PELONCILLO MOUNTAINS

LANDS WITH WILDERNESS CHARACTERISTICS

Three Units of Public Land Contiguous to the Northern Boundary of the Peloncillo Mountains Wilderness, Arizona: Whitehorse, Antelope Canyon and Engine Mountain



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



ARIZONA WILDERNESS COALITION

October, 2016

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TABLE OF CONTENTS	
PREFACE: This Proposal was developed according to BLM Manual 6310	page 3
METHODS: The research approach to developing this citizens' proposal	page 5
Section 1: Overview of the Proposed Lands with Wilderness Characteristics	
Unit Introduction: Overview map showing unit location and boundaries • provides a brief description of the unit	page 8
Section 2: Documentation of Wilderness Characteristics	
The proposed LWC meets the minimum size criteria for roadless lands	page 10
The proposed LWC is affected primarily by the forces of nature	page 10
The proposed LWC provides outstanding opportunities for solitude and/or primitive and unconfined recreation	page 12
Conclusion: The proposed area should be managed for protection of wilderness characteristics	page 14
Section 3: Detailed Maps and Description of the Unit Boundary, Roads, Ways and	d Human Impacts
Detail Maps with Photopoint Locations	page 16
Narrative Description of the Proposed LWC Boundary and Vehicle Routes	——page 20
Whitehorse Unit Boundary Description	page 20
Antelope Canyon Unit Boundary Description	page 22
Engine Mountain Unit Boundary Description	page 23
Section 4: Photopoint Data	
Data Tables and Geotagged Photographs to accompany the	

Detailed Boundary & Vehicle Routes Description ______page 25

Cover Photo: From atop a hill at photo point S1, along the wilderness inventory road that forms the southern boundary of the Whitehorse unit, this photo captures the rugged volcanic escarpment of the Peloncillo Mountains, and vegetation typical of upper Sonoran habitats: creosote, yucca, ocotillo, tobosa grass, and prickly pear.

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.

¹Memorandum 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

<u>Sufficient roadless area to satisfy size requirements</u> (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

<u>Affected primarily by the forces of nature</u> – 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.

<u>Human impacts</u> – 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.

<u>Outside human impacts</u> – 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.

METHODS: The research approach to developing this citizens' proposal

The information presented in this report was developed systematically to ensure a comprehensive and accurate description of the proposed LWC that fulfills the citizens' proposal requirements of Manual 6310. Our intent has been to effectively combine the analytical power of technology with the equally important elements of qualitative observation, to produce a suite of products that can be used to facilitate the protection of a variety of lands with wilderness characteristics across the Safford Resource Area, meeting the conservation objectives of Arizona Wilderness Coalition *and* the legal obligation for the BLM to "preserve and protect certain public lands in their natural condition".

STEP 1: GIS ROADLESS ANALYSIS

The initial exercise in our inventory was to complete a geospatial analysis of the study area to identify potential roadless areas using a combination of Ogis, ESRI ArcGis, and Google Earth Pro. The BLM's Route Inventory dataset was gueried for keywords that indicated that a route may be maintained, such as "gravel-surfaced", "2WD use", "Recent grading", and numerous other terms. Several rounds of this process were verified over color aerial imagery to assess the quality of the output. During this step, some errors in the dataset were corrected, such as incomplete line features or very inaccurate digitization. Additionally, we performed a visual assessment of aerial imagery for roads that appeared obviously maintained, and added an attribute column to mark these features as such. We also acquired railroad data, US Census Lidar data for Primary & Secondary Roads, Interstate highway data, and county-maintained roads data from Cochise County. In addition, we digitized natural gas pipeline corridors, telephone and power lines, and the proposed route for the SunZia transmission line. Each feature type was buffered by distances ranging from 10 feet for dirt roads, to 50 feet for interstates and powerlines, and the results were dissolved and unioned to develop one master feature dataset that represented probable wilderness inventory roads and rights-of-way corridors. These data were then used to clip BLM's Surface Management dataset into contiguous blocks of BLM land. Areas less than 5,000 acres were then deleted (unless contiguous to wilderness, WSA, or Proposed Wilderness), and the resultant output was a dataset of 52 units of BLM lands that were probable roadless areas.

STEP 2: FIELD INVENTORY PRIORITIZATION

Prior to visiting any sites on the ground, we assessed each initial roadless area polygon to determine where our resources would be most effectively deployed. Our objectives were to maximize field inventory efforts on the areas that we estimated would possess the most outstanding wilderness values, while also covering a broad geographic sample of the study area. Our determinations were informed by EIS documents, past wilderness inventory reports by BLM and AWC, research by The Nature Conservancy and the Sky Island Alliance, and geospatial data we acquired from BLM, US Forest Service, academic institutions, and the Arizona Game and Fish Department, including the Heritage Database. It is important to make clear that the units we decided not to inventory probably possess wilderness characteristics, but given available resources, we could not visit every unit. In addition to the units we are proposing as LWC's, we are also providing recommendations for areas we have identified as "Potential LWC's". Those units should still be inventoried for wilderness characteristics.

STEP 3: FIELD PLANNING

Trips to the field were strategic, focused efforts. For each unit, we developed a list of field inventory points that we endeavored to visit either by foot or vehicle. By using the BLM Route Inventory Dataset, the BLM Range Improvements dataset, the USGS Springs dataset, the Arizona Land Resources Information System Mines dataset, and USGS Topographic Maps, we identified potential impacts to naturalness *and* areas of potential supplemental value. These datasets were exhaustively examined on Google Earth to validate feature locations. Additionally, other inventory features were identified on the aerial imagery. Once the field inventory points were identified, they were loaded into MotionX GPS HD for iPad. Also, we loaded high-resolution color aerial imagery for our target units and the surrounding area, to assist in navigation, identification of landscape features, and location of hard to detect features. Finally, standard logistical planning steps were completed to ensure that our team would enjoy safe and efficient days in the field.

STEP 4: FIELD INVENTORY

From January to March, 2016, and again in September, 2016, our team dedicated more than 800 hours to inventorying lands with wilderness characteristics. Our objectives were: 1) to refine unit boundaries to confirmed wilderness inventory roads and impacts to naturalness; 2) to identify and document primitive routes, ways, and trails; 3) locate and document minor impacts to naturalness that are permitted within LWC's; 4) identify and document opportunities for solitude and primitive recreation; and 5) discover and document supplemental values where they exist. The primary tool for documentation was GeoJot+ for iPhone, a data collection app that allows the user to develop drop-down data tables that are attached to geotagged .jpeg digital photographs. In making determinations whether a route was a road versus a way, we returned to the legislative definition of a road (discussed earlier), closely assessed the history of maintenance, and considered the purpose (or lack thereof) of the route, the level of use, its connectivity, and other aspects. We are confident that upon verification, our determinations meet the intent of Manual 6310.

STEP 5: FINAL ASSESSMENT, MAPPING, AND DATA COMPILATION

After a field trip, data were loaded into GeoJot + Core for PC, where edits were made where necessary, and final determinations for unit boundaries were made. A range of products were developed from this application: 1) the photopoint data in Section 5 of this report, complete with tables and geotaggs; 2) .kml files for Google Earth to visualize the photopoints across the landscape; and 3) a .kml file of scenic panoramas of the units, showcasing the immense beauty and wildness of our final unit proposals. It is the intent of AWC to share these interactive products with BLM to facilitate in the review of our proposals and to support our best efforts to put forth fair proposals in full transparency. Finally, edits were made to unit polygons in GIS, supplemental information was further explored, maps were developed, and the components of this report were produced. Arizona Wilderness Coalition is proud to share with the BLM this citizens' proposal report and accompanying GIS data, the product of an intensive and science-based conservation process that furthers our collective goal to "preserve and protect certain public lands in their natural condition".

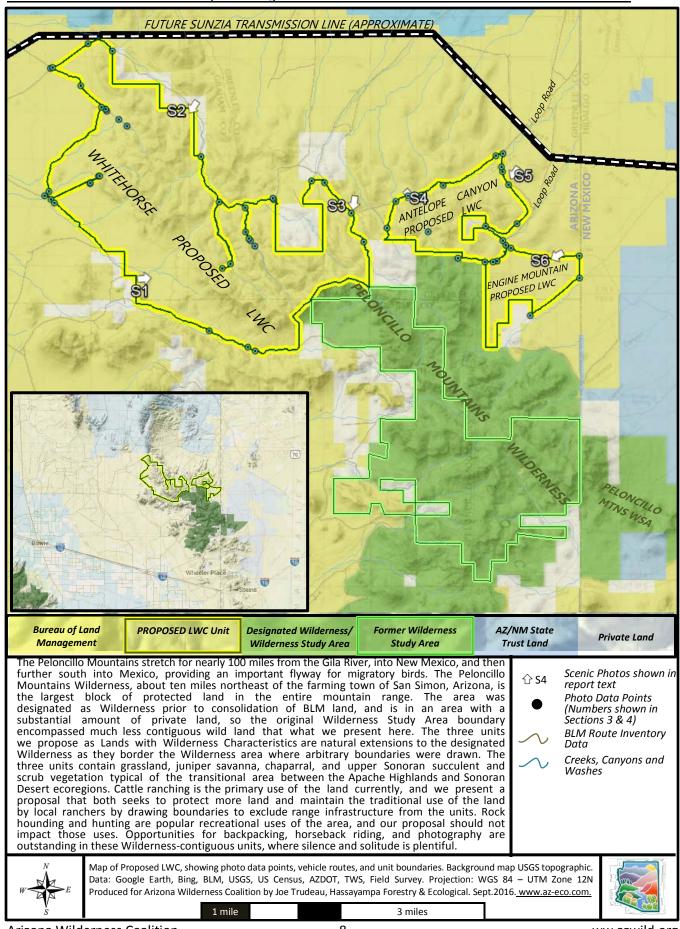
Section 1:

Overview of the Proposed Lands with Wilderness Characteristics



In this report, we propose three separate units with wilderness characteristics that share contiguous boundary with the northern and northeastern borders of the Peloncillo Mountains Wilderness. These three units are natural extensions of the designated Wilderness, where the current boundary follows arbitrary ridgelines or section lines. Our unit proposals encompass contiguous BLM land up to private property lines, wilderness inventory roads, or other human impacts, like waterlines, dirt tanks, and water tanks.

