Proposed Lands with Wilderness Characteristics:

Goodwin Mesa

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

August, 2015

ARIZONA WILDERNESS COALITION

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Cover Photo: Taken along the southwestern unit boundary, from BLM Route 7665, midway between photopoints 005 and 006, showing the rugged granite landscape and dense chaparral vegetation. In the distance are the Aquarius Cliffs, which form the southern edge of Goodwin Mesa, on the other side of Salt Creek.
All Photos by the authors.

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?

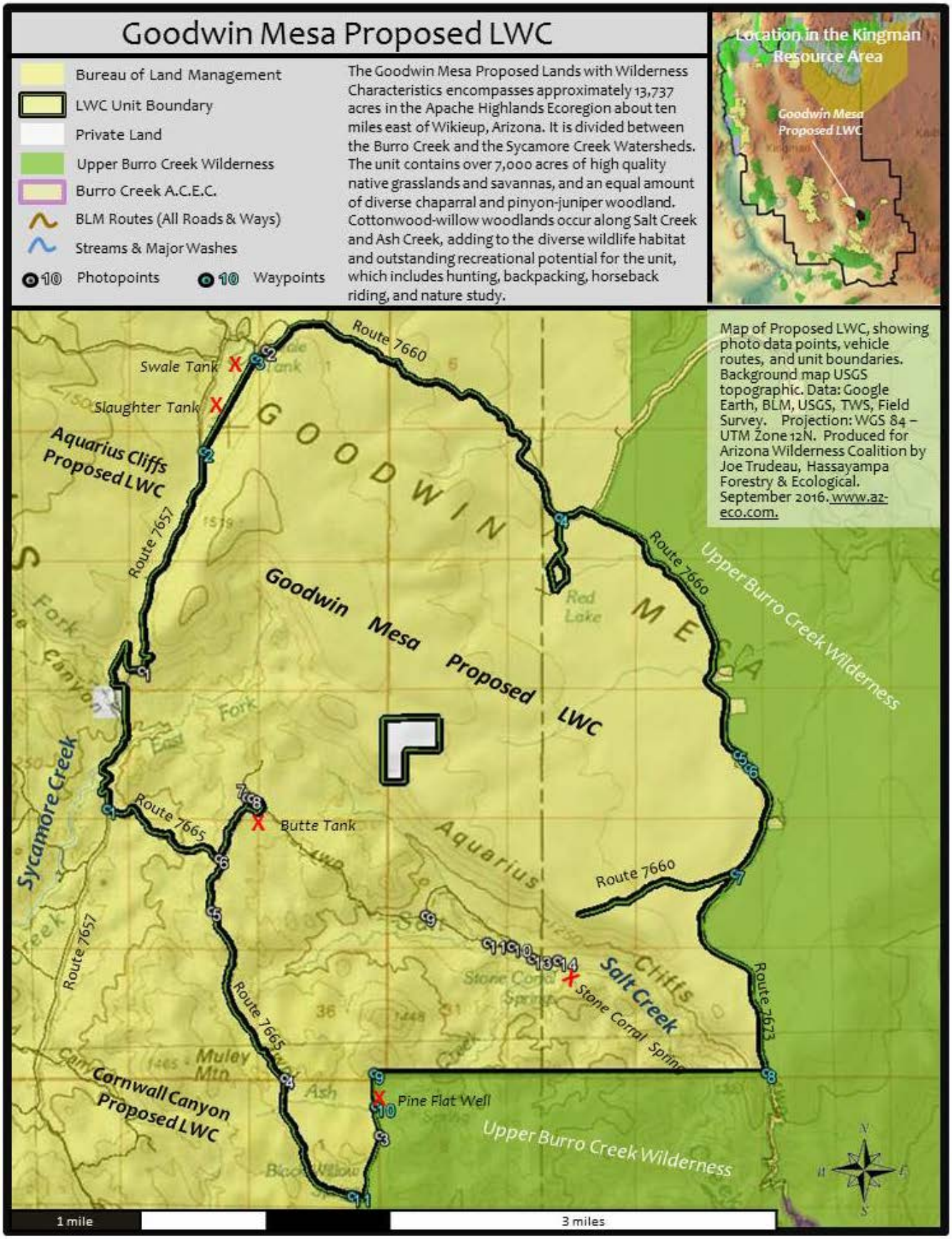
Boundaries should be based on wilderness inventory roads and naturalness rather than opportunities for solitude or primitive and unconfined recreation. For inventorying wilderness characteristics, BLM will use the "road" definition from FLPMA's legislative history; the term "road" and "wilderness inventory 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: Goodwin Mesa Proposed Lands with Wilderness Characteristics (LWC)



SECTION 1: General Overview

Unit Location

The Goodwin Mesa Proposed LWC is situated in the south-central region of the Kingman Resource Area, divided along the boundary of Mohave and Yavapai Counties. This roughly 13,737 acre unit encompasses a portion of the Aquarius Cliffs at the southern end of the Aquarius Mountains. This proposed LWC unit is contiguous with the Upper Burro Creek Wilderness, sharing over three miles of the Wilderness area's northwestern boundary. The Goodwin Mesa Proposed LWC is roughly twelve miles east of Highway 93 and Wikieup, about five miles northeast of Burro Creek Crossing Road (BLM Route 7666), approximately two and a half miles west of Burro Creek, and about nine miles south of the Mohon Mountains.

