Proposed Lands with Wilderness Characteristics:

# Black Mesa

A proposal report to the Bureau of Land Management,
Kingman Field Office, Arizona

August, 2015

*Prepared by:*
Joseph M. Trudeau &
Amber R. Fields

ARIZONA WILDERNESS COALITION

hassayampa forestry
PRESCOTT, ARIZONA

# *Table of Contents*

***PREFACE: This Proposal was developed according to BLM Manual 6310*** ***page 3***
***MAP: Black Mountains North Proposed LWC*** ***page 5***

***SECTION 1: Proposed LWC Overview***
***Unit Location*** ***page 6***
***Brief Boundary Description*** ***page 6***
***Landforms & Biological Communities*** ***page 6***
***Previous Wilderness Inventories*** ***page 7***

***SECTION 2: Wilderness Characteristics***
***The proposed LWC meets the minimum size criteria for roadless lands*** ***page 8***
***The proposed LWC is affected primarily by the forces of nature*** ***page 8***
***The proposed LWC provides outstanding opportunities for solitude or primitive & unconfined recreation*** ***page 9***
***The proposed LWC has supplemental values that enhance the wilderness experience & deserve protection*** ***page 10***
***Works Cited*** ***page 12***

***SECTION 3: Detailed Boundary & Routes Description***
***Narrative Description of the Proposed LWC Boundary*** ***page 13***

***SECTION 4: Photopoint data***
***Data Tables & Photographs to accompany the Detailed Boundary & Routes Description*** ***page 16***

Cover Photo: Looking south towards Eagle Point and its neighboring peaks from Alamo Road, the unit's eastern boundary road. The photo was taken near the junctions of BLM Route 7479 and 7481.

All photos by Joe Trudeau and Amber Fields, 2015.

***PREFACE: This Proposal was developed according to BLM Manual 6310***

*General Overview*

Instruction Memorandum 2011-154 and Manuals 6310 and 6320 set out the BLM's approach to protecting wilderness characteristics on the public lands. This guidance acknowledges that wilderness is a resource that is part of BLM's multiple use mission, requires the BLM to keep a current inventory of wilderness characteristics, and directs the agency to consider protection of these values in land use planning decisions.[1]

In March 2012, the Bureau of Land Management issued updated manuals for inventorying and managing Lands with Wilderness Characteristics on public lands (hereafter often referred to as LWC's). These manuals provide the agency with direction for implementing its legal obligations to inventory and consider management of Lands with Wilderness Characteristics, including the Federal Land Policy and Management Act's provision that BLM "preserve and protect certain public lands in their natural condition" (43 U.S.C. § 1701(a)(8)). **Manual 6310** (Conducting Wilderness Characteristics Inventory on BLM Lands) guides the BLM on how to meet its obligations to inventory for and identify lands with wilderness characteristics. **Manual 6320** (Considering Lands with Wilderness Characteristics in the BLM Land Use Planning Process) guides the BLM on the options available to address lands with wilderness characteristics in land use planning once they have been identified in the required inventory, such as putting management prescriptions in place to protect wilderness characteristics. The purpose of this report is to provide the BLM with recommendations for designation of Lands with Wilderness Characteristics in the Kingman Resource Area of northwestern Arizona, based on new, accurate, and up-to-date information according to **Manual 6310.**[2]

*What does Manual 6310 require for the identification of LWC's?*

Minimum standards for LWC proposals are described in Manual 6310 in section .06.B.1. There are three things required in a citizens' wilderness proposal in order to meet the minimum standard for BLM to consider it in an inventory and to consider it as new information:

- Detailed map with specific boundaries;
- Detailed narrative of the wilderness characteristics; and
- Photographic documentation.

Once there is new information that meets these standards, then "as soon as practicable, the BLM shall evaluate the information," including field checking as needed and comparing with existing data to see if previous conclusions remain valid. Further, BLM will document its rationale and make it available to the public. (.06.B.2). This proposal report provides the three necessary criteria listed above.

[1]Memorandum 2011-154 is available online at:
http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2011/IM_2011-154.html

[2] Manual 6310 is available online at :
http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/blm_manual.Par.38337.File.dat/6310.pdf

*What does Manual 6310 require for an area to be identified as an LWC?*

Requirements for determining lands have wilderness characteristics are found in section .06.C.2 of Manual 6310. Lands with Wilderness Characteristics must possess the following traits:

- **Size**

Sufficient roadless area to satisfy size requirements (5,000 acres, of sufficient size to make management practicable or "any roadless island of the public lands"; or contiguous with Wilderness, Wilderness Study Areas, USFWS areas Proposed for Wilderness, Forest Service WSAs or areas of Recommended Wilderness, National Park Service areas Recommended or Proposed for Designation).

- **Naturalness**

Affected primarily by the forces of nature – The criteria is "apparent naturalness" which depends on whether an area looks natural to "the average visitor who is not familiar with the biological composition of natural ecosystems versus human affected ecosystems." This is an important distinction between ecological integrity and apparent naturalness.

Human impacts – Human impacts must be documented and some are acceptable so long as they are "substantially unnoticeable"; Examples include trails, bridges, fire rings, minor radio repeater sites, air quality monitoring devices, fencing, spring developments, and stock ponds.