The photo above highlights the terrain and vegetation of the Whitehorse unit from the northern boundary road. The rolling hills and low mountains seen here, draped in grassland and scrub typical of the Apache Highlands Ecoregion, are entirely within the proposed LWC, and are similar to the landscape in the contiguous Wilderness area. Managing these units for their Wilderness Characteristics expands on the outstanding opportunities for primitive recreation and solitude that are established in the neighboring Wilderness area.



Unit Introduction: Overview map showing unit location & boundaries

Arizona Wilderness Coalition

Section 2:

Documentation of Wilderness Characteristics



This view over the eastern portion of the Whitehorse unit is from a hilltop to the north of the units' northern boundary road. The unit boundary follows a road in the valley at photo center, which leads to a well and dirt tank on private land. The highest mountains, at left, are contained within the existing Wilderness area. The scene shown here is typical of the proposed LWC's, with rolling high-desert grassland, punctuated by stands of juniper on northern slopes, and areas of upper Sonoran vegetation (like the ocotillo shown here) on southern slopes.

<u>Size Criteria</u>

The Peloncillo Mountains Wilderness Contiguous Proposed LWC units meet the size criterion specified in BLM Manual 6310. All three proposed LWC units are contiguous to the Peloncillo Mountains Wilderness. The Whitehorse Proposed LWC unit contains about 12,446 acres of contiguous, roadless BLM land. The Antelope Canyon Proposed LWC includes approximately 2,378 acres of contiguous, roadless land under BLM ownership. The Engine Mountain Proposed LWC contains about 1,383 roadless, contiguous acres of BLM land. BLM Manual 6310 states that areas under 5,000 acres are eligible for LWC determinations if *"they are contiguous with lands which have been formally determined to have wilderness or potential wilderness values, or any Federals lands managed for the protection of wilderness characteristics*". Because the Antelope Proposed LWC and the Engine Mountain Proposed LWC are contiguous to the Peloncillo Mountains Wilderness, these units meet the size qualifications regardless of the fact that they are less than 5,000 acres in size. None of the three proposed LWC units enclose any private or other agency inholdings; all private lands encountered are provided with access along unit boundaries or cherrystemmed roads.

<u>Naturalness</u>

The Peloncillo Mountains Wilderness Contiguous Proposed LWCs are affected primarily by the forces of nature. The works of humans are substantially unnoticeable and relatively minor. The landscape contained within the proposed LWC units is wild and incredibly scenic. Human impacts are few and do not detract from the naturalness of the units, which are largely undisturbed. Most human disturbances in the area are excluded from the proposed LWCs, but there are some rather minor signs of human activities within the proposed units that are few and far between.

The **Whitehorse** unit excludes most human impacts with boundary adjustments and fourcherrystemmed routes; the longest of which is one and three-quarter miles, and the shortest is just over a tenth of a mile in length. The cherrystemmed roads lead to a windmill (point 25), a stone dam (point 8) and a well and tank (point 11). Despite the cherrystems – which are all relatively faint routes that fade into the landscape from a short distance away – this proposed LWC contains a large, unfragmented unit core lacking any human impacts. The only human infrastructure located in our inventory within the Whitehorse Proposed LWC includes a buried waterline which parallels the boundary road (point 15), a water trough (point 22) and a feed station (point 28).These are not major impacts and they are substantially unnoticeable to the average visitor. Indeed, the BLM in Manual 6310 uses water troughs as an example, saying that "...the presence of a water trough is a relatively minor human impact on naturalness, and may be considered substantially unnoticeable". Certainly, neither of the other impacts mentioned above (waterline & feed station) are more substantial than a water trough. The Whitehorse LWC unit only contains four primitive routes, or ways, seen in points 12, 26, 27, and 33. As the photographs document, these ways do not substantially affect naturalness; by definition primitive routes do not necessarily detract from wilderness characteristics or naturalness. The **Antelope Canyon Proposed LWC** unit contains very few human imprints. Some ranching infrastructure can be found around the edges of the unit (points 45, 46, 49 & 51), and these were excluded with no impact to naturalness. A buried water line (points 40-42, & 50) serves as a significant portion of the unit boundary, but as the photopoints illustrate; this water line is substantially unnoticeable to the average visitor. According to BLM Manual 6310, barely visible linear disturbances, such as this buried water line, should not disqualify an area for having apparent naturalness. Using the waterline as the unit boundary sets the road back several hundred feet from the unit, thus increasing the wilderness characteristics in the unit. There is only one primitive route (point 52) that enters the proposed LWC, and it does not substantially detract from the naturalness of the unit as a whole. Point 53 displays the image of a feed station that was the only other minor human impact documented within this unit.

The **Engine Mountain Proposed LWC** is virtually indistinguishable from the adjacent Wilderness as far as naturalness is concerned. This proposed LWC unit does not contain many manmade disturbances. Most impacts were documented around the edges of the unit, and therefore, excluded from the proposed LWC. There is one earth-bermed tank within the LWC, but we could not locate any access roads or ways leading to it. Additionally, stock ponds are among the "human-made features that may be considered substantially unnoticeable" according to BLM Manual 6310. There are no primitive routes within the Engine Mountain Proposed LWC, an extraordinary fact considering that most of this unit is a flat desert plain.



The unit boundary road for the Engine Mountain unit can be seen in the foreground, with the unit itself encompassing most of the flat plain between this point and the Peloncillo Mountains. The western boundary of the Engine Mountain Unit is the Wilderness boundary, an arbitrary line midway between section lines cutting due north to south. Engine Mountain is the locomotive-shaped peak on the right. The Peloncillo Mountains Wilderness Contiguous Proposed LWC units that we propose are largely untrammeled by man as we carefully documented human impacts and worked to exclude them from the units. The three proposed LWC units combined contain only five primitive routes within their boundaries, making for an incredibly natural landscape contiguous to designated Wilderness. This is a very low number of primitive routes penetrating the unit boundaries; a rare attribute of any piece of undeveloped land these days. While there are ranching activities occurring on these lands proposed for LWC designation, it is common to see these very same activities and their impact features (such as stock ponds) within designated Wilderness areas.

Grazing activities and imprints do not detract from the naturalness of the Peloncillo Mountains Proposed LWCs in any considerable way according to the standards laid forth in BLM Manual 6310. In fact, the grazing seems to be very well managed, as the native grasslands appear exceptionally healthy and robust. The grasslands of the Peloncillo Mountains seem particularly sensitive to disturbance; any human disturbance could have visual impacts that last for decades. Mountains in this range have such graceful curves sloping in and out of canyons and other striking drainage features with highly aesthetic natural vegetative patterns. The largely undisturbed nature of these hillsides is an essential element of their wild beauty that deserves LWC designation in order to protect their outstanding levels of naturalness and wilderness characteristics. It is uncommon to find native grasslands in such good conditions, as they are in the proposed LWCs, making it all the more important to protect the wilderness characteristics of this land. As this report documents, the human impacts that do exist are minor and can be considered substantially unnoticeable to the average visitor.

Solitude & Recreation

The Peloncillo Mountains Wilderness Contiguous LWC units provide a wild landscape for outstanding experiences of solitude and primitive and unconfined recreation. All three proposed LWC units are contiguous with the Peloncillo Mountains Wilderness, and therefore inherit the outstanding wilderness characteristics present within the designated Wilderness. Such characteristics have already been documented within the Wilderness and designating the proposed LWCs would improve the available opportunities for experiencing outstanding solitude and primitive and unconfined recreation.

It is easy to find high-quality opportunities for being alone in remote country within the Peloncillo Mountains Wilderness Contiguous Proposed LWCs. The LWC units are set far from population centers among beautiful rolling hills that provide ample topographic relief for shielding the sights and sounds of others. Canyons and draws lead visitors into small basins and isolated areas with exceptional wilderness characteristics and outstanding opportunities for solitude. The Whitehorse Proposed LWC includes roughly 12,446 acres; even as a stand-alone unit this is more than enough to experience authentic solitude. Furthermore, scattered juniper woodlands within all three units provide vegetative screening that serves to shelter visitors from each other. Indeed, our inventory team did not see, hear or encounter any other individuals in the days that we spent exploring the area. There is no doubt that those seeking solitude will discover excellent opportunities in the isolated settings of the proposed LWC units.