Brief Boundary Description

The proposed LWC is bounded by wilderness inventory roads, property boundaries, and the Upper Burro Creek Wilderness boundary. BLM Route 7657 (a wilderness inventory road) forms most of the western proposed LWC boundary with a small segment being the BLM/private property line. About eight-tenths of a mile of this western proposed boundary use topography to exclude two water tanks that are heavily impacted from local grazing operations on the Francis Creek Ranch (Slaughter Tank and Swale Tank). BLM Route 7660, another wilderness inventory road, is the Goodwin Mesa northern unit boundary. An unnamed cherrystem road goes about four-tenths of a mile south to a water tank called Red Lake. The eastern Goodwin Mesa Proposed LWC unit boundaries are comprised of BLM Route 7660 and BLM Route 7673, with BLM Route 7660 cherrystemming into the unit for about a mile and a quarter leading to a water tank. The southern Goodwin Mesa Proposed LWC unit boundary is composed of the Burro Creek Wilderness boundary on the eastern half, and BLM Route 7665 (a wilderness inventory road) on the western half, with an unnamed road forming a short cherrystem leading to another water tank (Butte Tank) that was also excluded from the proposed unit.

Landforms & Biological Communities

The proposed LWC encompasses two geologic formations that define the topography, vegetation, and habitat elements of the area. The southwestern half of the unit is composed of 1.6 to 1.8 billion year old Granitic rocks, and the northeastern half consists of 8 to 16 million year old basaltic lava flows (Arizona Geological Society, 2000). The older granitic rocks form a landscape of rolling hills festooned with boulders, craggy outcrops, and hundreds of gravelly washes. The basalt layers form the expansive flat plateau of Goodwin Mesa, which is dominated by open grasslands and shrublands, and divided by occasional shallow canyons that drain to the northeast into Francis Creek and Pinky Canyon, both tributaries to Burro Creek.

These two areas are starkly different in their plant community composition and structure. The rolling granite hills are thickly cloaked in the Mogollon Chaparral ecological system (USGS, 2015). The cover photo for this report shows this vegetation type, featuring a diverse mixture of cacti, yucca, forbs, and grasses mixed throughout a wide variety of shrubs. In the area of this photo we observed scrub oak (*Quercus turbinella*), sugar sumac (*Rhus ovata*), birchleaf mountain mahogany (*Cercocarpus betuloides*), desert buckbrush (*Ceanothus greggii*), hollyleaf buckthorn (*Rhamnus crocea*), skunkbush

(*Rhus trilobata*), silktassel (*Garrya flavescens*), crucifixion thorn (*Canotia holacantha*), hop-bush (*Dodonaea viscosa*), turpentine bush (*Ericameria laricifolia*), barberry (*Berberis fremontii*), snakeweed (*Gutierrezia sarothrae*), catclaw (*Acacia greggii*), and the occasional pinyon pine (*Pinus edulis*). The combination of the varied vegetation with the abundant boulders, outcrops, and drainages creates a landscape suggestive of the savannas and shrublands that we evolved in, rich with edible nuts and seeds, and dotted with hundreds of rocky summits to gain perspective over the undulating terrain. Three primary drainages flow towards Burro Creek from these hills. Ash Creek and an unnamed creek flow north and east, joining Salt Creek near Stone Corral Spring. Luxuriant galleries of Fremont cottonwood (*Populus fremontii*), Arizona walnut (*Juglans arizonica*), and velvet ash (*Fraxinus velutina*) occur where water surfaces in perennial and intermittent flows.

Goodwin Mesa, just a few hundred vertical feet above this, is dramatically different, but also a natural extension of this community on a different substrate. The land is nearly level, yet slightly tilted to the northeast. A very open example of the Colorado Plateau Pinyon-Juniper Woodland ecological system is intermixed with sparse Mogollon Chaparral and Apacherian-Chihuahuan Mesquite Upland Scrub systems, and throughout, the extensive Apacherian-Chihuahuan Semi-Desert Grassland and Steppe (USGS, 2015). These open savanna-like plains are very important habitat for pronghorn, elk, deer, and many grassland birds.

The highest quality grasslands are those which have not been invaded by chaparral, pinyon-juniper woodlands, or mesquite-cacti shrublands. Goodwin Mesa provides a high concentration of the most intact grasslands in the Apache Highlands ecoregion. This view of the East Fork of Sycamore Creek shows the transition from chaparral cloaked granitic hills to the grasslands and savannas that occur on the basaltic mesa-top. Outstanding opportunities for unconfined primitive recreation occur in this intact ecosystem.