Outside human impacts – impacts outside the area are generally not considered, but major outside impacts should be noted and evaluated for direct effects on the entire area (the manual explicitly cautions BLM to "avoid an overly strict approach").

- **Outstanding opportunities for either solitude or primitive and unconfined recreation**

The area does not have to possess both opportunities for solitude and primitive and unconfined recreation, nor does the area need to have outstanding opportunities on every acre; BLM cannot compare lands in question with other parcels; BLM cannot use any type of rating system or scale.

- **Supplemental values**

Ecological, geological, scientific, scenic, educational or historical features should be documented where they exist, although they are not required traits.

*What does Manual 6310 require for the identification of the boundaries of an LWC?*

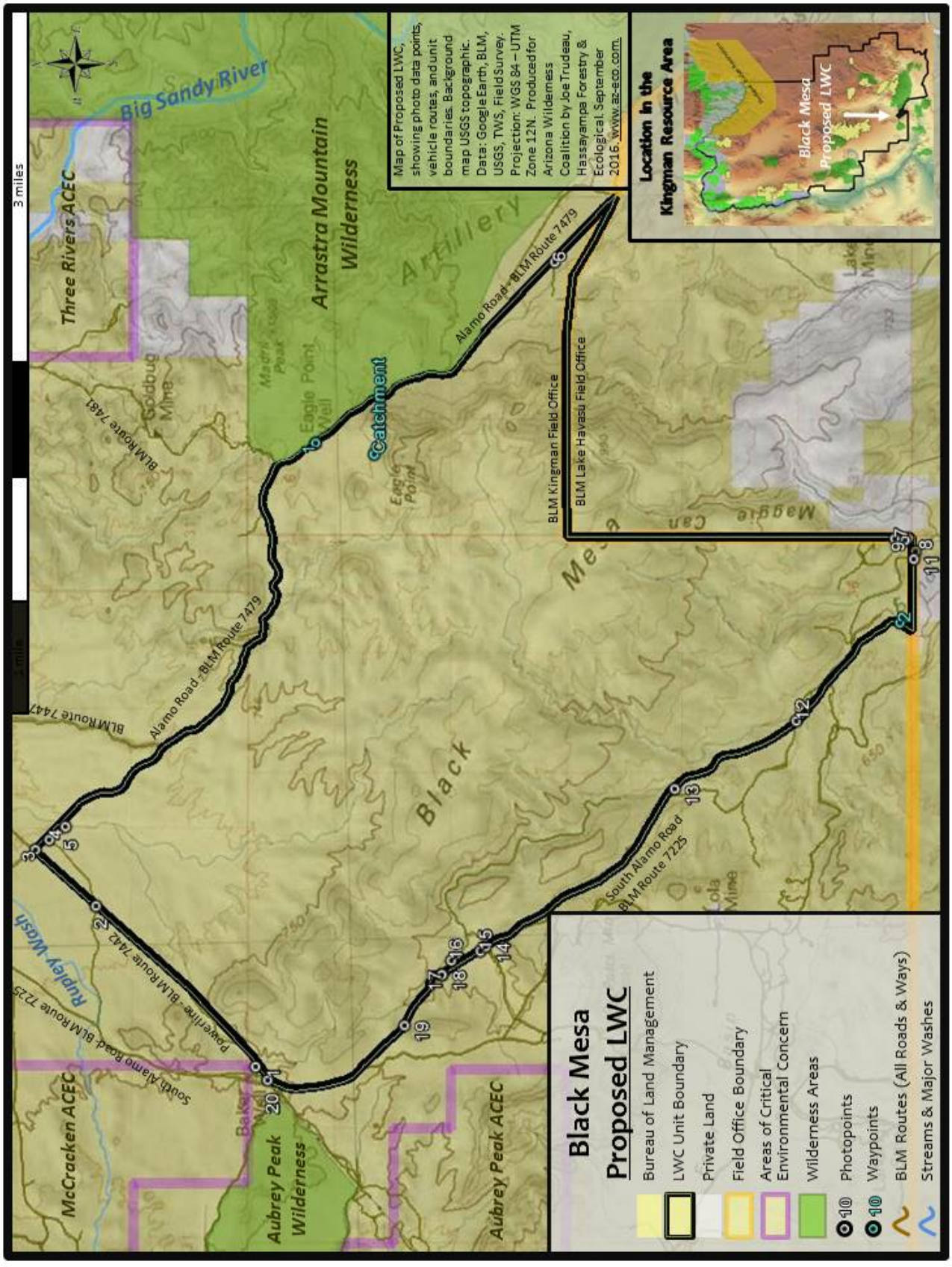
Boundaries should be based on wilderness inventory roads and naturalness rather than opportunities for solitude or primitive and unconfined recreation. For inventorying wilderness characteristics, BLM will use the "road" definition from FLPMA's legislative history; the term "road" and "wilderness inventory road" are interchangeable in this guidance. The AWC survey team took a very literal, maintenance-driven approach to road/way determination.

- "Wilderness inventory roads" are routes which have been: (1) *improved and maintained* (when needed), (2) *by mechanical means* (but not solely by the passage of vehicles), (3) *to insure relatively regular and continuous use*.