Outstanding opportunities for primitive and unconfined recreation exist throughout the proposed LWCs. The Peloncillo Mountains Wilderness area contains approximately 19,800 acres. The Lands with Wilderness Characteristics that are being proposed cover approximately 16,200 acres total. Combined that amounts to approximately 36,000 acres of roadless land with spectacular wilderness characteristics and outstanding opportunities for long, rugged adventures through a rough, untamed and secluded landscape. Backpackers or horse packers can easily put together a twenty mile loop within the existing Wilderness. That loop could be extended by tens of miles with the additional terrain contained by the proposed LWC units; providing outstanding opportunities for outdoor recreationists looking for longer expeditions over extended periods of time without having to backtrack. Numerous canyons cut through the undulating terrain within the Wilderness and the proposed LWCs providing outstanding opportunities for risky navigation and difficult route-finding. This vast landscape is ideal for primitive and unconfined recreation.

Day adventurers will find a plethora of outstanding opportunities for primitive and unconfined recreation throughout the land proposed for LWC designation. Hikers can enjoy cross-country travel through the picturesque grasslands and woodlands. Climbers looking for more of a challenge can venture into the Wilderness to summit Horsefoot Mountain at almost 6,000 feet in elevation. This incredibly rugged mountain also provides stunning features for photographers to capture. In addition, the lovely grasslands and beautiful juniper woodlands throughout the LWCs and the Wilderness provide excellent opportunities for photography. The light plays across this unspoiled landscape in magical ways offering exceptional perspectives of the land's wild characteristics. Bird watching and sightseeing for botanical and zoological features amidst the incredible scenery within this part of the Peloncillo Mountains is also quite outstanding. The connectivity to the adjacent Wilderness makes the opportunities for all of these various forms of primitive recreation that much more exemplary.



From a hilltop across Loop Road, this view over the Antelope Canyon unit shows the expansive grasslands and juniper savannas that define this region. Engine Mountain can be seen just over the ridge, where the units Wilderness-contiguous boundary follows and arbitrary section line.

Hunting prospects are absolutely outstanding within the proposed LWCs, especially when considered along with the contiguous Wilderness area. Native desert grasslands found within all three proposed units provide exceptional habitat for hunting game. Intact desert grasslands are becoming less common due to human disturbance. As a result, native grasslands that remain hold great intrinsic value, and it is important to protect them from potential threats. The terrain and vegetation in the proposed LWCs are perfect for backcountry hunting. Across Arizona, many grasslands have been invaded by brush, making it hard to travel by foot. The grasslands in the LWCs are largely not being invaded by brush and are ideal for hunting by foot. Some species of economic and recreational importance found within the proposed LWC units include band-tailed pigeon, bighorn sheep, Gambel's quail, javelin, scaled quail, mountain lion, mule deer, pronghorn (in Antelope & Engine Mtn. Proposed LWCs), and white-winged dove (see www.habimap.org).

Primitive recreation in such healthy desert grasslands is absolutely outstanding. So many native grasslands in Arizona have been overgrazed and lack their original stunning beauty. However, the grasslands in the proposed LWCs do not seem to be overgrazed and appear in excellent condition. Taking this into consideration, the solitude and primitive recreation opportunities present within the proposed LWC units stand apart from those available elsewhere.

Conclusion

The Arizona Wilderness Coalition recommends to the Bureau of Land Management that the proposed area should be managed for protection of wilderness characteristics according to the policies established in BLM Manuals 6310 and 6320. In this report, we have provided the requirements for a citizens' proposal, and documented that the proposed unit meets the criteria for size, naturalness, solitude, and primitive recreation. The scenic quality of these wilderness contiguous units is spectacular, featuring a mix of native grasslands, diverse chaparral species, and upper Sonoran vegetation. Indisputably, there are outstanding opportunities for experiencing solitude and primitive and unconfined recreation within the existing Peloncillo Mountains Wilderness. The Peloncillo Mountains Wilderness Contiguous Proposed LWCs also contain their own outstanding wilderness characteristics. Furthermore, because the boundaries between the Wilderness area and the proposed LWC's are arbitrary (not wilderness inventory roads, rights of ways, property boundaries, etc.), the proposed LWC units automatically inherit the undeniably outstanding wilderness characteristics present within the Peloncillo Mountains Wilderness.

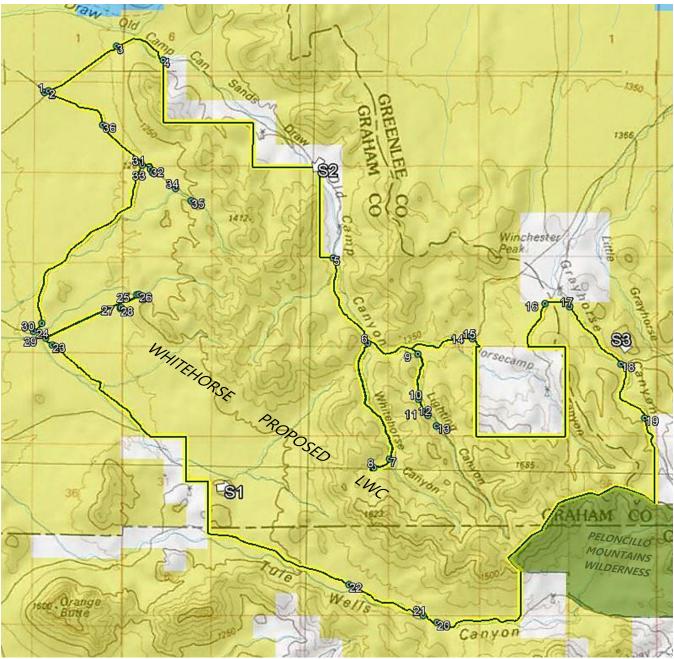
Section 3:

Detailed Maps & Description of the Unit Boundary, Roads, Ways and Human Impacts



From the unit boundary along a road in Antelope Canyon, this view is looking up an unnamed valley in the 2,378-acre Antelope Canyon Proposed LWC, towards Engine and Horsefoot Mountains in the Peloncillo Mountains Wilderness.

Detail Maps with Photopoint Locations



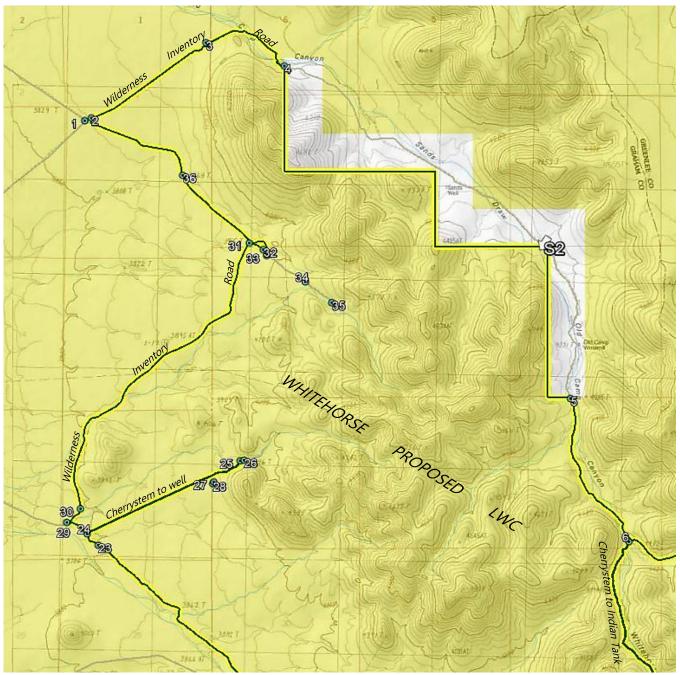
DETAIL MAP 1: WHITEHORSE - ENTIRE UNIT

Whitehorse: ~12,446 acres contiguous to the Peloncillo Mountains Wilderness

The narrative description of the unit boundary and other data starts at the northwestern corner of the unit and progresses in a clockwise direction. It is divided into four boundary segments:

Segment A is the northern boundary from points 1 to 16, following vehicle routes and private land Segment B is the eastern boundary from points 17 to 19, following a road and private land Segment C is the southern boundary, following the Wilderness boundary, private land, and points 20 to 22 on a road Segment D is the western boundary from private land to point 36, following wilderness inventory roads

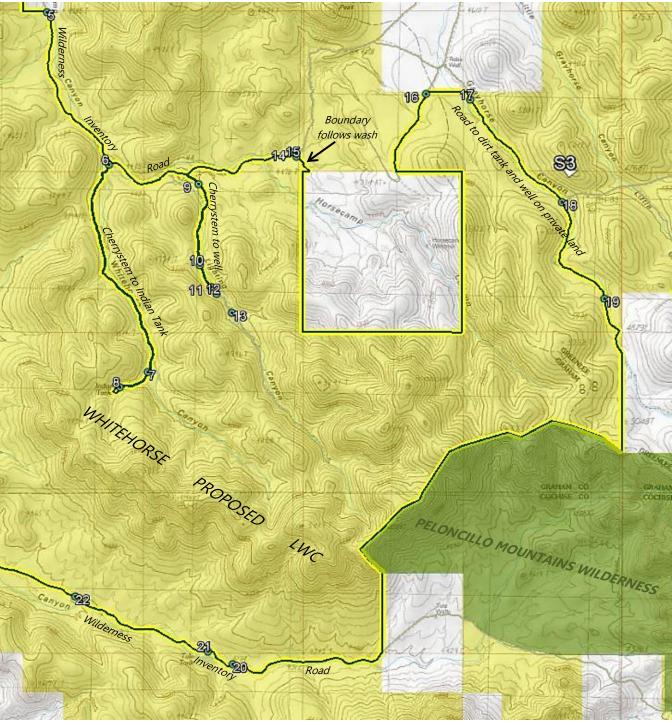
Detail Maps with Photopoint Locations



DETAIL MAP 2: WESTERN PORTION OF WHITEHORSE UNIT

*note: the route used as the unit boundary from point 1 through 5 would not typically meet the criteria for a wilderness inventory road, but we have used it as the boundary to keep the unit south of the SunZia transmission line corridor and to exclude private property.

