

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU United States Department of the Interior
Bureau of Land Management
EA #: DOI-BLM-AZ-G020-2016-0016-EA
Previously DOI-BLM-AZ-G020-2010-0011**

**Environmental Assessment
Empire Fencing Projects**

April 2016

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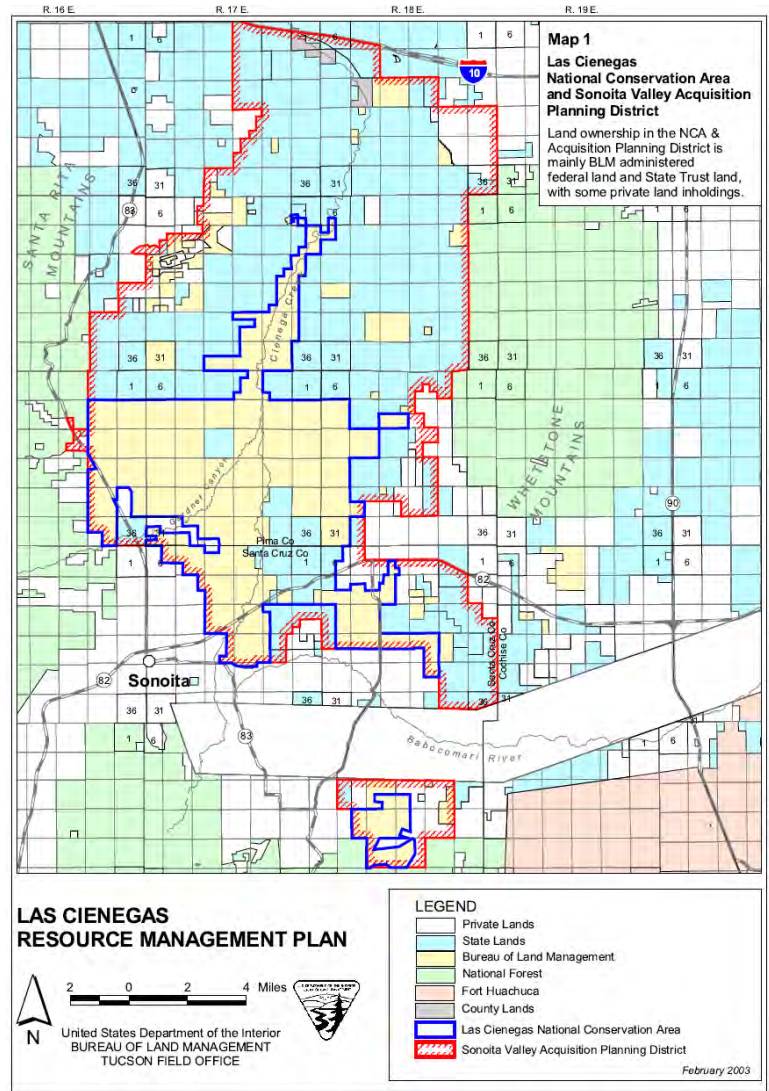


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1 INTRODUCTION

The Empire Ranch has been a working livestock operation for nearly 150 years and includes the Empire-Cienega Allotment. It is located in the Las Cienegas National Conservation Area (NCA) just northeast of the town of Sonoita in Pima and Santa Cruz counties (Map 1). The Empire-Cienega allotment is made up of 36,684 acres of BLM and 37,462 acres of State Trust lands for a total of 74,146 acres. Authorized Animal Unit Months (AUMs) for BLM and State Trust lands are 8,460 and 9,552 respectively for a total of 18,012 AUMs.



Map 1. Map of Las Cienegas National Conservation Area

This Environmental Assessment (EA) provides an analysis of fence projects on the Empire-Cienega allotment as site specific analysis of the proposed action to install fencing to divide the Spring Water pasture and the North Pasture on the allotment. The purpose of the pasture fencing is to better utilize the pasture and not continue having concentrations of livestock in the lower elevations. The management

goal for this fencing is to allow for better management and more uniform utilization within the two larger pastures.

1.1 Purpose and Need

The Purpose of the federal action is to respond to a request from the lessee to install new fence lines on BLM lands within the Empire-Cienega Allotment. The new fencing would increase the ability to control livestock movement within the Spring Water and North pastures and allow for more even distribution of livestock use.