- "Primitive routes" or "ways" are transportation linear features located within areas that have been identified as having wilderness characteristics and not meeting the wilderness inventory road definition.

Lands between individual human impacts should not be automatically excluded from the area; no setbacks or buffers allowed; boundaries should be drawn to exclude developed rights-of-way; "undeveloped rights-of-way and similar possessory interests (e.g. as mineral leases) are not treated as impacts to wilderness characteristics because these rights may never be developed"; areas can have wilderness characteristics even though every acre within the area may not meet all the criteria.

***MAP: Black Mesa Proposed LWC***



## ***Section 1: General Overview***

### *Unit Location*

The Black Mesa Proposed LWC encompasses 14,674 acres of pristine wildlands in the southernmost part of the BLM Kingman Resource Area. The unit is approximately 20 miles south of Wikieup, about 25 miles due west of Highway 93, and roughly 23 miles east/northeast of the Colorado River. Black Mesa sits to the northwest of the Artillery Mountains, to the southeast of the McCracken Mountain Range, to the northeast of the Rawhide Mountains and Alamo Lake. The proposed LWC is positioned between the Arrastra Mountain Wilderness to the east and the Aubrey Peak Wilderness to the west.

### *Brief Boundary Description*

The BLM Kingman Resource Area boundary and wilderness inventory roads form the proposed LWC boundaries. The unit is surrounded by BLM property and a small amount of private land. A powerline and access road (BLM Route 7442) form the north/northwestern unit boundary. Alamo Road (BLM Route 7479) forms the eastern boundary. The southern boundary follows the boundary of the Kingman Resource Area. South Alamo Road (BLM Route 7225) is the western boundary.

### *Landforms & Biological Communities*

The proposed LWC's namesake feature, Black Mesa, is somewhat of a local geographic anomaly: a basalt mesa with numerous parallel canyons set in a broader landscape of jagged igneous and sedimentary peaks rising from broad alluvial valleys. The mesa is situated in the uplands overlooking the dramatic confluence of the Santa Maria and Big Sandy Rivers at Lake Alamo, truly one of the most remote locations in Arizona. The eastern quarter of the unit is composed of variable sequences of 15-25 million year old volcanic rocks such as basalt, andesite, dacite, and rhyolite. The western half of the unit is composed of 8-16 million year old lava flows that overlap the earlier period of volcanism. These layers of black basalt give the formation its name, Black Mesa. The northern quarter of the unit is composed of light gray to tan consolidated conglomerate and sandstone deposited in basins during and after late Tertiary faulting (Arizona Geological Society, 2000).

These three distinct geologic formations manifest in three distinct geographic elements, each with their own attendant plant communities, habitat elements, and recreational opportunities. The eastern volcanic section has eroded into a convoluted mass of soaring peaks, knife-edge ridges, and sheer cliff faces. The western lava flows form a broad mesa dissected by numerous canyons, one of which has incised five miles of winding gorge as it descends from Eagle Point to the west. The northern basin features five square miles of undulating terrain and rolling hills that fall away from Black Mesa.

The unit is entirely within the Arizona Upland Sonoran Desert Scrub Biotic Community, but features ecotonal elements with the Mohave Desert, including Joshua Trees on the western slopes of Black Mesa. The matrix vegetation consists of the Sonoran Palo Verde-Mixed Cacti Desert Scrub cover type, featuring a rich assemblage of saguaro, ocotillo, mesquite, chollas, prickly pears, and many more shrubs, forbs, and grasses. The crest of Black Mesa and the Eagle Point highlands feature elements of the Sonoran Mid-elevation Desert Scrub interspersed with Sonora-Mojave Creosotebush-White

Bursage Desert Scrub, Apacherian-Chihuahuan Mesquite Upland Scrub, and pockets of Madrean Pinyon-Juniper Woodland (USGS, 2015).

***Previous Wilderness Inventories***

The proposed LWC has long been recognized as having significant wilderness characteristics. The "Black Mesa" unit (AZ-020-056) was proposed as a Wilderness Study Area by the BLM in the Hualapai-Aquarius Draft Grazing Environmental Impact Statement, as a response to court-ordered Environmental Review (BLM, 1980a; BLM, 1980b). In that proposal, the unit was 17,010 acres, which would have included several thousand acres of what is now the Lake Havasu Field Office, which was excluded from the current LWC proposal.

The BLM later acknowledged the exceptional qualities of the Black Mesa WSA. The 1982 Upper Sonoran Draft Wilderness EIS stated:

> "*Numerous canyons cut within the mesa, and heavily eroded volcanic faces provide outstanding potential for solitude. The unit's size, complexity, and natural condition and the absence of vehicular access combine to enhance the wilderness experience. The Black Mesa WSA offers outstanding opportunities for primitive recreation, including hiking, backpacking, and photography. The area's large size and complex terrain provide the hiker and backpacker with many challenges. Several canyons lead up to the mesa top, and many interesting cross-country routes test one's hiking skills*" (BLM, 1982: p. 41).