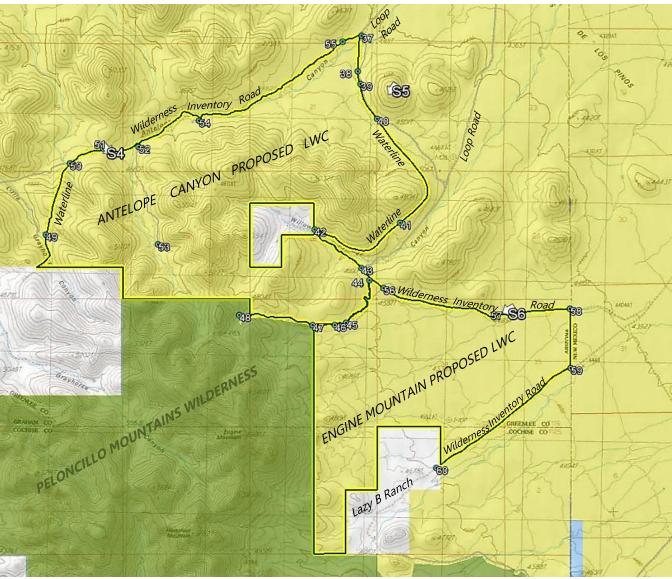
Detail Maps with Photopoint Locations



DETAIL MAP 3: EASTERN PORTION OF WHITEHORSE UNIT

*a note on Cherrystems: BLM Manual 6310 clearly permits the use of cherrystem roads to exclude human impacts from a unit of Land with Wilderness Characteristics. The existing Peloncillo Mountains Wilderness has at least four cherrystemmed roads which lead to range developments or private land, so the cherrystems we propose here are not beyond the precedent set by BLM in establishing the designated Wilderness.

Detail Maps with Photopoint Locations



DETAIL MAP 4: ANTELOPE CANYON AND ENGINE MOUNTAIN UNITS

Antelope Canyon Unit: ~2,378 acres contiguous to the Peloncillo Mountains Wilderness

Segment A is the eastern boundary, following a buried waterline and associated livestock waters

Segment B is the southern boundary, following roads that lead to private land and a well and tank, then following the Wilderness boundary and private land

Segment C is the western boundary, which follows a buried waterline that leads from a tank on private land to livestock waters such as the one at point 49

Segment D is the northern boundary, which follows the wilderness inventory road down Antelope Canyon

Engine Mountain Unit: ~1,383 acres contiguous to the Peloncillo Mountains Wilderness

Segment A is the northern boundary, which follows roads and some fenceline

Segment B is a short section that follows the Arizona – New Mexico state line

Segment C is the southern boundary, which follows the road into the Lazy B Ranch, the private property line, and the Wilderness boundary

Segment D is the western boundary, which follows the Wilderness boundary north to point 47

Narrative Description of the Proposed LWC Boundary & Vehicle Routes

Whitehorse Unit - Segment A: North Boundary

General Description: From the northwest corner, the northern unit boundary is comprised of a primitive route (points 2 & 4). This way is used as the unit boundary in order to avoid future conflict with the approved SunZia Powerline route, which will be located nearby to the northwest. The BLM property line with a private parcel serves as the next portion of this boundary segment. Point 5 shows an image of the road that forms the next part of this boundary segment. Point 14 shows a dry wash that serves as a short segment of the LWC unit boundary. The BLM property line with a private parcel LWC unit boundary once again. The last portion of this boundary segment is another wilderness inventory road (point 16).

Boundary Adjustments:

-Point 14 was taken near the unit boundary looking to the southeast down a dry natural wash that serves as a short segment of the LWC unit boundary. This wash is used for a portion of the boundary in order to exclude some ranch impacts to the northeast and to connect the proposed unit boundary to the BLM property line.

Cherrystems:

-Point 6 depicts a road that accesses Indian Tanks (point 8). Point 7 displays another image of this wilderness inventory road with some ranching equipment; both are excluded from the proposed LWC unit.

-Points 9 and 10 show a cherrystem that leads to an earth-bermed tank (point 11) which is also excluded from the proposed LWC. **Ways:**

-Points 12 and 13 were taken looking down a primitive route that leads from the end of a cherrystem. As the photographs document, all vehicular use of this route ends at the tank (point 11) where the cherrystem ends and becomes an unmaintained way.

Associated Human Impacts:

-Point 1 displays an image of some ranch infrastructure that is excluded from the proposed LWC near the northwest unit corner. Because these impacts are excluded from the proposed LWC unit, they do not impact the naturalness within the unit.

-Point 3 was taken looking at an old earth-bermed water tank that no longer appears to be functional and has been excluded from the proposed unit.

-Point 15 documents a buried waterline that enters the LWC unit and does not substantially detract from the naturalness of the unit as a whole.

Whitehorse Unit - Segment B: East Boundary

General Description: A wilderness inventory road (points 17-19) forms most of the proposed eastern unit boundary. The southern end of this unit boundary segment is the BLM property line with a private parcel. *There are no boundary adjustments, cherrystems, primitive ways, or major human impacts along the eastern boundary segment.*

Whitehorse Unit - Segment C: South Boundary

General Description: This boundary segment is comprised of the Peloncillo Mountains Wilderness boundary, the BLM property line with a private parcel, and a wilderness inventory road (point 21).

Associated Human Impacts:

-Point 20 shows a windmill and water tanks that are excluded from the proposed LWC along the unit boundary road. These human impacts do not detract from the naturalness of the proposed unit because they are not major disturbances, and they are not located within the LWC unit.

-Point 22 displays an image of a concrete tank that lies inside the proposed LWC, but is so small that it does not substantially detract from naturalness.

There are no boundary adjustments or cherrystems along the southern boundary segment, as well as no primitive ways that enter the proposed LWC unit.

Whitehorse Unit - Segment D: West Boundary

General Description: This boundary segment is the BLM property line with private property and two wilderness inventory roads seen in points 23, 29 and 36.

Cherrystems:

-Point 24 was taken looking northeast up a cherrystem that leads to some ranch infrastructure (point 25) which is also excluded from the proposed LWC unit. Point 26 documents that most vehicular use ends at the windmill and water tank, after which the cherrystem becomes an unmaintained way.

-Point 31 documents another cherrystemmed route that leads to an earth-bermed tank (point 32) that is also excluded from the proposed unit.

Ways:

-As mentioned above, point 26 illustrates that most vehicular use ends at the windmill at the end of a cherrystem, and the unmaintained way seen in point 26 continues into a natural dry wash.

-Point 27 displays the image of a primitive route that is kept open solely by the passage of vehicles and leads to a feed station (point 28).

-Point 30 shows an old route that is no longer used, and has naturally revegetated and been reclaimed by nature.

-After the cherrystem seen in point 31, the route turns to an unmaintained way that is kept open solely by the passage of vehicles (points 33 & 34) and ends (point 35) with no apparent purpose.

There are no boundary line adjustments or further human impacts located along the western boundary segment.

Antelope Canyon Unit - Segment A: East Boundary

General Description: A buried waterline (points 40-42) that runs parallel to the Loop Road (points 37 & 39) serves as the proposed LWC unit boundary for most of the eastern boundary segment. The next portion of this boundary segment is comprised of the BLM property line with a private parcel of land. The remainder of the eastern boundary is a wilderness inventory road seen in point 43.

Ways:

-Aerial imagery shows some vehicle tracks that, as point 38 illustrates, do not exist on the ground.

There are no boundary line adjustments, cherrystems or other associated human impacts along the proposed eastern LWC unit boundary.

Antelope Canyon Unit - Segment B: South Boundary

General Description: The proposed southern unit boundary is comprised of a wilderness inventory road (point 44) that eventually leads to the Wilderness. The remainder of this boundary segment is the Peloncillo Mountains Wilderness boundary and the BLM property line with a private parcel of land.

Boundary Adjustments:

-In order to exclude the human impacts seen in points 45 & 46 (discussed below) the proposed unit boundary follows a short segment of fence line.

Cherrystems: There are no cherrystems along this boundary segment.

Ways:

-Vehicles traveling along the road (unit boundary) seen in point 44 can drive to some ranch infrastructure near, but excluded from the Wilderness. In aerial imagery, it appears that there are tracks of some sort leading from the Wilderness into the proposed LWC. However, as point 48 illustrates, this old way is closed and gated, and receives no vehicular use.

Associated Human Impacts:

-Points 45 and 46 display images of some ranch infrastructure that is located directly along the boundary road and has been excluded from the proposed LWC unit. These corrals appear to be out of order and because they are outside of the LWC unit, they do not detract from naturalness within the proposed unit.

Antelope Canyon Unit - Segment C: West Boundary

General Description: The entire western unit boundary follows a buried waterline (point 50).

Associated Human Impacts:

-Point 49 was taken looking at a livestock watering tank located along the proposed LWC unit boundary that has been excluded from the unit, and therefore, does not detract from the naturalness of the unit itself.