"A proper functioning grassland ecosystem provides values to the public that can be classified as recreational, aesthetic, educational, biological, social and economic/commercial"

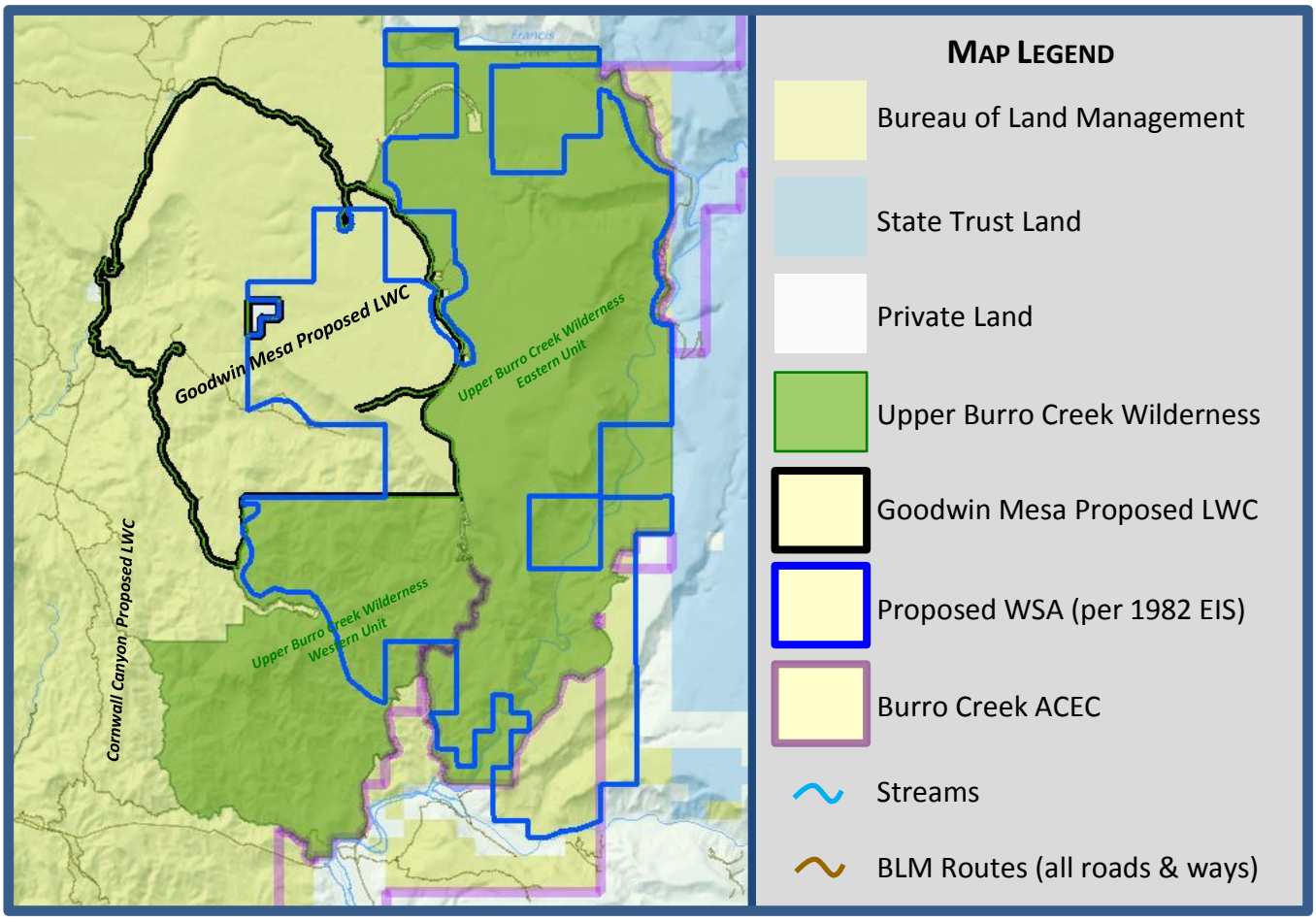
From: Jarnecke, 2014, "Central Arizona Grasslands Conservation Strategy." An Interagency Report published cooperatively by Arizona Game and Fish Department, Bureau of Land Management, Prescott National Forest, Tonto National Forest, and the USDA Natural Resource Conservation Service).

Previous Wilderness Inventories

Portions of the proposed LWC were identified by BLM as having wilderness characteristics during the 1979/1980 intensive wilderness inventory (BLM, 1980a; BLM, 1980c). The Hualapai-Aquarius Grazing EIS was the process by which the unit "AZ-020-062 – Upper Burro Creek" was officially proposed as a wilderness study area (WSA), encompassing 27,390 acres (BLM, 1980b). The map below shows the 1980 proposed WSA as a single blue line encompassing one-third of the proposed LWC (black line), as well as much of what later became the Upper Burro Creek Wilderness (green shade).

Of the Burro Creek WSA proposal, approximately 4,500 acres were contained within what is now the current proposed LWC, consisting of the plains of Goodwin Mesa and some of the upper slopes of the granitic hill country. The BLM stated that "*wilderness values in the WSA are excellent, including unique plant and animal sightseeing opportunities as well as dramatic scenery*" (BLM, 1982: p. 42), as well as stating that the unit contained "*13,700 acres of crucial pronghorn grassland habitat on Goodwin Mesa*" (BLM, 1982: p. 46). Ultimately, the BLM decided that the preferred alternative was to not advance wilderness protection for the WSA because of multiple use conflicts (BLM, 1987). After years of negotiation between stakeholders, Upper Burro Creek was designated as Wilderness in 1990, but the portion west of BLM Route 7660 was not included in the wilderness area.