Unfortunately, because of potential conflicts with mining interests, the BLM decided that the WSA was "*nonsuitable for wilderness designation because of potential conflicts with mineral development and the checkerboard pattern of mineral ownership. Fifty-three percent (9,020 acres) of the mineral rights are nonfederal"* (BLM, 1982: p. 16)[3]. This conclusion was in contrast to the BLM's own statement that wilderness protection would "*preserve a large basalt mesa with isolated rugged cliff faces and interior canyons. In addition to preserving its pristine character, solitude, and recreation opportunities, wilderness would facilitate habitat management, enhance a scenic corridor designation, and maintain cultural resources for future study*" (BLM, 1982: p. 81).

Because of this concern over mining uses, the preferred alternative in the 1987 Final EIS for Sonoran Desert Wilderness Areas was to designate none of the proposed acreage as wilderness, despite that the plan was for the development of four mining sites that would disturb less than five acres (BLM, 1987: p. 18). Since then, there has been no significant establishment of active mines, nor has there been expansion of prospects. Because the expected mineral development has never occurred, it is important that the BLM consider Black Mesa

*Looking northwest towards Eagle Point from Photopoint 006*

[3] At that time, 8,498 acres of mineral rights, or 50% of the total mineral estate, were owned by the Santa Fe Pacific Railroad (BLM, 1982: p. 51)

again for its outstanding and well-established wilderness qualities.

## ***SECTION 2: Wilderness Characteristics***

### ***The proposed LWC meets the minimum size criteria for roadless lands***

The Black Mesa Proposed LWC contains about 14,674 roadless acres under BLM ownership in the Kingman Resource Area. The unit could be expanded substantially into the Lake Havasu Resource Area. There are no private or other inholdings within the proposed LWC unit, and no cherrystemmed routes.

### ***The proposed LWC is affected primarily by the forces of nature***

The Black Mesa Proposed LWC is set in a truly remote location dominated by the forces of nature. Essentially, there are four categories of human impacts within the unit: primitive routes, ranch infrastructure, a wildlife water catchment, and inactive, old mining evidence; all of which are substantially unnoticeable and do not affect the naturalness of the unit in its entirety.

*Primitive Routes*

Very few primitive routes (ways) enter into the unit. These routes, described in detail in Section 3, are lightly used, single lane two-tracks or dry washes that do not penetrate deep into the core of the unit, which is an area entirely unaffected by vehicles. Short vehicle routes exist near Maggie Tank along the western boundary (7225D and 7225E) which are not necessary to the use and maintenance of the tank, which was excluded from the unit. Several routes shown on the BLM Route Inventory in the western and southern end of the unit are recorded as “need to verify”, “reclaiming”, “not routes”, or “light use”, all of which are lightly used or not at all, and show no signs of maintenance. It is our determination that the existence of these routes does not substantially affect the wilderness user experience.

*Ranch Infrastructure*

The Black Mesa Proposed LWC contains minimal impacts from livestock grazing operations. There is one corral located within the proposed LWC unit close to the northern unit boundary. An earth-berm tank (Maggie Tank) was excluded from the unit on the western bound along BLM Route 7225, and a steel tank on the eastern edge was also excluded (Eagle Point Wel); neither of these excluded waters affects the naturalness within the unit at all. It is important to consider that what little ranch infrastructure that does exist within the unit is located close to the boundary line of the proposed LWC or is excluded. The small amount of ranch activity present does not affect the naturalness of Black Mesa, as BLM Manual 6310 clearly states that fences and stock ponds can be considered substantially unnoticeable to the average visitor. Furthermore, the core of the proposed LWC contains no ranch infrastructure other than fence.

*Wildlife Water Catchments*

Arizona Game & Fish Department has installed one water catchment within the unit, the Oscar Carlson Catchment (Water ID 1,053), built in March of 1995 in cooperation with the Arizona Desert Bighorn Sheep Society (www.adbss.org). This installation is located in the eastern part of the proposed LWC, about a half mile to the west of Alamo Road, on the northern slopes of Eagle Point, and was painted camouflaged to blend in with the surroundings. Currently, AZGFD maintains catchments in several of the existing wilderness areas in the Kingman Resource Area. It is our determination that, because such

installments can be accommodated within LWCs, that this installment in particular does not substantially affect the naturalness of the unit. Furthermore, the structure is currently reached only by foot, further enhancing its compatibility with LWC management.

*Inactive Mining*

Old evidence of mining and/or prospecting occurs in the far south of the unit at the Last Chance, Polianite, and Black Mary mines. No current activity was observed. The very minimal diggings are revegetating with native plants and do not create a substantial visual impact to the casual visitor. All evidence of old mining exists in the southern part of the proposed LWC with no evidence within the core of the unit. Claim stakes occur in some areas throughout the unit at claim corners, but no active mineral exploration is currently underway. The presence of mineral claims does not affect naturalness, as "*undeveloped possessory interests (e.g., mineral leases) are not treated as impacts to wilderness characteristics because these rights may never be developed*" (BLM Manual 6310, page 10).

*Summary of Human Impacts*

Collectively, the impacts documented above do not substantially detract from the naturalness of the proposed LWC. The few human impacts that do occur are located near the boundaries of the Black Mesa Proposed LWC with none cutting into the heart of the unit. Furthermore, none of the human influences discussed above are substantially noticeable as unnatural to the average visitor. There are no outside human impacts that affect the naturalness of the proposed LWC. All primitive routes remain relatively close to the unit boundaries and the large core of this proposed LWC completely lacks signs of human influence. Black Mesa is undeniably ruled primarily by the forces of nature.