There are no boundary line adjustments, primitive ways, or cherrystems along the western LWC unit boundary.

Antelope Canyon Unit - Segment D: North Boundary

General Description: The entire northern boundary is comprised of a wilderness inventory road seen in point 55.

Boundary Adjustments:

-The proposed LWC unit boundary excludes a livestock watering tank (point 51) directly along the boundary road.

Ways:

-Point 52 depicts a primitive route that is not maintained and is kept open solely by the passage of vehicles. This way ends at some feed buckets seen in point 53.

-Point 54 was taken looking at an old way that is no longer used and has been reclaimed by nature.

There are no cherrystems or additional human impacts along the northern boundary segment.

Engine Mountain Unit - Segment A: North Boundary

General Description: The proposed northern unit boundary is comprised of two wilderness inventory roads (point 44 & 56-58).

Boundary Adjustments:

-In order to exclude the human impacts seen in points 45 & 46 (discussed below) the proposed unit boundary follows a short segment of fence line.

Associated Human Impacts:

-Points 45 and 46 display images of some ranch infrastructure that is located directly along the boundary road and has been excluded from the proposed LWC unit. These corrals appear to be out of order and because they are outside of the LWC unit, they do not detract from naturalness within the proposed unit.

There are no cherrystems or primitive routes that enter the proposed unit along this boundary segment.

Engine Mountain Unit - Segment B: East Boundary

General Description: The eastern boundary is the Arizona/New Mexico state line, as well as the eastern boundary of the Safford Field Office.

There are no boundary line adjustments, cherrystems, ways, or associated human impacts along the eastern boundary segment.

Engine Mountain Unit - Segment C: South Boundary

General Description: This boundary segment is comprised of a wilderness inventory road (points 59 & 60), the BLM property line with private land, and the Peloncillo Mountains Wilderness boundary.

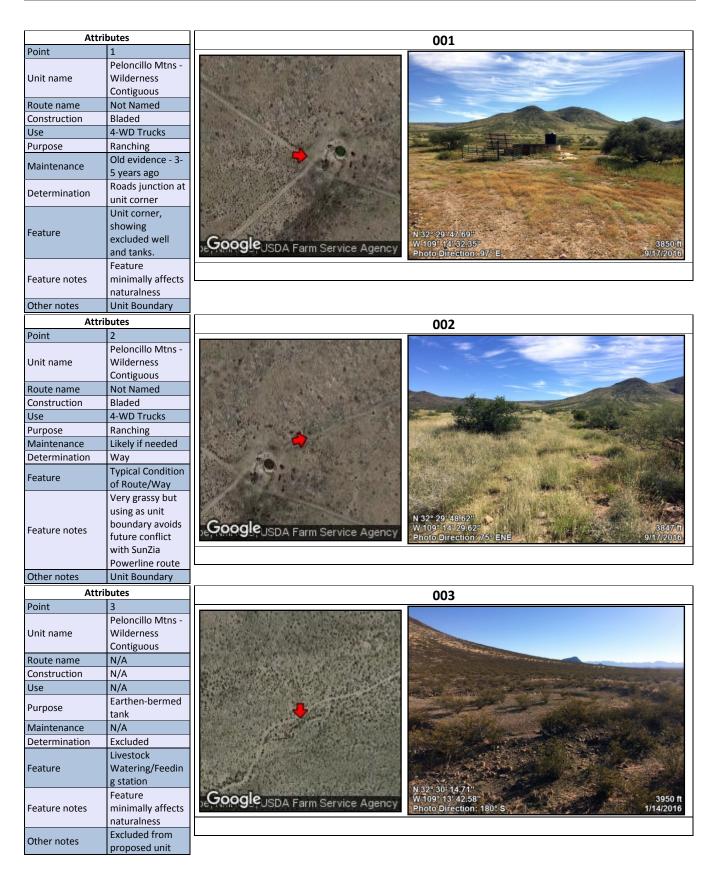
There are no boundary line adjustments, cherrystems, ways, or associated human impacts along the southern boundary segment.

Engine Mountain Unit - Segment D: West Boundary

General Description: The entire western boundary of the proposed LWC unit is the Peloncillo Mountains Wilderness boundary. As point 47 illustrates, this is an arbitrary line; there is no visual difference between Wilderness and non-Wilderness.

There are no boundary line adjustments, cherrystems, primitive routes, or associated human impacts along the western boundary segment.

Section 4: Photopoint Data



Attr	ibutes	004
Point	004	
Unit name	Peloncillo Mtns - Wilderness Contiguous	
Route name	Not Named	THE REPORT OF THE PARTY OF THE
Construction	Probably only bladed once	
Use	4-WD Trucks, infrequent	
Purpose	Private land access	
Maintenance	None	
Determination	Way	
Feature	Good section of route at private land boundary	Secondle USDA Farm Service Agency Photo Direction: 2539 WSW 9/47/12016
Feature notes	Best section of route	
	Unit Boundary	
	because of access	
Other notes	to private land	
other notes	and to keep unit	
	south of SunZia	
	Powerline route	
	ibutes	005
Point	5	
Unit name	Peloncillo Mtns - Wilderness	
onichanie	Contiguous	
Route name	Not Named	
Construction	Bladed	
	4-WD	
Use	Trucks/UTV's	
Purpose	Corral and wells	
Maintenance	Likely if needed	
Determination	Road	
Feature	Typical Condition of Route/Way at BLM line Feature	Google USDA Farm Service Agency
Feature notes	minimally affects naturalness	Photo Direction: 170º S 9/17/2016
Other notes	Unit Boundary	
	ibutes	006
Point	6	
Unit name	Peloncillo Mtns - Wilderness	
Route name	Contiguous Indian Tanks	
	access Probably only	
Construction	bladed once	
Use	UTV	
Purpose	Dam and pond	
Maintenance	Likely if needed	and the second
Determination	Road	
Feature	Typical Condition of Route/Way	N-522-274-20LOF
Feature notes	Feature minimally affects naturalness	PhotoDirection: 200° SSW 24721016
Other notes	Cherrystem	

Attr	ibutes	007
Point	7	007
Unit name	Peloncillo Mtns - Wilderness Contiguous	
Route name	Indian Tanks	
Construction	Probably only bladed once	
Use	4-WD trucks	
Purpose	Well/Water tanks	
Maintenance	Likely if needed	
Determination	Road	
Feature	Typical Condition of Route/Way	
Feature notes	Recent use	N 279 26' 4.4 42"
Other notes	Cherrystem	N 32° 26' 14.43' W 109' 10' 33.75'' W 109' 10' 33.75'' Photo Direction: 19' NNE 1/14/2016
Attr	ibutes	
Point	8	008
Unit name	Peloncillo Mtns - Wilderness Contiguous	
Route name	N/A	
Construction	N/A	
Use	N/A	
Purpose	Concrete and stone dam	
Maintenance Determination	N/A Excluded from	ANT THE STATE OF THE REAL OF A
Feature	LWC Concrete and stone dam	
Feature notes		N 32° 26'09.42"
Other notes		Scoogle USDA Farm Service Agency W109° 10' 44:54 Photo Direction \$277° W
	ibutes	009
Point	9	
Unit name	Peloncillo Mtns - Wilderness Contiguous	
Route name	Not Named	
Construction	Bladed	and a state is a state of the s
Use	Occasional trucks and UTV's	
Purpose	Water tank and trough	
Maintenance	Likely if needed	
Determination	Road	
Feature	Typical Condition of Route/Way	N 32°27' 15.58"
Feature notes	Feature minimally affects naturalness	BECOOGLE USDA Farm Service Agency 4397/10/14/25" Photo Direction: 1379 SE 9/17/2016
Other notes	Cherrystem to tank	

Attributes	
Point	10
Unit name	Peloncillo Mtns - Wilderness Contiguous
Route name	Not Named
Construction	Probably only bladed once
Use	4-WD trucks
Purpose	Well/Water tanks
Maintenance	Likely if needed
Determination	Road
Feature	Typical Condition of Route/Way
Feature notes	
Other notes	Cherrystem

Attributes

11

Wilderness Contiguous

Not Named Probably only

bladed once

4-WD trucks

Road

Point

Use

Purpose Maintenance

Unit name

Route name

Construction

Determination

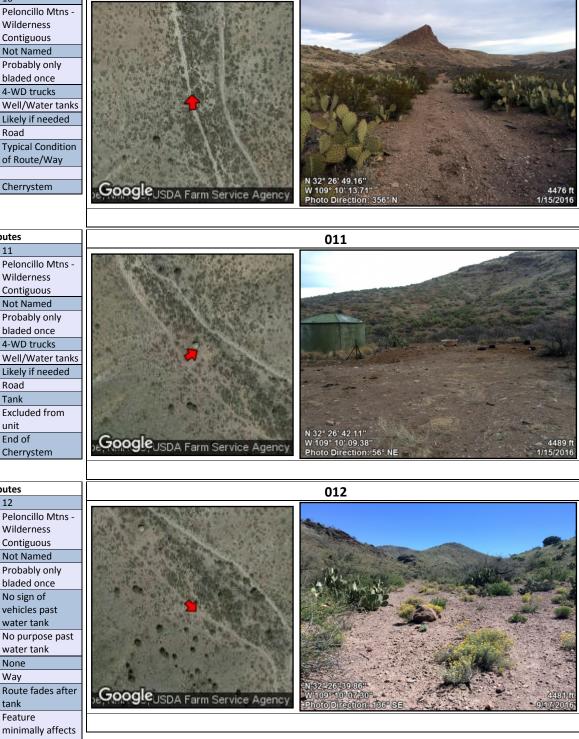
Maintenance

Feature

Determination

Feature notes

Other notes



010

Feature Tank Excluded from Feature notes unit End of Other notes Cherrystem Attributes Point 12 Peloncillo Mtns -Unit name Wilderness Contiguous Route name Not Named Probably only Construction bladed once No sign of Use vehicles past water tank No purpose past Purpose water tank