The Need is to respond to the lessee's request to install new fencing based on provisions of the Taylor Grazing Act of 1934, the Federal Land Policy and Management Act (FLPMA) of 1976 and the Public Rangelands Improvement Act of 1978. These acts provide authority to install range improvement facilities and treatments, acting to detect and abate unauthorized use and taking other range management actions.

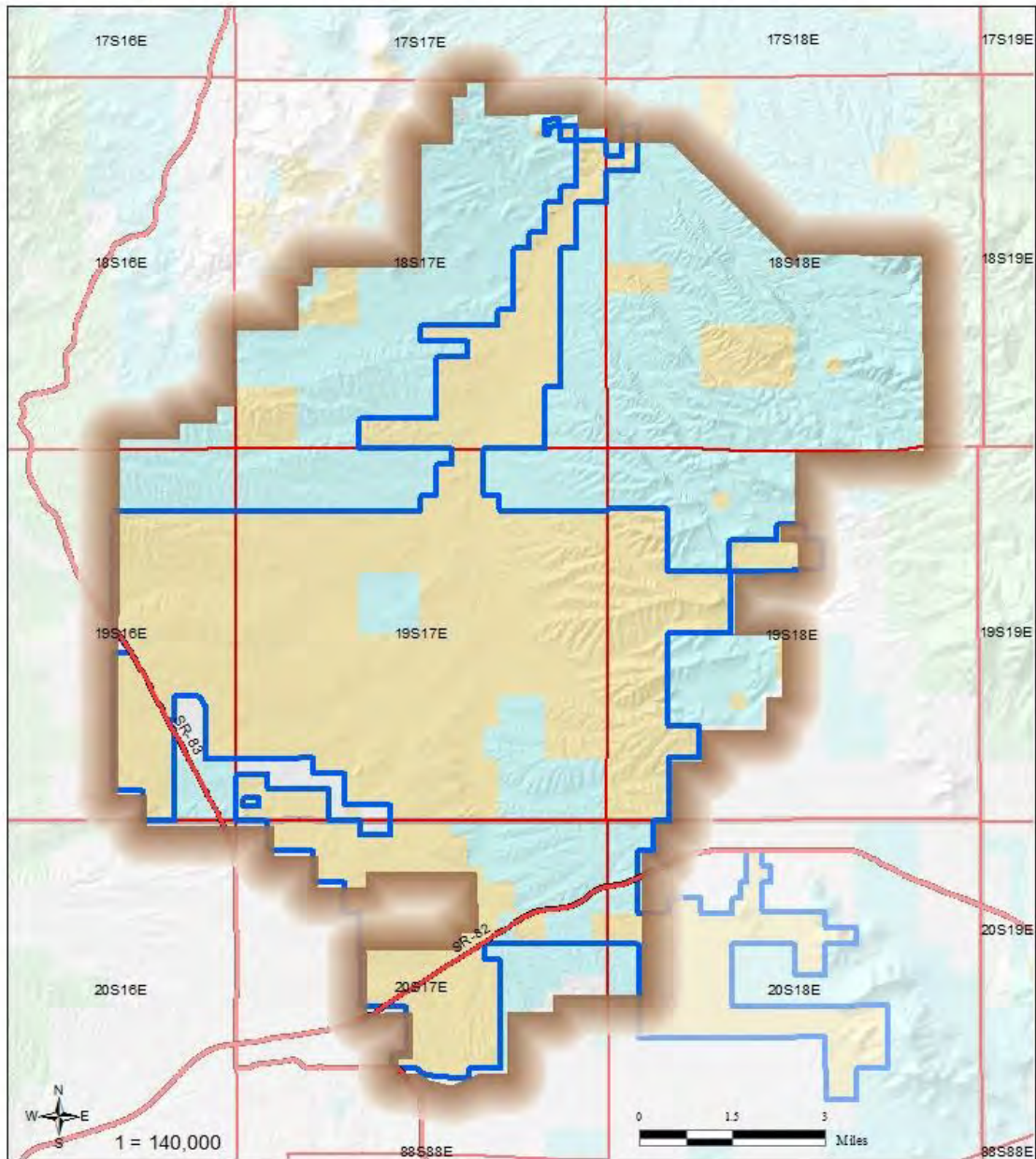
1.2 Decision to be Made

The decision to be made is whether or not the BLM would authorize the lessee to construct the proposed fence line projects on the BLM Empire-Cienega Allotment (#6090) including installation of the Spring Water and North Canyon pasture division fences (6 miles of new fence construction).