***The proposed LWC provides outstanding opportunities for solitude or primitive & unconfined recreation***

The Black Mesa Proposed LWC unit provides many outstanding opportunities for one to experience solitude. Whether a person is on top of the mesa, in one of its many canyons, or climbing the peaks of the Eagle Point massif, Black Mesa offers amazing opportunities to experience solitude in a wilderness setting. Black Mesa is topographically isolated by the basalt cliffs that line its edge for much of the mesa. These cliffs exclude motorized vehicles and provide an obstacle which only adventurous recreationists are willing to traverse. Therefore, one could enjoy the top of Black Mesa and have it completely to him or herself on almost any day of the year. Furthermore, there are over twenty canyons within the Black Mesa Proposed LWC unit. Each of these canyons provides outstanding opportunities for solitude as well as for primitive and unconfined recreation. Canyons notoriously provide the best opportunities for solitude, due to their walls that mask the outside world from visitors, providing exemplary opportunities for various forms of primitive and unconfined recreation. These canyons are likely to provide reliable water resources for backpackers to draw from during the cool and rainy winter season in a setting of beautiful, ecologically diverse, and scenic value. These rugged canyons provide outstanding prospects for viewing terrain and features that are absolutely unique to this area. The summits of the eagle Point massif provide outstanding opportunities for desert mountaineering, high-angle rock climbing, and observing raptors in their preferred habitat. Whether rock climbing on the basalt cliffs, bird watching, looking for unique plants or wildlife, hunting, hiking, backpacking, horseback riding, foraging, sightseeing for botanical, zoological, or geological features, or simply looking for solitude; without a doubt, the Black Mesa Proposed LWC provides all of these outstanding opportunities and more.

*Isolated canyons, rolling hills, and mixed vegetation offer vegetative and topographic screening, providing outstanding opportunities for solitude. Photo taken from near BLM Route 7477 and Alamo Road, looking south at Black Mesa.*

***The proposed LWC has supplemental values that enhance the wilderness experience & deserve protection***

The proposed LWC would protect several supplemental values, including habitat linkage between protected areas, habitat for species of economic and recreational importance, habitat for species of greatest conservation need, and habitat for known species of concern.

*The proposed LWC would link existing protected Wilderness habitat areas.*

Designating Black Mesa as an LWC would help to protect important ecological values that exist within and surrounding the proposed unit. The Black Mesa Proposed LWC would create connectivity between the Arrastra Mountain Wilderness and the Aubrey Peak Wilderness providing a protected habitat corridor stretching for 43 miles with only two dirt roads for wildlife to cross. Such a piece of protected land would help to ensure the fecundity of many important wildlife species in the region, including species of economic and recreational importance known to occur here, such as mountain lion, mule deer, white-winged dove, Gambel quail, and bighorn sheep (AZGFD, 2012), and species of concern documented within the unit, such as desert tortoise, Gila monster, kit fox, prairie falcon, and other raptors (BLM, 1982).

*The proposed LWC would protect some of Arizona's Species of Greatest Conservation Need*

The Black Mesa Proposed LWC would protect important habitat for some of Arizona's Species of Greatest Conservation Need (SGCN). We conducted a query of Arizona Game and Fish Department's State Wildlife Action Plan data for potential habitat for SGCN animals in the portions of the Black Mesa unit which were ranked highest in the Departments' Richness Index Model, which are generally the highest peaks and slopes associated with Eagle Point, and along the crest of Black Mesa. The query returned an impressive list of potential occurrences[4] :

*Bats that have a high potential for occurring in the Black Mesa Proposed LWC[5]*

| | |
|---|---|
| Pale Townsend's Big-eared Bat | *Corynorhinus townsendii pallescens* |
| Spotted Bat | *Euderma maculatum* |
| Greater Western Mastiff Bat | *Eumops perotis californicus* |
| Allen's Big-eared Bat | *Idionycteris phyllotis* |
| Western Yellow Bat | *Lasiurus xanthinus* |
| California Leaf-nosed Bat | *Macrotus californicus* |
| Arizona Myotis | *Myotis occultus* |
| Cave Myotis | *Myotis velifer* |
| Yuma Myotis | *Myotis yumanensis* |
| **Pocketed Free-tailed Bat** | ***Nyctinomops femorosaccus***[6] |
| Mexican Free-tailed Bat | *Tadarida brasiliensis* |

*Amphibians & Reptiles that have a high potential for occurring in the Black Mesa Proposed LWC*

| | |
|---|---|
| **Lowland Leopard Frog** | ***Rana yavapaiensis*** |
| Sonoran Desert Toad | *Bufo alvarius* |
| **Sonoran Desert Tortoise** | ***Gopherus agassizii (Sonoran Population)*** |
| Gila Monster | *Heloderma suspectum* |
| Sonoran Coralsnake | *Micruroides euryxanthus* |
| Regal Horned Lizard | *Phrynosoma solare* |