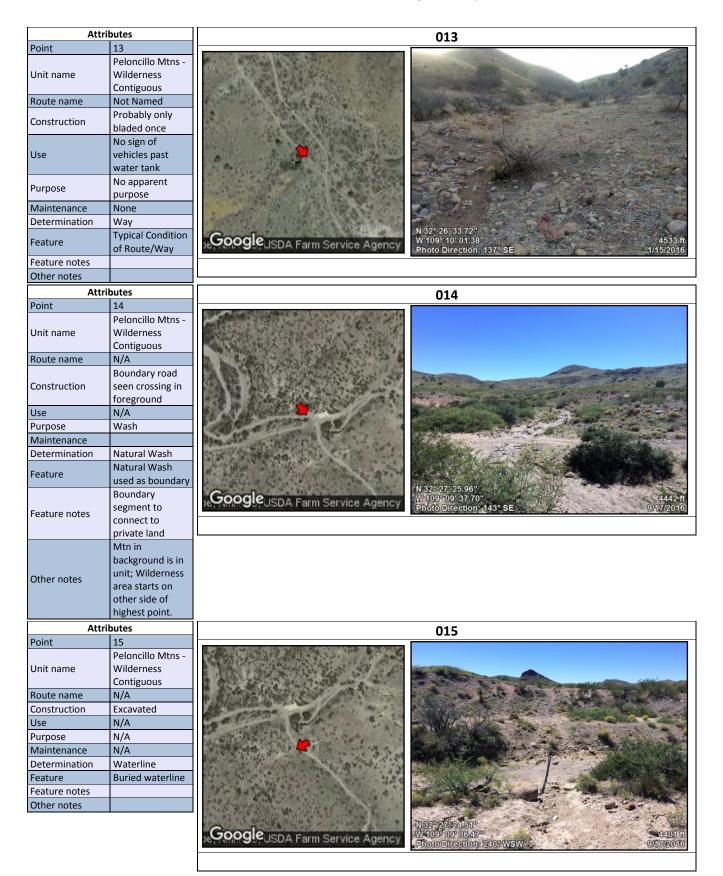
> None Way

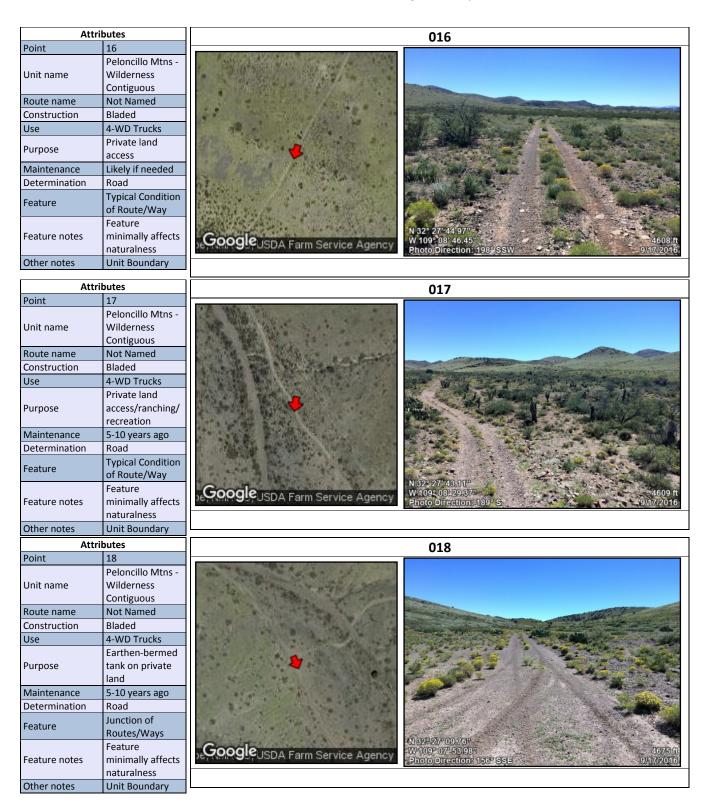
tank

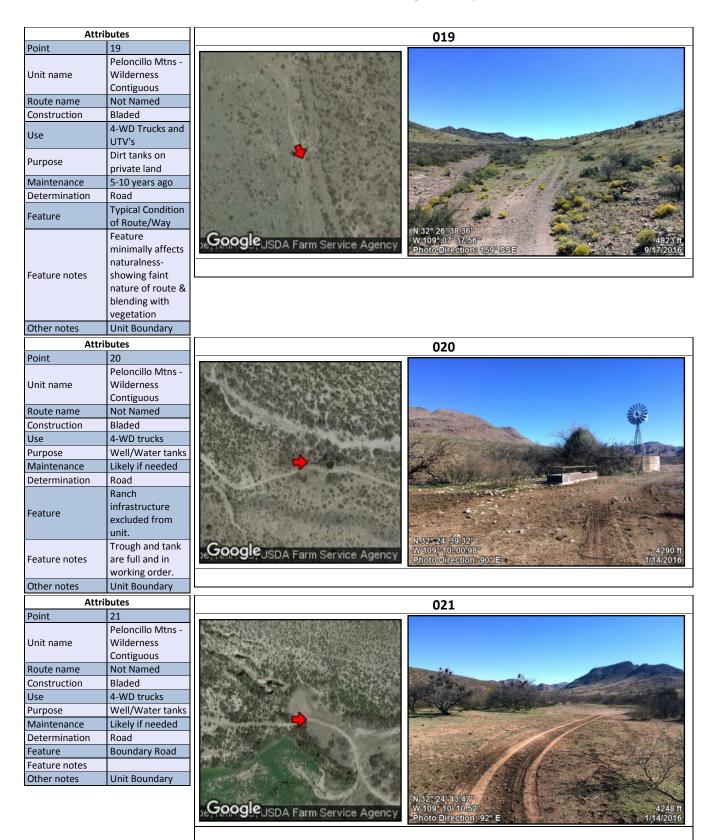
None

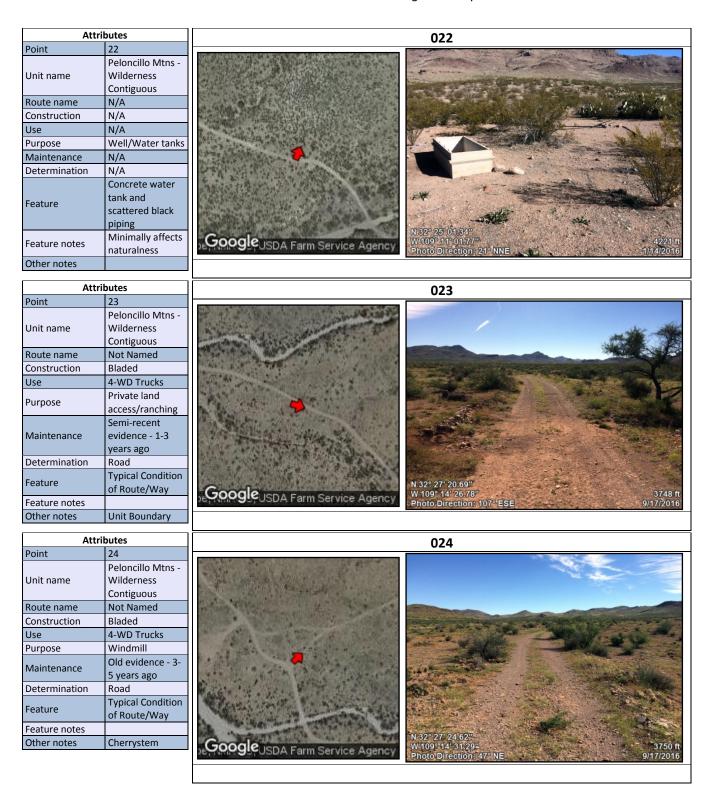
Feature

naturalness

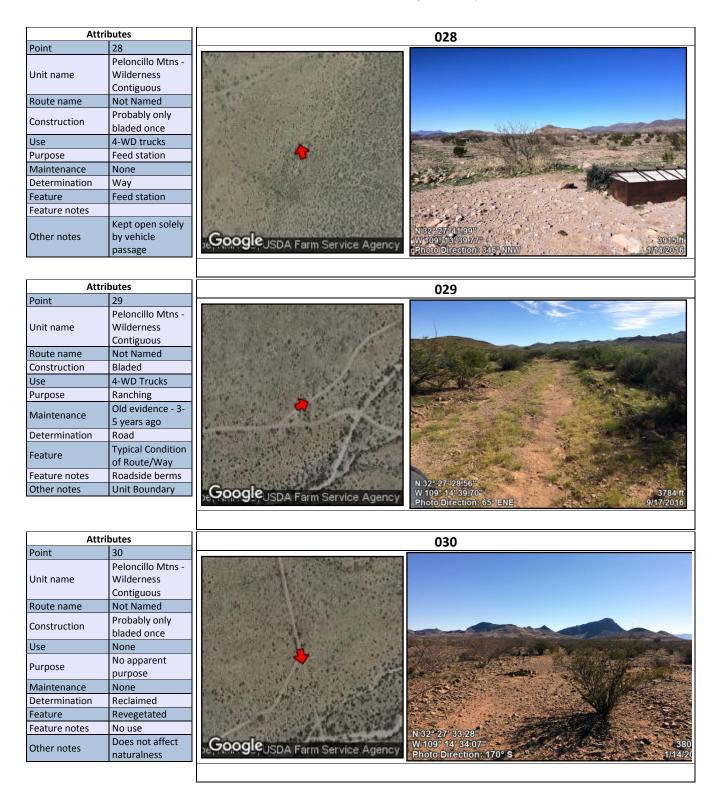


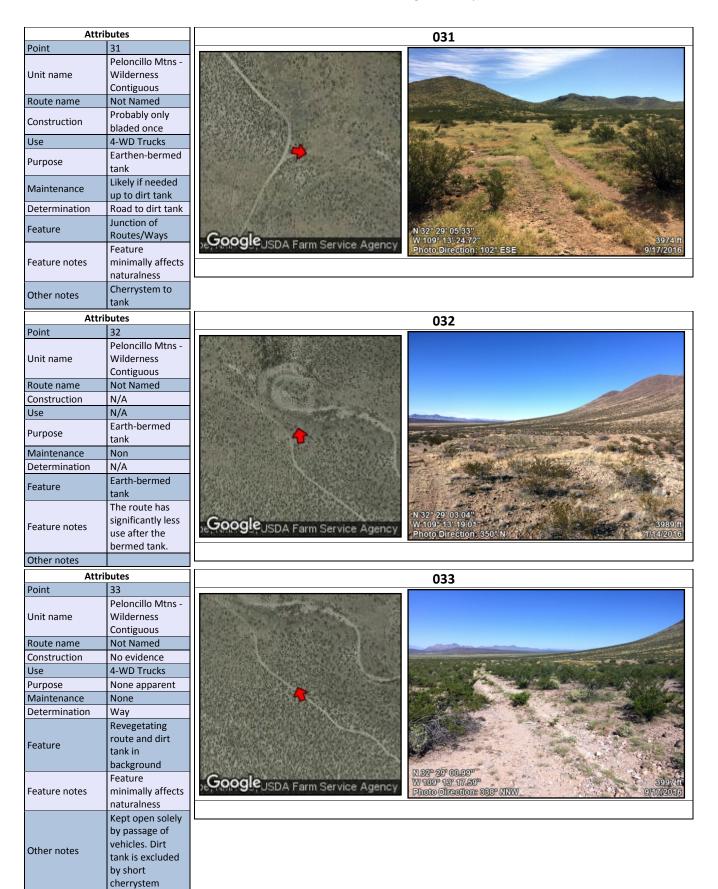


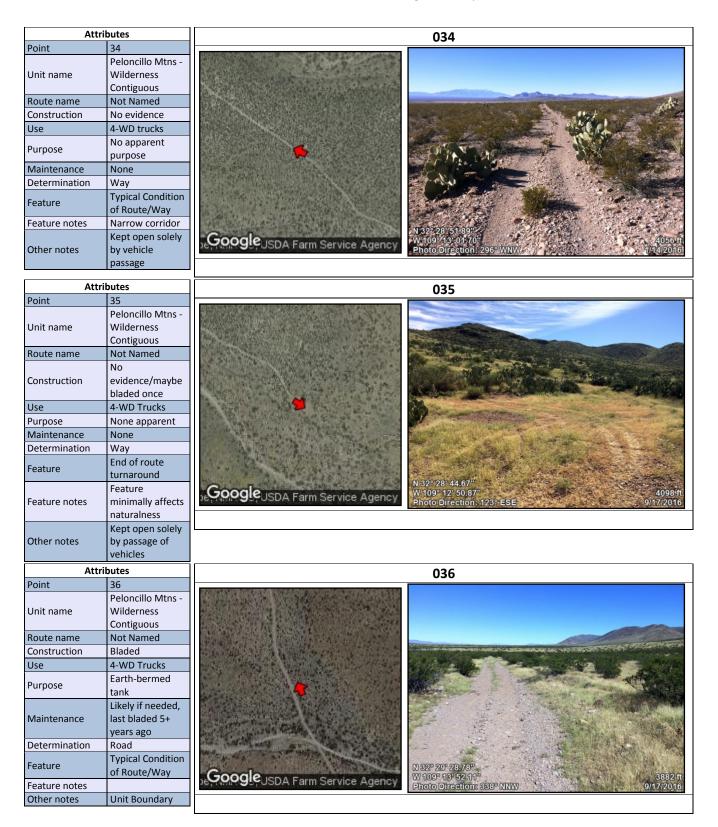




Δ++	ributes	025	
Point	25	020	
Unit name	Peloncillo Mtns - Wilderness Contiguous		
Route name	N/A		
Construction	N/A N/A		
Use	N/A	The second s	
Purpose	Ranching		
Maintenance Determination	N/A N/A	Las restant to set	
Determination	Excluded	A REAL AND A	
Feature	Windmill/Tank		
Feature notes	Full and working		
	properly.	N132° 27" 49.91"	
Other notes	Cherrystem	Second Public Agency N32° 27'40.91" W409° 13'2849" Photo Direction: 78'ENE	
	ributes	026	
Point	26		
	Peloncillo Mtns -		
Unit name	Wilderness		
	Contiguous		
Route name	Not Named		
Construction	No evidence		
Use	Most use ends at windmill		
Purpose	No apparent		
u pose	purpose		
Maintenance	None	The second s	
Determination	Way		
Feature	Typical Condition of Route/Way		
Feature notes	Very low use	Google N32° 27' 5016"	
Other notes		Coogle JSDA Farm Service Agency	
Att	ributes	027	
Point	27		
Unit name	Peloncillo Mtns - Wilderness	the second s	
	Contiguous		
Route name	Not Named		
Construction	Probably only bladed once		
Use	4-WD trucks		
Purpose	Feed station		
Maintenance	None		
Determination	Way		
Feature	Typical Condition of Route/Way		