1.3 Land Use Plan Conformance

The Land Use Plan applicable to the proposed action is the Las Cienegas Resource Management Plan (RMP), approved July 2003. The proposed actions have been reviewed to determine if they conform to the land use plan terms and conditions as required by 43 CFR 1610.5, BLM MS 1617.3. Range Improvements are identified and discussed in the Las Cienegas Record of Decision (LCROD) pages 56-59, Tables 9, 10 and 11 and Maps 16 and 17. The RMP does not analyze the specific impacts of these projects; therefore this project level Environmental Assessment has been prepared.

Empire Cienega Allotment @ 75,768 Acres



Legend

Bureau of Land Management (BLM)	Allotment Boundary
National Forest Lands (USFS)	Private Lands
Bureau of Reclamation (BOR)	State Lands

United States Department of the Interior
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 Tucson Field Office
Land Status updated as of August 27, 2015

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1.4 Relationship to Statutes, Regulations or Other Plans or Policies

Surface Management Jurisdiction Limitation: The BLM decision only authorizes use of BLM land. Use of non-BLM land (National Forest, State Trust Land, and private land) is subject to the agency or private landowners' permission.

Threatened and Endangered Species Act: The U.S. Fish and Wildlife Service provided Biological and Conference Opinion on 10 listed and proposed species in 2002 (Biological Opinion 22410-2002-F-0162-R001, Effects of the Proposed Las Cienegas National Conservation Area Resource Management Plan in Pima and Santa Cruz Counties, Arizona). Terms and Conditions from the Biological Opinion that relate to either the proposed new fence lines or reconstructed fence lines are included as Wildlife Mitigation Measures of the proposed action.

Land Health Standards are being monitored and met on the Empire Allotment (BLM 2010).

The Migratory Bird Treaty Act (MBTA) of 1918 prohibits hunting, taking, capturing, killing, possessing, selling, purchasing, shipping, transporting or exporting migratory birds, parts, nests and eggs, covered by the Act, except as permitted by regulations (50 CFR Subchapter B). Executive Order 13186 directs executive branch departments and agencies to take certain actions to further implement the MBTA. Section 3 of EO 13186 requires each agency ensure that environmental analysis of Federal actions required by NEPA or other established environmental review processes evaluates the effects of actions and agency plans on migratory birds, with emphasis on species of concern. "Species of Concern" are defined as "Those species listed in the periodic report, Birds of Conservation Concern, published by the Fish and Wildlife Service Division of Migratory Bird Management". BLM Instruction Memorandum No. 2008-050 indicates that this is applicable to BLM MBTA NEPA review at the project level. Stipulations for migratory birds are included in Wildlife Mitigation.

1.5 Scoping and Issue Identification

1.5.1 Internal Scoping & Public Involvement

Internal scoping was conducted with BLM specialists.

1.5.2 Issues

For the purpose of BLM NEPA analysis, an "issue" is a point of disagreement, debate, or dispute with a Proposed Action based on some anticipated environmental effect. An issue is more than just a position statement, such as disagreement with grazing on public lands. An issue:

- Has a cause and effect relationship with the Proposed Action or alternatives;
- Is within the scope of the analysis;
- Has not been decided by law, regulation, or previous decision; and
- Is amenable to scientific analysis rather than conjecture.

1.5.3 Issues Identified for Analysis

For the purpose of this EA, the BLM analyzed issues if the analysis of the issue is necessary to make a reasoned choice between alternatives, or the issue is significant or may have potentially significant effects (BLM H-1790-1 2008). The issues derived from internal scoping are as follows:

Issue 1: Will new fencing affect Areas of Critical Environmental Concern?

Issue 2: How will the new fencing affect wildlife movements?

Issue 3: Will the new fencing affect cultural sites and/or traditional cultural properties?

Issue 4: How will new fence construction affect vegetation?

Issue 5: Will new fence construction impact visual resources?

Issue 6: Will new fence construction impact Recreation?