*Birds that have a high potential for occurring in the Black Mesa Proposed LWC*

| | |
|---|---|
| Western Yellow-billed Cuckoo | *Coccyzus americanus occidentalis* |
| Southwestern Willow Flycatcher | *Empidonax traillii extimus* |
| American Peregrine Falcon | *Falco peregrinus anatum* |
| Bald Eagle | *Haliaeetus leucocephalus* |
| **Golden Eagle** | ***Aquila chrysaetos*** |
| Ferruginous Hawk | *Buteo regalis* |
| **Gilded Flicker** | ***Colaptes chrysoides*** |
| Lincoln's Sparrow | *Melospiza lincolnii* |
| **Gila Woodpecker** | ***Melanerpes uropygialis*** |
| Savannah Sparrow | *Passerculus sandwichensis* |
| Arizona Bell's Vireo | *Vireo bellii arizonae* |

*Mammals that have a high potential for occurring in the Black Mesa Proposed LWC*

| | |
|---|---|
| Harris' Antelope Squirrel | *Ammospermophilus harrisii* |
| Kit Fox | *Vulpes macrotis* |
| Arizona Pocket Mouse | *Perognathus amplus* |

[4] sources: AZGFD, 2012 & Arizona Game & Fish Department HabiMap Tool: http://www.habimap.org/habimap/)

[5] the entire query area is considered a "High Netting Concentration Bat Foraging Area"; the cliffs of Eagle Point provide excellent bat roosting and hibernacula.

[6] species in **bold** type indicate confirmed AZ Heritage Data occurrence in the Signal Quadrangle

**Works Cited**

Arizona Geological Society. 2000. Geological Map of Arizona. Available online at: http://data.azgs.az.gov/geologic-map-of-arizona/#.

AZGFD. 2012. Arizona's State Wildlife Action Plan: 2012-2022. Arizona Game and Fish Department, Phoenix, Arizona.

BLM. 1980a. Wilderness Review: Intensive Inventory of Public Lands Administered by Bureau of Land Management. Proposal Report. Bureau of Land Management, Arizona State Office, Phoenix, AZ.

BLM. 1980b. Hualapai-Aquarius Draft Grazing Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, Arizona State Office, Phoenix, AZ.

BLM. 1982. Upper Sonoran Draft Wilderness Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, Arizona State Office, Phoenix, AZ.

BLM. 1987. Upper Sonoran Final Wilderness Environmental Impact Statement. U.S. Department of the Interior, Bureau of Land Management, Arizona State Office, Phoenix, AZ.

USGS. 2015. National Gap Analysis Program (GAP) Land Cover Data Viewer. U.S. Department of the Interior, United States Geological Survey, online tool at http://gis1.usgs.gov/csas/gap/viewer/land_cover/Map.aspx

Looking east at Black Mesa from near Photopoint 014, showing Joshua Trees, creosote bush, and saguaro, and one of the mesas' many canyons disappearing behind a bend.

## ***SECTION 3: Detailed Boundary & Routes Description***

### *Narrative Description of the Proposed LWC Boundary*

This section of the report provides a detailed boundary description for the Black Mesa Proposed LWC unit, including all wilderness inventory roads that comprise the unit boundary, all of the primitive routes/ways that permeate the unit boundary, and all other boundaries, such as land ownership, utility corridors, and other excluded areas. Many portions of the unit boundary have been determined according to wilderness inventory road identification protocols described in BLM Manual 6310, which states that a "way" maintained solely by the passage of vehicles does not constitute a "road" for purposes of inventorying lands with wilderness characteristics. Furthermore, the fact that a "way" is used on a regular and continuous basis does not make it a road. A vehicle route that was constructed by mechanical means, but is no longer being maintained by mechanical methods is not a road. A wilderness inventory road, by comparison, is a vehicle route that has "been improved and maintained by mechanical means to ensure relatively regular and continuous use" (Manual 6310, p. 11). Based on these criteria, the Black Mesa Proposed LWC unit contains 14,674 contiguous roadless acres, with few primitive routes permeating the unit boundary, and none cutting into its core. The Photopoints described here of the Black Mesa Proposed LWC are listed in detailed tables with photographs following this description. Beginning at Photopoint 1, the proposed LWC unit description will move clockwise around the unit.

### *Northern Boundary*

Photopoint 1 depicts the powerline and associated right of way (BLM Route 7442) that form the north/northwestern unit bound for the Black Mesa Proposed LWC unit. Traveling east, there are no routes leaving this unit bound until Photopoint 2. Photopoint 2 shows an old BLM Route (7406) heading into the unit. As this photograph illustrates, this road is growing in with vegetation. There is no evidence that this old route was constructed, it is not being maintained or used, and even the BLM's route data indicates that this route is "Reclaiming". Therefore, this old primitive route shown in Photopoint 2 has been documented as reclaimed, and is not even a way.

Photopoint 3 was taken at the most northern point on the Black Mesa LWC unit boundary. Photopoint 3 pictures Alamo Road (BLM Route 7479) which was constructed and is a regularly maintained road; and forms the eastern unit bound. Continuing south from Photopoint 3, Photopoint 4 shows the eastern end of the way depicted in Photopoint 2. Photopoint 4 serves as further evidence that this old route is reclaimed, and therefore not a route or a way. Heading south along the northeastern unit bound, Photopoint 5 depicts a wash that vehicles are using that goes south into the proposed LWC unit. This wash way is not in the BLM route data, was not constructed, is not being maintained, has no apparent purpose, and is therefore a determined to be a way.