With the exception of a single square mile section, the portions of the proposed LWC that were not included within the WSA were at that time in state or private ownership. It is likely that had the land been under BLM ownership, the entire unit would have been determined as having wilderness characteristics. Now that the BLM has acquired those checkerboarded private or state lands, many earlier conflicts have been eliminated. Also, our inventory of this unit is the first time these lands have been inventoried for wilderness characteristics, and as such this is considered "new information" according to BLM Manual 6310.



SECTION 2: Wilderness Characteristics

The proposed LWC meets the minimum size criteria for roadless lands

The Goodwin Mesa Proposed LWC unit contains 13,737 wild acres of land. This acreage excludes a private inholding that is about 96 acres in size with no access roads or rights-of-ways. The above acreage also excludes three short wilderness inventory roads that cherrystem into the unit, and the water tanks that two of these roads access.

The proposed LWC is affected primarily by the forces of nature

The Goodwin Mesa Proposed LWC appears to be in a natural condition, and without a doubt is dominated by the forces of nature. The few human impacts that are present are discussed below.

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 mostly along Salt Creek in the chaparral-cloaked portion of the proposed LWC. These routes have not seen any maintenance in years (see photopoints 9 through 13) and appear to serve no purpose for the current uses of the land. It is our determination that the existence of these routes does not substantially affect the wilderness user experience because the rolling terrain, steep cliffs, massive boulder-strewn hills, and dense vegetative screening present throughout this portion of the LWC effectively conceal these primitive routes from visitors. Furthermore, closure of these routes would permit relatively quick revegetation and naturalization. This proposed LWC is remote and hard to access, with much of the unit completely lacking any routes at all.

Ranch Infrastructure

The Francis Creek Ranch has a presence in the Aquarius Mountains and on Goodwin Mesa. This ranch is actively maintaining their ranching infrastructure in the area. Three short roads that are being well-maintained access earth-bermed water tanks and are excluded from the proposed LWC unit in the form of cherrystems (Butte Tank at photopoint 7, Red Lake at the northeastern boundary, and an unnamed installation on the eastern edge of the unit). These cherrystems are relatively short, and when compared to the nearly pristine, expansive landscape, do not detract from the wilderness character of the unit. The topography, natural features, and vegetation in the LWC conceal these wilderness inventory roads making them substantially unnoticeable to the average visitor. Considering the rugged, natural character of the Goodwin Mesa Proposed LWC, the cherrystems do not negatively affect the recreationist's experience, especially since most of the proposed unit contains absolutely no routes at all. Almost all of the ranching impacts in the Goodwin Mesa area were excluded from the proposed LWC, including the three cherrystems as well as Pine Flat Well (north of photopoint 3), and Swale and Slaughter Tanks (seen from photopoint 2), which were excluded along the unit boundary. Because most of these impacts are not within the proposed unit, they do not affect the naturalness found within the LWC. "*Human impacts outside the area will not normally be considered in assessing naturalness of an area*" (BLM 6310, p.7). Fences and water tanks are considered to be substantially unnoticeable to the average visitor, and indeed, the relatively small amount of evidence of ranching within the proposed LWC does not detract from the wild character of the Goodwin Mesa Proposed LWC.

Water developments at Stone Corral Spring

This natural spring in Salt Creek has been significantly negatively affected by ranch-related water development. The route to it is in terrible, unmaintained condition, and the watering installations are in equally bad condition. The spring, which has the potential to be a thriving, beautiful, natural feature, has been severely degraded and deserves restoration and permanent protection from future degradation. LWC designation, following intensive restoration and site cleanup, would help the agency achieve its goals for protecting riparian resources and preserving watershed integrity in the Burro Creek watershed.

Summary of Human Impacts

Collectively, the impacts documented above do not substantially detract from the naturalness of the Goodwin Mesa Proposed LWC. Most of the unit completely lacks signs of any human influence. Human impacts that do exist are minor, or deserve restoration to a self-sustaining natural condition. Most human impacts are largely not obvious to the average visitor, unless they were at one of the sites which are mostly excluded from the unit. Natural forces are absolutely the primary factors influencing the land, vegetation, and wildlife within the proposed LWC.

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

The Goodwin Mesa Proposed LWC contains topography and natural features perfect for experiencing solitude, especially when considering the unit's connection with Upper Burro Creek Wilderness. The western part of the unit contains the East Fork of the headwaters of Sycamore Creek (see photo on page 7), and from the central portion flows Salt Creek, both areas which provide elevational relief, creating a visual barrier to surrounding areas. The granitic hills, basalt buttes, and meandering canyons within the unit provide recreationists numerous options to easily find solitude. Within the plentiful rock outcrops of the southern half of the unit, there are outstanding prospects for discovering a sense of isolation, including countless microsites where a person can find complete, high-quality seclusion among these awesome granitic boulders and interesting pockets of vegetation (see photo below).

The proposed LWC shares three miles of uninterrupted contiguity with the boundary of the Upper Burro Creek Wilderness, which is ample area to suggest that wilderness characteristics present in the designated wilderness are also found within the proposed LWC (see map on page 8). In the Wilderness Management Plan and Environmental Assessment for Upper Burro Creek, the BLM states that on Goodwin Mesa within the Wilderness area "*the opportunity for a sense of solitude is high because of the distances from jeep roads*" (BLM 2005: p. 5). We agree with this statement and find the same to be true for the remainder of Goodwin Mesa within the proposed LWC. There are relatively few primitive routes and wilderness inventory roads in this area, and because the mesa is so large, prospects for solitude are plentiful.