Feature notes	St noute, way		
Other notes	Kept open solely by vehicle	Google JSDA Farm Service Agency N 392° 27" 42:59" W 109° 137 39:27" Photo Direction: 39° NE	







Attributes	
Point	37
Unit name	Peloncillo Mtns - Wilderness Contiguous
Route name	Loop Road
Construction	Bladed
Use	2-WD Passenger vehicle
Purpose	Camping
Maintenance	Likely if needed
Determination	Road
Feature	Sign
Feature notes	
Other notes	Unit boundary parallels road



Unit name	Peloncillo Mtns - Wilderness Contiguous
Route name	N/A
Construction	N/A
Use	N/A
Purpose	Nothing
Maintenance	N/A
Determination	N/A
Feature	Nothing
Feature notes	No vehicle tracks present on the ground.
Other notes	Aerial imagery shows vehicle tracks

Attributes

38

Point

Attributes	
Point	39
Unit name	Peloncillo Mtns - Wilderness Contiguous
Route name	Loop Road
Construction	Bladed
Use	4-WD Trucks
Purpose	Private land access and ranching
Maintenance	Semi-recent evidence - 1-3 years ago
Determination	Road
Feature	Showing road and adjacent buried waterline
Feature notes	Feature minimally affects naturalness
Other notes	Unit Boundary



Google USDA Farm Service Agency

4440 f

Attributes	
Point	40
	Peloncillo Mtns -
Unit name	Wilderness
	Contiguous
Route name	Not Named
Construction	Excavated
Use	N/A
Purpose	Waterline
Maintenance	Likely if needed
Determination	Waterline
Feature	Buried waterline
Frank and a state of	Minimally affects
Feature notes	naturalness
Other notes	Unit Boundary