### *Eastern Boundary*

Alamo Road (BLM Route 7479) forms the proposed eastern LWC bound. Continuing south along the eastern bound, Waypoint 1 marks an area with some ranching infrastructure that has been excluded

from the Black Mesa Proposed LWC unit. Photopoint 6 depicts an old primitive route that heads west into the unit, near the southeastern unit corner. As the photograph displays, this old route in the valley bottom was not constructed, is not being maintained, is not being used by vehicles, serves no apparent purpose, is revegetating, was labeled as a "need to verify" in the BLM route data, and is only three tenths of a mile long. For all of these reasons, this old primitive route is determined to be a way.

***Southern Boundary***

From the southeastern Black Mesa Proposed LWC unit corner, the unit boundary turns to the west. The entire southern unit bound is the Kingman Resource Area Boundary. The next data point is Photopoint 7, which shows an unnamed primitive route that enters the LWC unit. This way was constructed and has roadside berms, but it shows no evidence of maintenance, improvements, or use; and is now filling in with vegetation. At one time it was used for mining, but this mine is now inactive and being reclaimed by nature. Even the BLM route data documents this primitive route as "non-existent" for its "use-level". Continuing south along the Black Mesa LWC unit boundary, Photopoint 8 shows an intersection of unnamed ways. The way on the right in the photo is the same way seen in Photopoint 7. The way on the left (also shown in Photopoint 9), was constructed, but is not receiving any maintenance, is only lightly used, and is in the process of growing in with vegetation. For these reasons, the primitive route shown in Photopoints 8 and 9 are documented as ways. The ways depicted in Photopoints 7-9, which were created for mining, lead a little bit further into the unit, and some of them split. All of these primitive routes and the ways that they lead to are in the process of reclaiming. Additionally, the old mining disturbances in this area are also growing in with vegetation and naturalizing. Continuing west, Photopoint 10 shows an old primitive route that was once constructed, but has not been maintained, gets no use, and is reclaimed. Photopoint 10 also shows the Resource Area boundary stake to the right of the old route. Photopoint 11 illustrates a way in a dry wash. This way displays no evidence of construction and is not maintained. This is a primitive route in a dry wash bottom.

***Western Boundary***

From the southwestern corner of the Black Mesa Proposed LWC unit, BLM Route 7225 (pictured at the northwest unit corner in Photopoint 20) forms the western unit bound. Heading north along the western boundary, Waypoint 2 marks a wash that the BLM route inventory data has labeled as a route. There is no evidence on the ground that this wash is being used by vehicles at all. Additionally, the BLM's own route data says that this is "Not a route - Wash", indicating that this is only a wash, not a route. Photopoint 12 was taken of an unnamed route that heads east into the unit from the western boundary. This primitive route is in a dry wash, shows no evidence of construction or maintenance, and appears to serve no specific purpose. All ways that this primitive route leads to are also unmaintained primitive routes, many of which are in dry wash bottoms, or being reclaimed by nature. Continuing north up the western unit boundary, Photopoint 13 shows the southern end of a wash that the BLM route data has recorded as a route. As Photopoint 13 illustrates, this is just a wash that was never constructed and is not maintained as a route; and is therefore not a road or a way. Photopoint 14 was taken at the northern end of this wash, which the BLM has identified in their route data as BLM Route 7225E. Photopoint 14 also supports the evidence that this wash contains no route. As

Photopoint 14 displays, the wash was never constructed into a road, it is not maintained as a road, shows no evidence of vehicular use, has no purpose, and is fully vegetated; therefore it is not a road or a way. Photopoint 15 shows a primitive route that leaves the western boundary and heads northeast into the Black Mesa Proposed LWC unit. This route was constructed, but shows no evidence of maintenance. It does get some 4-WD use, but is probably just a section of the old road before the newer, larger road (BLM Route 7225) was built. Photopoints 16 and 17 also show this primitive route (BLM Route 7225D) displayed in Photopoint 15. Photopoint 18 is a scenic photograph that shows a stock tank along the western border that has been excluded from the unit. The stock tank is in the foreground of the photo and in the background are hills with vegetative screening and hidden valleys that easy hide human disturbances such as this stock tank. Continuing north along the western unit bound, Photopoint 19 was taken looking at another primitive route that is most likely the old road bed before BLM Route 7225 was built. As the photo shows, this primitive route was constructed, but is not being maintained, and now that the new road has been built, it serves no purpose. This detailed description ends at Photopoint 20, which depicts BLM Route 7225 from the northwestern unit corner. As Photopoint 20 displays, this is a constructed and maintained wilderness inventory road.