2 THE PROPOSED ACTION AND ALTERNATIVES

2.1 Description of the Proposed Action

The proposed action is the construction of new fence line projects on the BLM Empire-Cienega Allotment (#6090), which includes new pasture division fences in the Spring Water and North Canyon pastures. As such, this Environmental Assessment includes an analysis of the construction projects for two new fence construction projects. These projects are described below.

2.1.1 Fence Project Design Features

Fence Project Design: All livestock fencing built, reconstructed or relocated on the Empire-Cienega allotment on Las Cienegas National Conservation Area (LCNCA) will follow BLM fence standards (Figures 1-4). Note that the fence line panel standard design (Figure 1) allows for the normal, unimpeded movement of wildlife, yet also provides a barrier to livestock movement. Dimensions for three and four strand standard designs are listed below (Table 1). BLM has consulted with the Arizona Game and Fish Department to verify our fencing specs are in line with their recommendations. All fences built will have a smooth bottom wire to allow for pronghorn movement.

Physical Elements of Fence Projects, General Description:

Brushing: New fence construction, and often the maintenance of existing fencing, involves “brushing” the fence line. Brushing involves the use of chainsaws/handsaws to cut limbs, brush and sometimes small trees that lie within the proposed or existing fence alignment. Brushing is undertaken so that barbed wire can be stretched and fence posts driven without the encumbrance of vegetation.

Posts: Posts are then driven into the ground along the “brushed” proposed alignment (or augment posts are driven in along an existing alignment for fence maintenance projects), and barbed or smooth wire is stretched tight along the line of posts.

Transportation of Materials/Field Crew: Fencing projects in remote locations may require the transport of people and materials overland, off existing road systems. Materials to be used include wire (barbed and smooth), concrete mix (limited application), miscellaneous hand tools, chainsaws, steel posts, steel post wire ties.

Creation or Augmentation of Physical Barrier: Once the new fence is completed (or existing fence reconstructed or maintained), a barrier to movement of both livestock and in some cases wildlife is created. As noted above, BLM constructs fence on LCNCA according to BLM wildlife suitable fence designs in order to minimize or mitigate entirely the wildlife movement altering aspects of livestock fencing. Livestock fencing also alters the movement and distribution of livestock in a pasture. Fence location is designed so that livestock movements are altered in a fashion favorable to more uniformly utilizing forage resources; that is, so that livestock use in any given portion of the pasture is not excessive and a more even grazing effect across the entire pasture is achieved.



Figure 1. BLM Standard Line Panel, 3 Strand Barbed Wire Fence design.

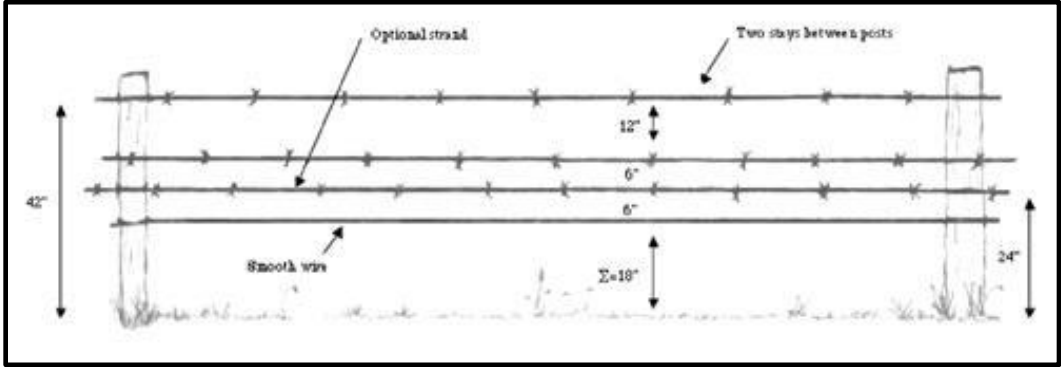


Figure 2. Standard Line Panel, 4 Strand Barbed Wire Fence design.

