rating		-2		

Explain:

The long-term economic viability of hunting bighorn would be conserved. Dart gunning animals requires the personnel to chase and retrieve the bighorn potentially taking up to 1 hour with the possibility of not being able to retrieve the animal due to the terrain. Alternative 2 would require 12,800 man-hours/40 sheep captured. To carry a bighorn across rough terrain over long distances > 1 mile would be stressful for the bighorn and would take hours to transport one bighorn by hand (on a stretcher).

Based on hunting and scouting time requirements, successfully darting a bighorn sheep is projected to take 10 days/sheep. Unlike a rifle, a dart must be "lobbed" from a distance of < 75 meters, to allow safe injection without the dart barrel impaling the animal. This Alternative Tool would require 320 man-hours/sheep (4 people (1 darter and 3 scouts) X 8 hours/day X 10 days). To capture 40 sheep would require 12,800 man-hours.

Safety of Visitors & Workers

What is the effect of each component activity on the safety of visitors and workers? What mitigation measures will be taken?

SAFETY OF VISITORS & WORKERS

Component Activity for this Alternative		Positive	Negative	No Effect
X	<i>Example: Personnel will travel by horseback</i>	✓		✓
1	Personnel would find and capture bighorn on foot. Capture would involve dart-gunning to immobilize		✓	
2	Bighorn would be transported on a stretcher on foot to the staging area		✓	
3	The bighorn are driven to a site located near the Arrastra Mtn. Wilderness and released.			✓
4				
Totals		3	0	NE
Safety of Visitors & Workers Total Rating		-2		

Explain:

Accessing the wildernesses on foot and attempting to immobilize (dart) bighorn sheep in steep, rocky, and slippery terrain, the sheep's natural habitat, would pose a significant safety hazard to the bighorn sheep and to personnel. Chemical immobilization for bighorn sheep has been shown to result in a 23% mortality rate. Bighorn sheep, once darted, would still have the ability to flee while the immobilization chemicals took effect. As the chemical gradually entered the sheep's system, their muscle control, balance, and coordination would become increasingly compromised and the likelihood of injury or mortality from falling would become more probable. Bates et al. (1985) found that 34 of 147 (23%) darted bighorn sheep died as a result of the capture method. Personnel attempting to follow the sheep would also be exposed to the increased risk of navigating the steep, rocky, and slippery terrain. In addition, personnel may be faced with the decision of following the drugged sheep over perilous terrain to collar and administer the reversal drug or allowing the sheep to die because it is inaccessible. It would be unsafe to carry a bighorn across rough terrain over long distances > 1 mile and it would be stressful for the bighorn to be carried for such a long distance as it would take hours to transport one bighorn by hand (on a stretcher)..

Summary Ratings for Alternative 2	
--	--

Wilderness Character	
Untrammeled	0
Undeveloped	0
Natural	2
Solitude or Primitive & Unconfined Recreation	1
Other Features of Value	3
Wilderness Character Summary Rating	6

Other Criteria	
Maintaining Traditional Skills	2
Special Provisions	2
Economics & Time Constraints	-2
Other Criteria Summary Rating	2

Safety	
Safety of Visitors & Workers	-2
Safety Summary Rating	-2

Project Title:

Black Mountains and Poachie Mountains Bighorn Capture and Release, 2013

MRDG Step 2: Alternative Comparison

Alternative 1: Proposed Action - Motorized

Alternative 2: Non-Motorized

Alternative 3:

Wilderness Character	Alternative 1		Alternative 2		Alternative 3	
	Positive	Negative	Positive	Negative	Positive	Negative
Untrammled	0	1	0	0	0	0
Undeveloped	0	0	0	0	0	0
Natural	2	1	2	0	0	0
Solitude or Primitive & Unconfined Rec.	1	2	1	0	0	0
Other Features of Value	2	0	3	0	0	0
Totals	5	4	6	0	0	0
Wilderness Character Rating	1		6		0	

Other Criteria	Alternative 1		Alternative 2		Alternative 3	
	Positive	Negative	Positive	Negative	Positive	Negative
Maintaining Traditional Skills	2	2	2	0	0	0
Special Provisions	1	0	2	0	0	0
Economics & Time Constraints	3	0	0	2	0	0
Totals	6	2	4	2	0	0
Other Criteria Rating	4		2		0	

Safety	Alternative 1		Alternative 2		Alternative 3	
	Positive	Negative	Positive	Negative	Positive	Negative
Safety of Visitors & Workers	0	2	0	2	0	0
Safety Rating	-2		-2		0	

Project Title: Black Mountains and Poachie Mountains Bighorn Capture and Release, 2013

MRDG Step 2: Decision

Refer to the [MRDG Instructions](#) before identifying the selected alternative and explaining the rationale for the selection.

Selected Alternative

Alternative 1:	<input checked="" type="checkbox"/>	Proposed Action - Motorized
Alternative 2:	<input type="checkbox"/>	Non-Motorized
Alternative 3:	<input type="checkbox"/>	

Explain Rationale for Selection:

Using a helicopter and landing in unimproved sites has an inherent level of risk to personnel however this risk is offset by the high potential for injury to personnel and wildlife if a helicopter was not used. Using a helicopter to find, capture and then sling-load bighorn to a staging area would reduce the potential for worker and bighorn injury. Research has shown net-gunning to be the safest way to capture bighorn sheep; it results in the fewest, if any, capture related sheep mortality. The proposed action also does not expose AGFD personnel to the hazards of hiking in the rough terrain of the Wildernesses. The action also requires the least amount man-hours. For example: 1 hour per entry/flight and landing, 3 man-hours/sheep (1 for the pilot, 1 for the net-gunner, and 1 for the mugger). If the maximum number (40 of sheep) is captured, 120 man- hours would be needed for this action.

Chemical immobilization for bighorn sheep has been shown to result in a 23% mortality rate. In addition, terrain and chemically impaired sheep fleeing make this an unsafe option for personnel. Alternative 2 would require ~12,800 man-hours/40 sheep captured. Bighorn would have to be carried to the staging area across rough terrain over long distances > 1 mile and it would be stressful for the bighorn to be carried for such a long distance as it would take hours to transport one bighorn by hand (on a stretcher).

If more space is needed, continue on the next page...

Approval of Prohibited Uses

Which of the prohibited uses found in Section 4(c) of the Wilderness Act are approved in the selected alternative and for what quantity?

Prohibited Use

Quantity

- | | | |
|-------------------------------------|----------------------|--|
| <input checked="" type="checkbox"/> | Mechanical Transport | As described in the Proposed Action of the EA. |
| <input type="checkbox"/> | Motorized Equipment | |
| <input type="checkbox"/> | Motor Vehicles | |
| <input type="checkbox"/> | Motorboats | |
| <input type="checkbox"/> | Landing of Aircraft | |
| <input type="checkbox"/> | Temporary Roads | |
| <input type="checkbox"/> | Structures | |
| <input type="checkbox"/> | Installations | |

Record and report any authorizations of Wilderness Act Section 4(c) prohibited uses according to agency policies or guidance.

Refer to agency policies for the following review and decision authorities:

Prepared	Name		Position	
	Rebecca Peck		Wildlife Biologist	
	Signature			Date
	/s/ Rebecca L. Peck			09/06/2013
Recommended	Name		Position	
	Ramone McCoy		Wilderness Specialist	
	Signature			Date
	/s/ Ramone B. McCoy			09/05/2013
Recommended	Name		Position	
	Signature			Date
Approved	Name		Position	
	Ruben Sanchez		Field Office Manager	
	Signature			Date
	/s/ Ruben A. Sánchez			09/06/2013