The BLM further states:

> *"This wilderness offers visitors a fairly high degree of solitude, due to the remoteness of the area. A large part of this wilderness is located on Goodwin Mesa, which provides limited topographic screening from other people. However, the wide expanse of the mesa makes the activities of others relatively unnoticeable when viewed from a distance. Natural quiet is typically in abundance throughout the wilderness"* (BLM 2005: p. 10)

The Goodwin Mesa Proposed LWC offers outstanding opportunities for experiencing primitive and unconfined recreation. The above mentioned granitic boulder outcrops provide for exceptional rock climbing and bouldering, granitic rock being especially sought-after by climbers. Climbers looking for seclusion in a wilderness setting could camp in this area and rock climb for an extended period. This rocky terrain is also great for hiking and exploring among the boulders and interesting little grottos. These rolling hills contain thousands of outlooks, summits of rocky knobs and knolls; a savanna not unlike the plains of North Africa. These hills of diverse nut and fruit-bearing shrubs, small trees, and cacti, are broken into a mosaic by endless, winding rocky corridors and alleyways of native grasses, and a web of minute sandy draws where the experienced backpacker could find easy passage between the scenic hills, and abundant grassy camps nested among the boulders. Horseback riders would enjoy the large views and easy travel of Goodwin Mesa, with abundant sources of water for the animals. Naturalists and photographers can find extraordinary plant diversity in the chaparral community that provides outstanding opportunities to observe the varied splendors of nature. The Aquarius Cliffs running through the heart of proposed LWC offer the more adventurous explorer more challenging travel.

> *"Upper Burro Creek provides outstanding opportunities for hiking, backpacking, and photography*" (BLM 1982: p. 42).

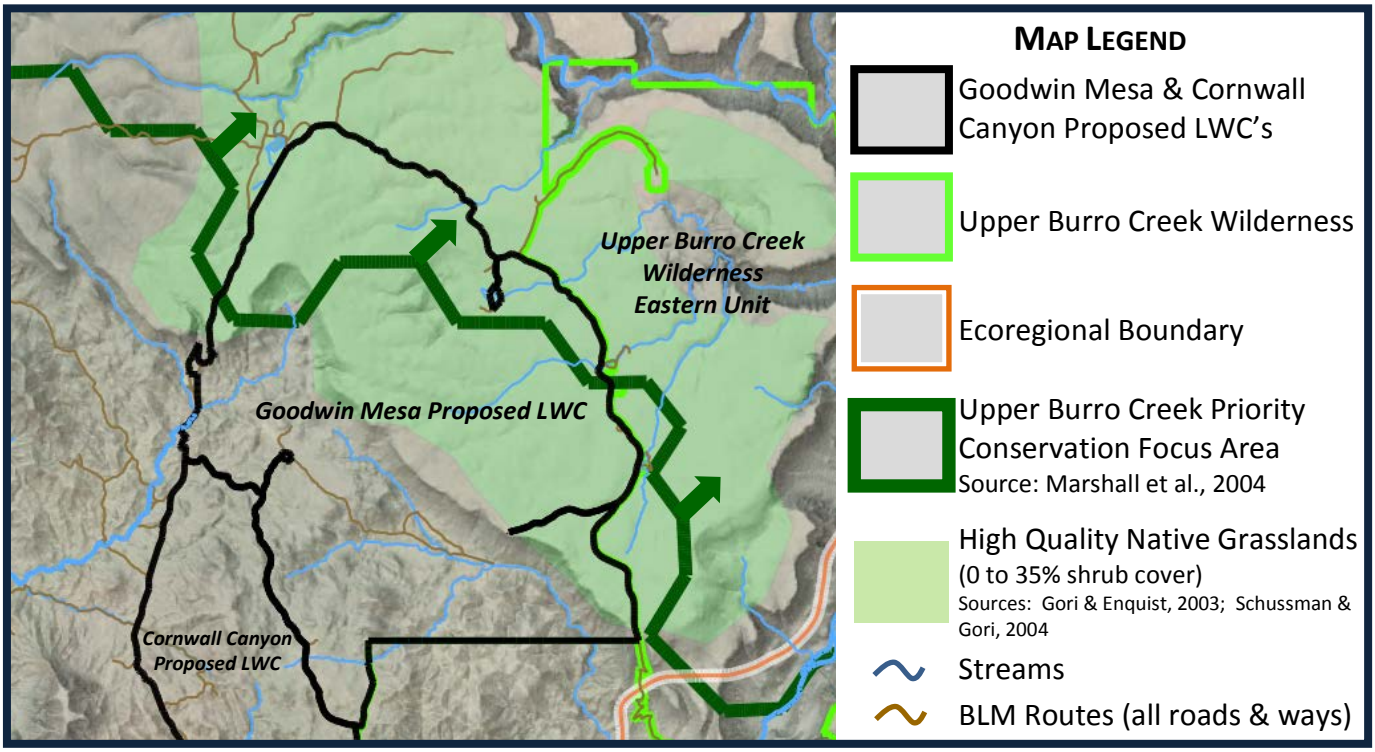
Again, because the proposed LWC shares three miles of uninterrupted, contiguous boundary with the Upper Burro Creek Wilderness, the above stated outstanding opportunities for primitive and unconfined recreation found within the Wilderness are without a doubt also present in the proposed LWC.