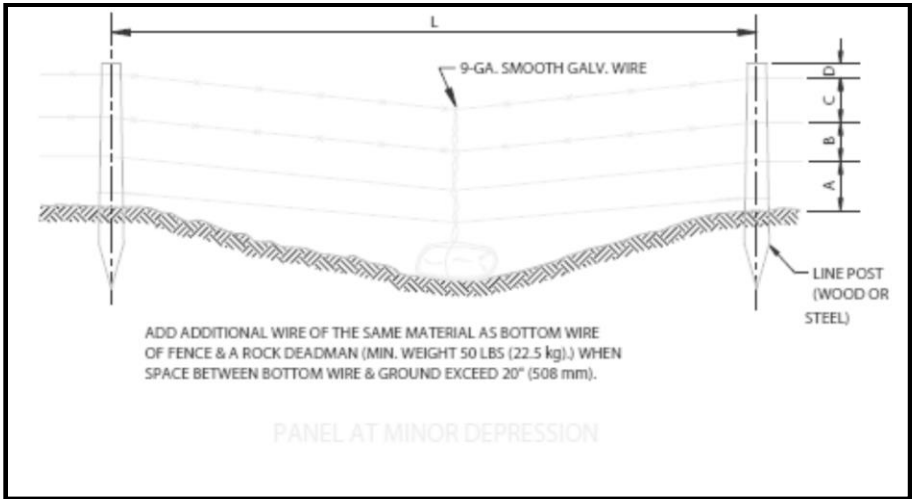


Figure 3. BLM Standard Wash Crossing Panel.

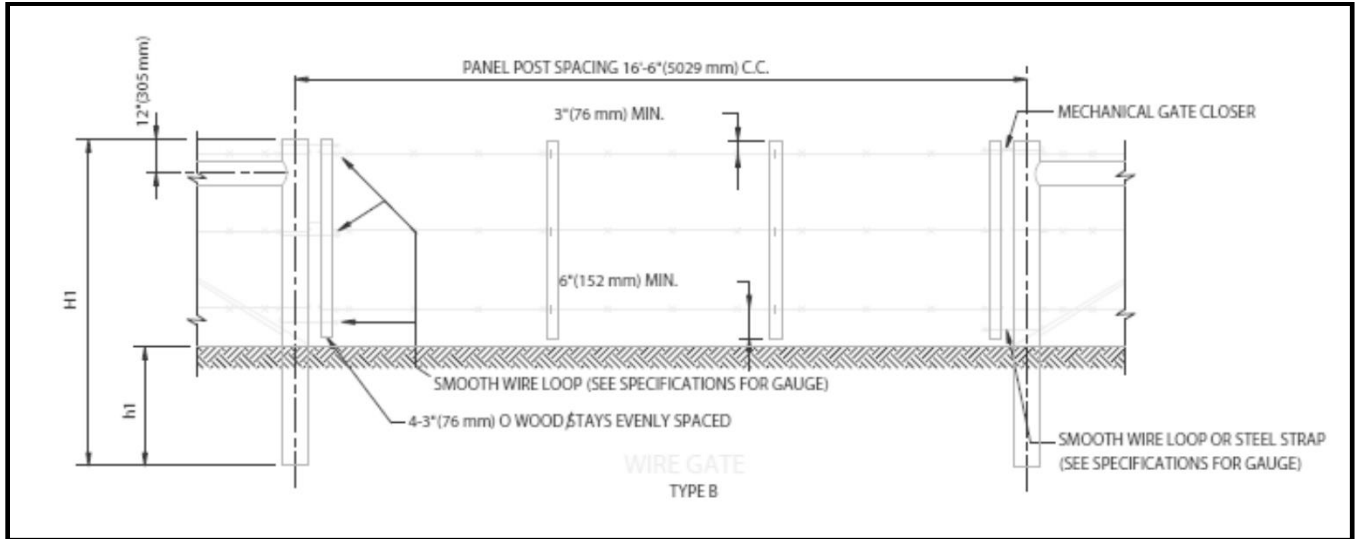


Figure 4. BLM Standard Wire Gate.

Table 1. Dimensions (inches) of Standard BLM Fencing			
Four Strand Design		Three Strand Design	
Strand	Height above Ground	Strand	Height above Ground
Top	42"	Top	42"
Second	30"	Middle	28"
Third	24"	Bottom (smooth wire)	18"
Bottom(smooth wire)	18"		

Note: Verified by Ron Peru, BLM Gila District Civil Engineering Technician

2.1.1.1 Spring Water Fence

The Empire Allotment lessee proposes to divide the Spring Water pasture (10,120 acres) into 2 pastures (5,326 and 4,794 acres). The objective of this pasture division (Figure 5) is to provide greater livestock

rotation flexibility, allow for better growing season's rest, and improve the livestock lessee's ability to move and rotate livestock.