Attributes

Attributes

Point

Use

Purpose

Feature

Point

Use

Purpose

Feature

Unit name

Route name

Construction

Maintenance Determination

Feature notes

Other notes

Unit name

Route name

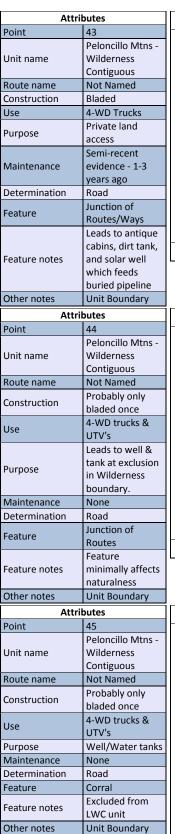
Construction

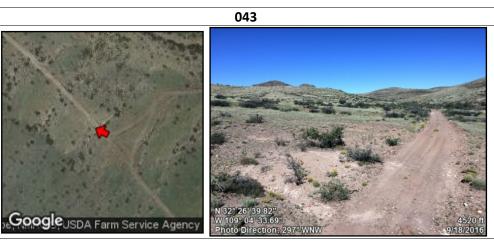
Maintenance Determination

Feature notes

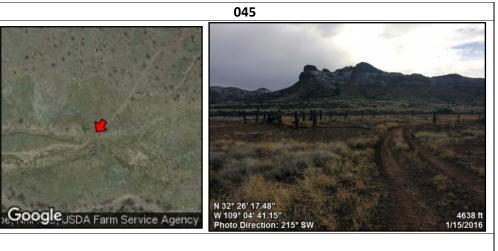
Other notes

040
Scoge SDA Farm Service Agency
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Scoogle JSDA Farm Service Agency

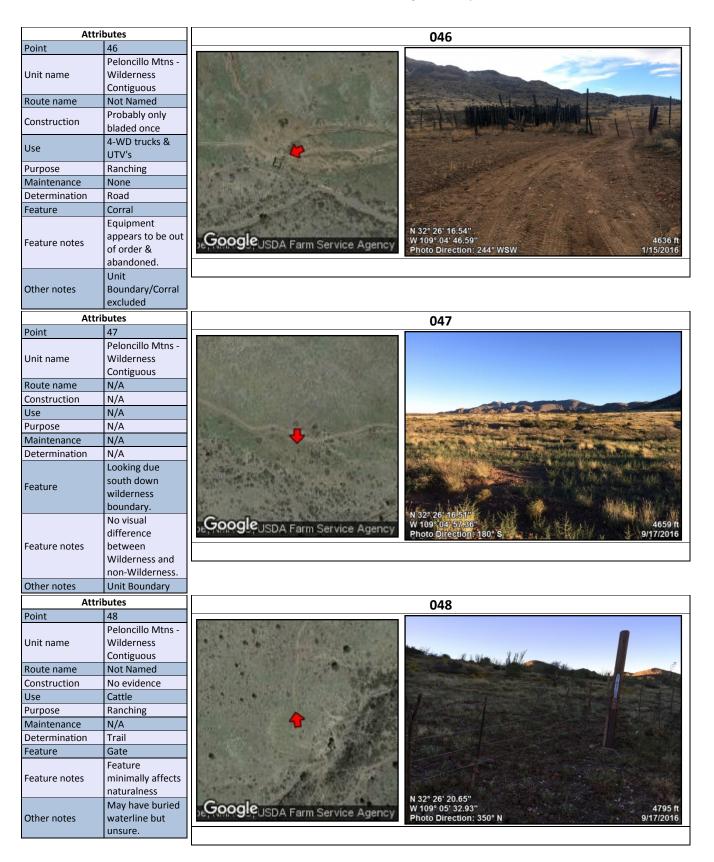




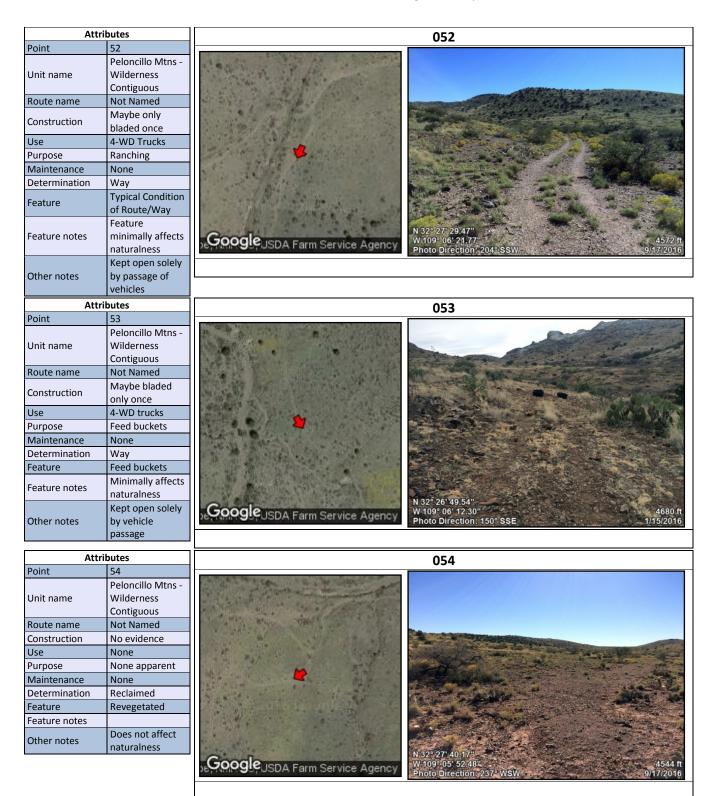


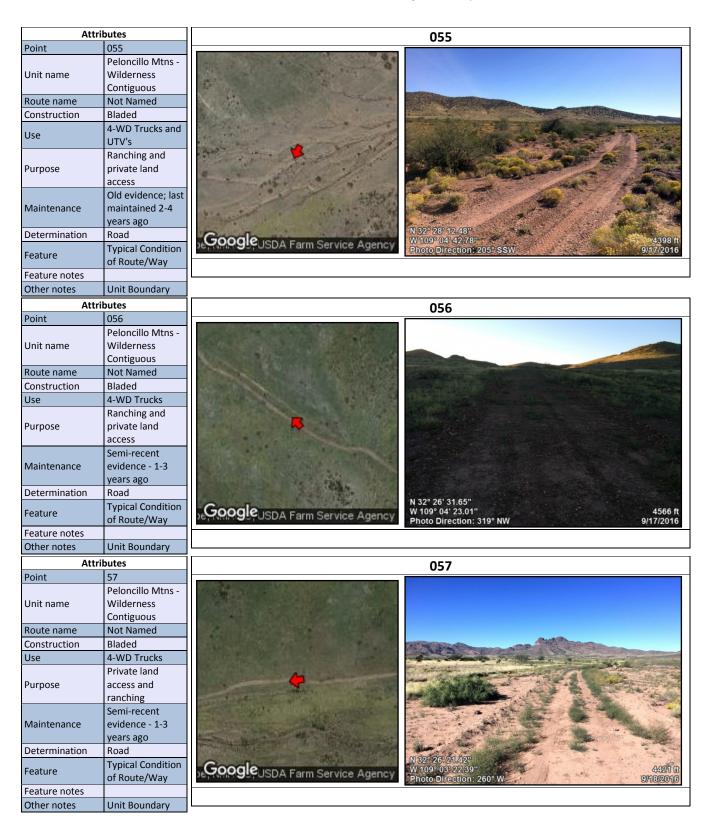


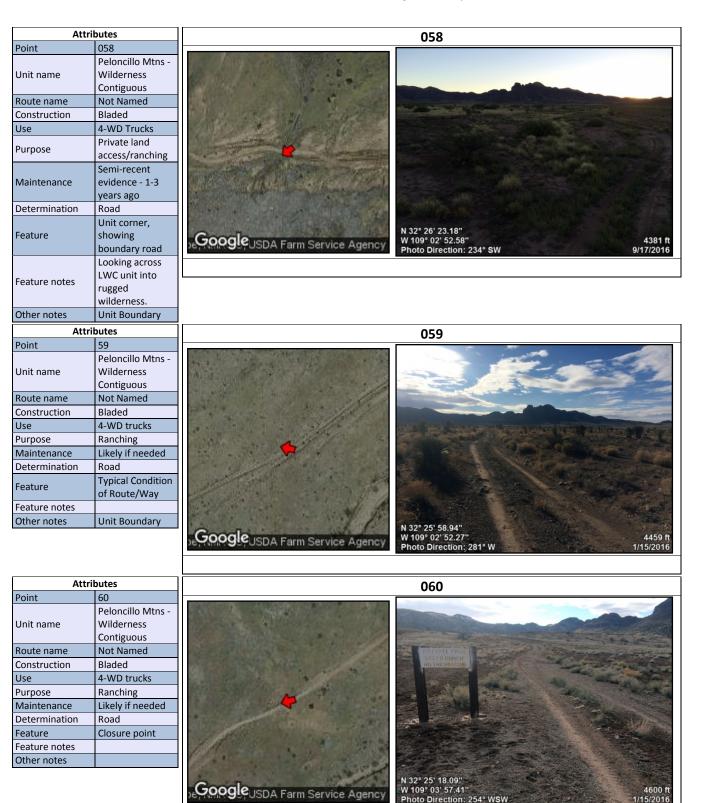
Arizona Wilderness Coalition



Att	ributes	049
Point	49	
Unit name Route name	Peloncillo Mtns - Wilderness Contiguous Not Named	
Construction	Buried waterline from hilltop tank on private land to this trough	
Use	4-WD trucks & UTV's	
Purpose	Water trough	
Maintenance	Likely if needed	and the second
Determination	Way leads to trough	ABOT IN 1929 20153 56" W1092 07"06.7/2" PhotoDirection: 1662 SSE
Feature	Livestock Watering/Feedin g station	PhotoDirection: 160 SSE 9/17/2016
Feature notes	Feature minimally affects naturalness	
Other notes	Unit Boundary	
Att	ributes	050
Point	50	
	Peloncillo Mtns -	
Unit name	Wilderness	
	Contiguous	
Route name	N/A	
Construction	Excavated	
Use	N/A	
Purpose	Buried waterline	
Maintenance	N/A	
Determination	Waterline	
Feature	Revegetated waterline trench	
Feature notes Other notes	Feature minimally affects naturalness Unit Boundary	Secondle USDA Farm Service Agency
Other hotes	Offit Boundary	
Att	ributes	051
Point	51	
Unit name	Peloncillo Mtns - Wilderness Contiguous	
Route name	Along boundary road	
Construction	Excavated waterline	
Use	Cattle	
Purpose	Water	
Maintenance	Likely if needed	
Determination	N/A	
Feature	Trough along buried pipeline	N32º 27*28 17
Feature notes	Feature minimally affects naturalness	De Google USDA Farm Service Agency
Other notes	Excluded from LWC unit	







1/15/2016

254° WSW