***SECTION 4: Photopoint Data***

***Data Tables & Photographs to accompany Maps and the Detailed Boundary & Routes Description***

| Attributes | |
|---|---|
| Title | Photopoint 001 |
| Unit name | Black Mesa |
| Route name | BLM Route 7442 |
| Determination | Road |
| Maintenance | Likely if needed |
| Feature | Typical condition of Route/Way |

**Photopoint 001. Powerline ROW serves as the Black Mesa northern unit bound.**


| Attributes | |
|---|---|
| Title | Photopoint 002 |
| Unit name | Black Mesa |
| Route name | BLM Route 7406 |
| Determination | Reclaimed |
| Maintenance | None |
| Feature | Revegetated |

**Photopoint 002. Old BLM route going into the Black Mesa LWC unit from the northern unit boundary.**



| Attributes | |
|---|---|
| Title | Photopoint 003 |
| Unit name | Black Mesa |
| Route name | BLM 7479/ Alamo Rd. |
| Determination | Road |
| Maintenance | Recent blade |
| Feature | Typical condition of Route/Way |

**Photopoint 003. Wilderness inventory road that forms the eastern LWC unit boundary.**


| Attributes | |
|---|---|
| Title | Photopoint 004 |
| Unit name | Black Mesa |
| Route name | BLM Route 7406 |
| Determination | Reclaimed |
| Maintenance | None |
| Feature | Revegetated |

**Photopoint 004. The other end of the old BLM route pictured in Photopoint 2.**



| Attributes | |
|---|---|
| Title | Photopoint 005 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Way |
| Maintenance | None |
| Feature | Typical condition of Route/Way |

**Photopoint 005. A primitive route heading into the unit within a dry wash**



| Attributes | |
|---|---|
| Title | Photopoint 006 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Reclaimed |
| Maintenance | None |
| Feature | Revegetated |

**Photopoint 006. An old primitive route that is now reclaimed.**


| Attributes | |
|---|---|
| Title | Photopoint 007 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Way |
| Maintenance | None |
| Feature | Erosion |

**Photopoint 007. An primitive mining route that is no longer used for mining.**



| Attributes | |
|---|---|
| Title | Photopoint 008 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Way |
| Maintenance | None |
| Feature | Junction of Routes/Ways |

**Photopoint 008. Juction of ways in southern part of the LWC unit.**



| Attributes | |
|---|---|
| Title | Photopoint 009 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Reclaimed |
| Maintenance | None |
| Feature | Revegetated |

**Photopoint 009. Another old mining way that is not used and growing in with vegetation.**


| Attributes | |
|---|---|
| Title | Photopoint 010 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Reclaimed |
| Maintenance | None |
| Feature | Revegetated |

**Photopoint 010. Old primitive route that is reclaimed. Note the Resource Area boundary stake to the left of the old way.**



| Attributes | |
|---|---|
| Title | Photopoint 011 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Way |
| Maintenance | None |
| Feature | Typical condition of Route/Way |

**Photopoint 011. A primitive way with no evidence of maintenance.**



| Attributes | |
|---|---|
| Title | Photopoint 012 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | Way |
| Maintenance | None |
| Feature | Typical condition of Route/Way |

**Photopoint 012. Primitive route in a dry wash heading east into the LWC unit.**


| Attributes | |
|---|---|
| Title | Photopoint 013 |
| Unit name | Black Mesa |
| Route name | Not Named |
| Determination | N/A |
| Maintenance | None |
| Feature | Undriven wash |

**Photopoint 013. This is a natural wash with no evidence of vehicular use.**



| Attributes | |
|---|---|
| Title | Photopoint 014 |
| Unit name | Black Mesa |
| Route name | BLM Route 7225E |
| Determination | N/A |
| Maintenance | None |
| Feature | Fully vegetated |

**Photopoint 014. Northern end of the wash pictured in Photopoint 13.**



| Attributes | |
|---|---|
| Title | Photopoint 015 |
| Unit name | Black Mesa |
| Route name | BLM route 7225D |
| Determination | Way |
| Maintenance | None |
| Feature | Typical condition of Route/Way |

**Photopoint 015. Old road bed, now just a primitive route.**


| Attributes | |
|---|---|
| Title | Photopoint 016 |
| Unit name | Black Mesa |
| Route name | BLM Route 7225D |
| Determination | Way |
| Maintenance | None |
| Feature | Typical condition of Route/Way |

**Photopoint 016. Old road bed, also pictured in Photopoints 15 & 17.**



| Attributes | |
|---|---|
| Title | Photopoint 017 |
| Unit name | Black Mesa |
| Route name | BLM Route 7225D |
| Determination | Way |
| Maintenance | None |
| Feature | Typical condition of Route/Way |

**Photopoint 017. Old road bed, also pictured in Photopoints 15 & 16.**



| Attributes | |
|---|---|
| Title | Photopoint 018 |
| Unit name | Black Mesa |
| Route name | N/A |
| Determination | N/A |
| Maintenance | N/A |
| Feature | Scenic/Landscape |

**Photopoint 018. Cattle tank in foreground. Hills and vegetative screening beyond.**


| Attributes | |
|---|---|
| Title | Photopoint 019 |
| Unit name | Black Mesa |
| Route name | Not named |
| Determination | Reclaimed |
| Maintenance | None |
| Feature | Revegetated |

**Photopoint 019. Old road bed; most likely used before the new BLM Route 7225 was built.**



| Attributes | |
|---|---|
| Title | Photopoint 020 |
| Unit name | Black Mesa |
| Route name | BLM Route 7225 |
| Determination | Road |
| Maintenance | Recent blade |
| Feature | Typical condition of Route/Way |

**Photopoint 020. Wilderness inventory road that forms the western Black Mesa LWC unit boundary.**