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

The proposed LWC is within a conservation priority area for the Apache Highlands Ecoregion

The Nature Conservancy (TNC) is an international conservation organization dedicated to preserving life in all of the earth's ecosystems. The organization takes a scientific approach to prioritizing conservation work to achieve the most effective species and habitat protection outcomes. Their approach involves identifying conservation focus areas in each ecoregion, based on collaborative, multi-disciplinary based determinations of at-risk species and habitats, threats to ecosystem health, and effective solutions to maintain biodiversity and ecosystem resiliency. The proposed LWC is situated within the northwestern portion of the Apache Highlands Ecoregion, which includes 30 million acres of central and southeastern Arizona, southwestern New Mexico, and north-central Mexico; bounded to the north by the Mogollon Rim, the west by the Mohave and Sonoran Deserts, the east by the Chihuahuan Desert, and to the south by the Sierra Madre Occidental. TNC completed an ecoregional assessment using advanced GIS and statistical computing tools to identify a network of conservation areas where the most imperiled, keystone, or endemic ecosystems, species, and habitats could be protected with the least effort.

This expansive effort at comprehensively prioritizing conservation across jurisdictional and biogeographical boundaries prioritized the Burro Creek Watershed 15th out of 90 conservation focus areas on an index of irreplaceability and total conservation targets present. Also, that analysis ranked the Burro Creek Watershed 23rd out of 69 conservation focus areas with aquatic systems in the entire Apache Highlands Ecoregion, and further concluded that enhanced conservation work in this area would protect 10.8% of the ecoregions conservation targets, including: 10 ecological system targets, 2 amphibian targets, 5 fish targets, 4 bird targets, 1 invertebrate target, 2 mammal targets, and 3 plant targets (Marshall et. al, 2004).



The proposed LWC would protect high quality native grasslands crucial to pronghorn antelope

Portions of central Arizona feature a mosaic of grasslands intermixed with chaparral, pinyon-juniper woodlands, desert lowlands, and montane conifer forests. The Apacherian-Chihuahuan Semi-Desert Grassland and Steppe ecological system (USGS, 2015) occurs from northern Mexico into northern Arizona, and reaches its southwestern edge along the rim of Goodwin Mesa. North America's central grasslands are considered one of the most threatened ecosystems on the continent and in the world (Gauthier et al. 2002), and the value of these ecosystems for wildlife habitat, watershed function, carbon sequestration, and maintenance of scenic and cultural values cannot be understated.

The values contained in the grasslands of the Goodwin Mesa Proposed LWC are exemplary in regional terms, and also when considered at state, national, and international scales. The grasslands and savannas that occur on Goodwin Mesa are considered by The Nature Conservancy to be among the highest quality in the Apache Highlands Ecoregion of central and southern Arizona, southwestern New Mexico, and northern Mexico, ranking in the top 1/6th of all ecoregional grasslands for native species composition, degree of shrub invasion, and prospects for restoration and conservation (Gori & Enquist, 2003; Schussman & Gori, 2004). The map on the previous page shows the proposed LWC (black line), and the area identified by The Nature Conservancy as high quality native grasslands (shaded green area).

American Pronghorn (*Antilocapra americana*) prefer flat, open grassland areas, but will use rolling hills and mesa tops of less than 20% slope. They also use such diverse habitats as sparse deserts, woodlands, and open forests (Jarnecke, 2014). Because of these preferences, the Goodwin Mesa area provides the Kingman Resource Area's most important pronghorn habitat (BLM 1993, p. 178). In addition to providing critical habitat for pronghorn, the proposed LWC provides habitat for Species of Economic and Recreational Importance such as bighorn sheep (*Ovis canadensis nelson*), javelina (*Tayassu tajacu*), Gambel's quail (*Callipepla gambelii*), mule deer (*Odocoileus hemionus*), and mountain lion (*Puma concolor*) (AZGFD, 2012; http://www.habimap.org/habimap/).

Threats to these intact grasslands include fire suppression; overgrazing; shrub and tree encroachment; invasive, non-native plants; soil erosion; and roads, buildings and development (Gori & Enquist, 2003; Schussman & Gori, 2004; Jarnecke, 2014; AZGFD, 2012). Protection of the large, intact portions of Goodwin Mesa as an LWC can help the BLM, and the broader conservation, hunting, and wildlife enthusiast community to achieve long-term wildlife preservation goals by alleviating the potential habitat loss associated with mineral development, soil disturbances, and other resource developments. Important restoration practices such as prescribed fire and native plant promotion are consistent with LWC management. Furthermore, protection of these critical ecosystems will benefit the full range of Burro Creek's watershed values and important riparian habitat, for which Goodwin Mesa serves as a headwater (see Turner & List, 2007 and Zaimes et al., 2007).

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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 Goodwin 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 Goodwin Mesa Proposed LWC unit contains about 13,737 contiguous roadless acres, with few primitive routes permeating the unit boundary, and none cutting into its core. The Photopoints described here of the Goodwin Mesa Proposed LWC are listed in detailed tables with photographs following this description. Beginning at Waypoint 1, the proposed LWC unit description will move clockwise around the unit.