Figure 5: New Fence Construction Proposed Alignment Spring Water.

2.1.1.2 North Pasture Fence

The Empire Allotment lessee proposes to divide the North Pasture (9,831 acres) into 2 pastures (6,200 and 3,631 acres). The objective of this pasture division (Figure 6) is to create greater rotational flexibility, allow for better growing season's rest, improve opportunities to move and rotate livestock, and improve livestock utilization of the pastures.

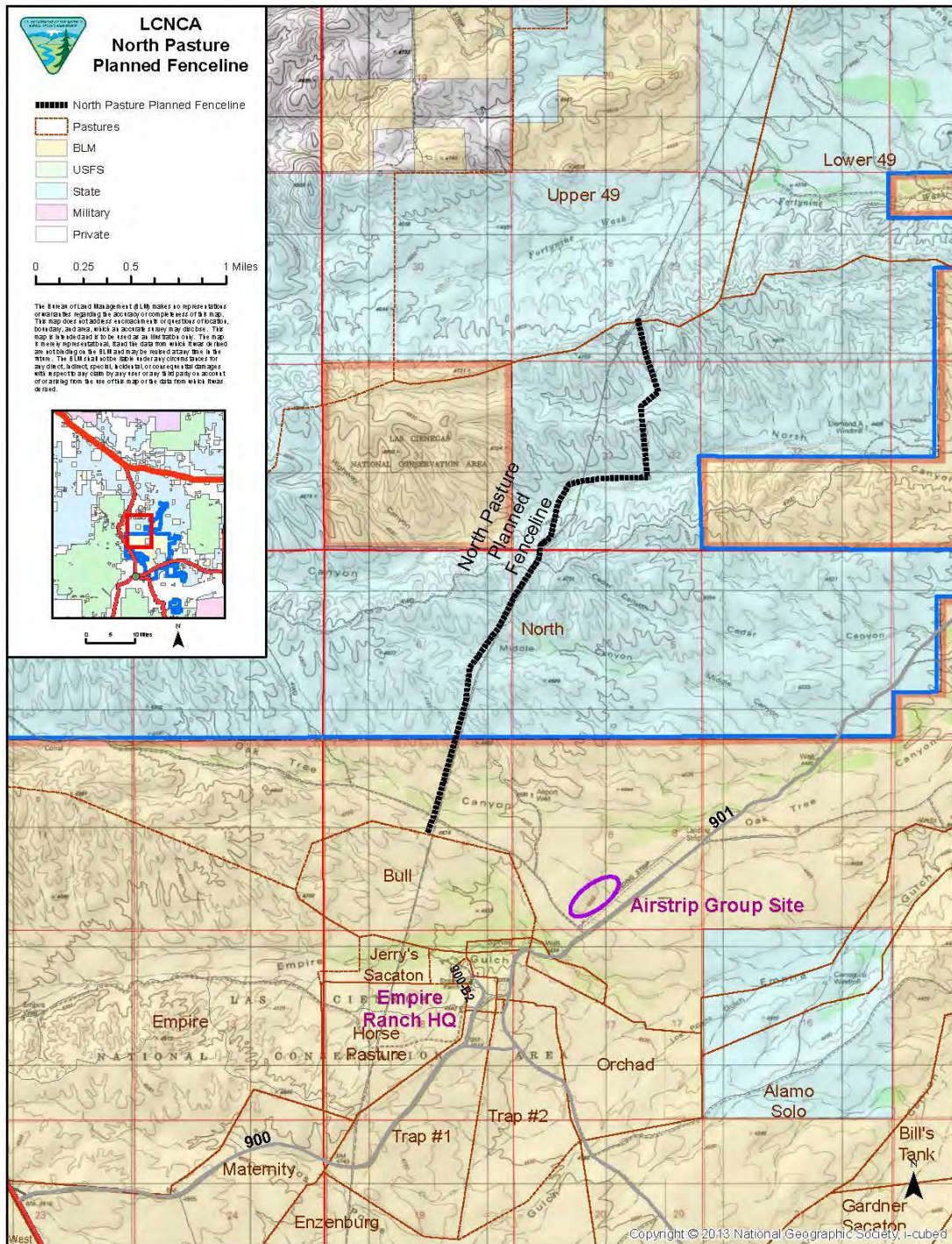


Figure 6: New Fence Construction Proposed Alignment North Pasture.