Western Boundary

BLM Route 7657 forms most of the western proposed LWC boundary. The Goodwin Mesa Proposed LWC unit boundary description begins on the western unit boundary at the intersection of BLM Routes 7657 and 7665, at Waypoint 1. Going north from the intersection of BLM Routes 7657 and 7665, the LWC unit boundary is BLM Route 7657 for about eight-tenths of a mile. Then the boundary becomes the BLM property line going due north for roughly four-tenths of a mile, where the proposed LWC unit boundary borders the Francis Creek Ranch private property. The BLM route inventory data depicts a route running from the northeastern corner of the private land, up to a switchback on BLM Route 7657. This is the old road cut before the new route (BLM Route 7657) was constructed. This old road cut is not receiving any use and is no longer maintained; not meeting the definition of a road as defined by BLM Manual 6310. Returning to the northeast corner of the private property, the proposed LWC unit boundary remains the BLM/private property line and turns west for approximately a tenth of a mile until intersecting BLM Route 7657. BLM Route 7657 once again becomes the proposed LWC unit boundary continuing north. Photopoint 1 was taken looking east from BLM Route 7657 into the canyon forming the headwaters of the east fork of Sycamore Creek within the Goodwin Mesa LWC unit.

Continuing north, BLM Route 7657 is the LWC unit boundary until Waypoint 2. There are no roads or ways entering the unit from this wilderness inventory road (BLM Route 7657) between Photopoint 1 and Waypoint 2. At Waypoint 2, the unit boundary cuts to the east of Slaughter Tank and Swale Tank. The area around these two wildlife/cattle tanks is well-used and heavily impacted by local ranching

activities; and has therefore been excluded from the unit. The water tanks and ranching infrastructure are excluded from the proposed LWC unit from Waypoint 2 to Waypoint 3.

Northern Boundary

BLM Route 7660 is the Goodwin Mesa northern unit boundary. At Waypoint 3, the unit boundary becomes a wilderness inventory road (BLM Route 7660). Photopoint 2 shows Swale Tank, to the west, and its immediate surroundings. Waypoint 4 is at the junction of BLM Route 7660 an unnamed cherrystem road. This cherrystem road goes about four-tenths of a mile south to a tank called Red Lake. The BLM route inventory data shows two routes leaving this cherrystem road to the west. These two routes are both unmaintained primitive ways and are included in the Goodwin Mesa LWC.

Eastern Boundary

The eastern Goodwin Mesa Proposed LWC unit boundaries are comprised of BLM Route 7660 and BLM Route 7673. Approximately a quarter of a mile east of Waypoint 4, the Upper Burro Creek Wilderness begins sharing BLM Route 7660 as its boundary with the Goodwin Mesa LWC. At Waypoint 5, the BLM route inventory data shows a route leaving BLM Route 7660, making a loop, and intercepting BLM Route 7660 again at Waypoint 6. This is a primitive route that is not being maintained and is not a wilderness inventory road. BLM Route 7660 is the eastern unit boundary until Waypoint 7. At Waypoint 7, BLM Route 7660 becomes a cherrystem going into the unit for about a mile and a quarter, and leads to a tank at the edge of the mesa. Also at Waypoint 7, the unit boundary becomes BLM Route 7673 and continues south until Waypoint 8.

Southern Boundary

The southern Goodwin Mesa Proposed LWC unit boundary is composed of the Burro Creek Wilderness boundary on the eastern half, and BLM Route 7665 (a wilderness inventory road) on the western half. At Waypoint 8, the proposed LWC unit boundary turns west and shares the Upper Burro Creek Wilderness boundary. The Wilderness and the proposed LWC unit share this east-west boundary for just over three miles. At Waypoint 9, the Wilderness and the LWC boundaries both turn south. The Upper Burro Creek Wilderness and the Goodwin Mesa LWC share this north-south boundary for about a quarter mile. At Waypoint 10, the LWC unit boundary excludes a well-used, recently upgraded cattle watering station. Heading south from Waypoint 10, an unnamed BLM route, which is used to access the ranching infrastructure, heads south as the LWC unit boundary, and is a wilderness inventory road. Photopoint 3 shows that this road has recently been bladed. The road pictured in Photopoint 3 is the LWC unit boundary until Waypoint 11, at which point BLM Route 7665 becomes the unit boundary. BLM Route 7665, a wilderness inventory road, travels to the northwest. At Photopoint 4, a way enters the proposed LWC unit and leads to a corral. As Photopoint 4 depicts, this primitive route shows no evidence of construction. Also observable in the photograph is the vegetation growing in the middle of the tracks, indicating that this way is not maintained, and not a road as defined by BLM Manual 6310. Continuing north, Photopoint 5 displays an image of the wilderness inventory road (BLM Route 7665), looking south along the unit boundary.

Photopoint 6 displays the intersection of BLM Route 7665 and another wilderness inventory road, which is a cherrystem into the LWC unit. This unnamed route shows some evidence of recent maintenance, and leads to a well-kept water tank (Butte Tank) and windmill (Photopoint 7) that have also been excluded from the unit. Beyond the tank and windmill site, the character of this route changes substantially. The route becomes much more rough, less used, and it no longer has any evidence of maintenance; making it a way and not a road. Photopoint 8 shows a primitive route stemming from this way. Photopoint 8 depicts the condition of this primitive route, which has no evidence of construction or maintenance. As Photopoint 8 displays, this is a tight corridor with vegetation growing in the median. Continuing southeast past the tank and windmill, Photopoint 9 shows another primitive route stemming from the main way. This primitive route makes a loop, returning to the main way with no apparent purpose. Photopoint 10 pictures the other end of this route where it meets back up with the main way. As Photopoints 9 and 10 depict, this primitive route does not display evidence of construction or maintenance, and is therefore not a road. Returning to the main way, Photopoint 11-13 depict the general condition of this primitive way. As the photographs show, this way is not being maintained and is extremely rough and almost impassable in places. Limited 4-WD vehicle use is the only factor keeping the way passable. Additionally, this primitive route goes up and down some unsustainably steep slopes and has considerable erosion problems. This way accesses Stone Corral Spring (Photopoint 14). This primitive route seems to get very minimal use and the ranching infrastructure located at the spring is in disrepair and unused (Photopoint 14).

To finish the detailed boundary description, return to the wilderness inventory road and the intersection depicted in Photopoint 6. From Photopoint 6 heading west, BLM Route 7665 is both the unit boundary and a wilderness inventory road. This road is the Goodwin Mesa Proposed LWC unit boundary for the remainder of the boundary back to the beginning of our description at Waypoint 1.

SECTION 4: Photopoint Data

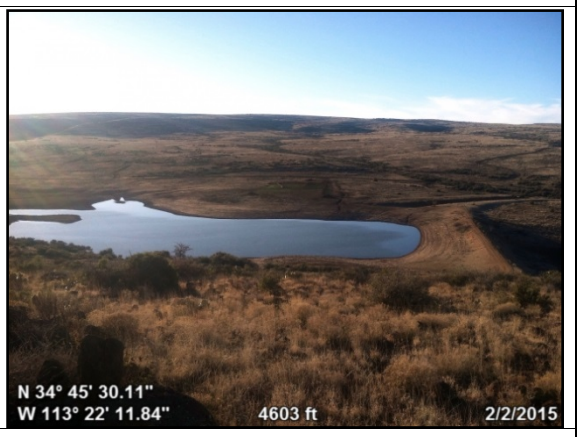
Data Tables & Photographs to accompany Maps and the Detailed Boundary & Routes Description

Attributes	
Title	Photopoint 001
Unit name	Goodwin Mesa
Route name	BLM Route 7657
Determination	Road
Maintenance	Bladed
Feature	View into basin

Photopoint 001. This is the canyon forming the headwaters of the east fork of Sycamore Creek. Picture was taken from BLM Route 7657.

Attributes	
Title	Photopoint 002
Unit name	Goodwin Mesa
Route name	Several shown
Determination	Road
Maintenance	Recent earthwork
Feature	View of Swale Tank

Photopoint 002. Looking west toward area excluded from Goodwin Mesa LWC.



Attributes	
Title	Photopoint 003
Unit name	Goodwin Mesa
Route name	None
Determination	Road
Maintenance	Recent blade
Feature	Typical condition of Route/Way

Photopoint 003. Wilderness inventory road showing evidence of a recent blade.

Attributes	
Title	Photopoint 004
Unit name	Goodwin Mesa
Route name	Not Named
Determination	Way
Maintenance	None
Feature	Leads to corral

Photopoint 004. Vegetation growing in median indicates low use and lack of maintenance.

Attributes	
Title	Photopoint 005
Unit name	Goodwin Mesa
Route name	BLM Route 7665
Determination	Road
Purpose	Ranching access
Feature	Typical condition of Route/Way

Photopoint 005. Looking south down wilderness inventory road.

Attributes	
Title	Photopoint 006
Unit name	Goodwin Mesa
Route name	BLM Route 7665
Determination	Road
Maintenance	Recent blade
Feature	Junction of Routes/Ways

Photopoint 006. Looking northeast at intersection.

Attributes	
Title	Photopoint 007
Unit name	Goodwin Mesa
Route name	None
Determination	Road
Maintenance	Old evidence
Feature	Butte tank, Windmill

Photopoint 007. Ranching infrastructure excluded from Goodwin Mesa LWC unit.

Attributes	
Title	Photopoint 008
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	No evidence
Feature	Typical condition of Route/Way

Photopoint 008. A primitive route heading north into the unit.

Attributes	
Title	Photopoint 009
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	No evidence
Feature	Typical condition of Route/Way

Photopoint 009. A way that makes a loop within the LWC unit.

Attributes	
Title	Photopoint 010
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	None
Feature	Loop trail

Photopoint 010. Other end of the loop.

Attributes	
Title	Photopoint 011
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	None
Feature	Typical condition of Route/Way

Photopoint 011. Erosion on primitive route.

Attributes	
Title	Photopoint 012
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	None
Feature	Typical condition of Route/Way

Photopoint 012. This way shows no evidence of maintenance.

Attributes	
Title	Photopoint 013
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	None
Feature	Erosion

Photopoint 013. More evidence of erosion and a lack of maintenance.

Attributes	
Title	Photopoint 014
Unit name	Goodwin Mesa
Route name	None
Determination	Way
Maintenance	No evidence
Feature	End of way

Photopoint 014. Rundown feedstation at end of way near Stone Corral Spring.