2.2 No Action Alternative

No new fence lines would be constructed. Cattle would continue to use the pastures like they have been which would result in over utilizing some areas of the large pastures and under utilizing other areas of the large pastures.

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 Resource Impacts of the Proposed Action

Table 3 summarizes the impacts from the proposed livestock fence construction on wildlife resources, cultural resources, vegetation, and visual resources. Impact analysis narratives, specific to NEPA elements, are included after the Impact Table.

Table 3. Physical elements, impacts and mitigation for livestock fence construction and maintenance operations			
Impacting Elements of Fencing	Physical Impacts	Resources Impacted	Mitigation
Brushing	Vegetation cut/removed	<ol style="list-style-type: none"> 1) Vegetation levels reduced slightly 2) Noise and activity changes wildlife distribution in area on short term basis. 3) Wildlife nests/dens might be destroyed if those are present in removed vegetation. 	<ol style="list-style-type: none"> 1) N/A. Transitory 2) Transitory Impact. Timing and avoidance are mitigations 3) Mitigated by timing and/or avoidance of specific sites
Post Driving	Ground breached	<ol style="list-style-type: none"> 1) Cultural objects might be damaged or destroyed. 2) Ground nests/dens might be damaged destroyed. 3) Wildlife temporarily displaced due to noise and activity. 	<ol style="list-style-type: none"> 1) Site avoidance based on class three survey is mitigation 2) Timing and avoidance mitigation 3) N/A. Transitory
Fence as Physical Barrier	Animal movements altered or restricted	<ol style="list-style-type: none"> 1) Wildlife might become trapped in fence. 2) Wildlife might be excluded from important water/foraging resources. 3) Wildlife exclusion might, over the long term, impact wildlife population levels/impact vegetative resources on or off site. 	<ol style="list-style-type: none"> 1) Mitigated by wildlife compatible fence standards 2) Mitigated by wildlife compatible fence standards 3) Mitigated by wildlife compatible fence

		<ul style="list-style-type: none"> 4) Livestock use of a pasture would change. 5) Change in physical setting or visual resources, in the case of new fencing. 	<p>standards</p> <ul style="list-style-type: none"> 4) Mitigate by ensuring that pasture fencing improves forage utilization and grazing distribution* 5) Mitigate by using topography to shield fencing from human view shed <p>*Forage utilization and impacts from grazing distribution are monitored annually on the Empire-Cienega Allotment both through utilization monitoring and annual quantitative upland monitoring.</p>
Transporting materials to/from fence construction site	Increase in noise levels, vehicle tracks, human presence	<ul style="list-style-type: none"> 1) Temporary wildlife displacement. 2) Wildlife (individual animal or nests/dens) could be destroyed by vehicular traffic. 3) Increased human use of area due to new tracks, if new tracks are not covered near allowed use areas. 4) Vegetation trampling 	<ul style="list-style-type: none"> 1) N/A. Transitory 2) Timing and avoidance mitigation 3) Mitigated by removal of obvious tracks 4) N/A. Transitory Impact
Human presence/activity during fence construction	Noise, human presence and activity	<ul style="list-style-type: none"> 1) Temporary wildlife displacement 2) Alteration of normal use patterns 	<ul style="list-style-type: none"> 1) N/A. Transitory 2) N/A Transitory

3.2 Impacts to Areas of Critical Environmental Concern

The Empire-Cienega allotment is within the Empire-Cienega ACEC, which is within Las Cienegas NCA. The goals of the Empire-Cienega ACEC are to protect and enhance watershed, grassland, and threatened/endangered wildlife resources, emphasizing total ecosystem management. Fourteen objectives were developed for the ACEC to meet these goals (Appendix 6, Approved Las Cienegas RMP July 25, 2003). Management prescriptions include limiting livestock use in the riparian areas of the ACEC

except for crossing lanes, watering areas; minimizing construction of livestock developments in the 100-year flood plain, and implementing a livestock grazing system consistent with the goals and objectives of the ACEC.

3.2.1 Impacts of the Proposed Action:

The proposed action is consistent with the goals and objectives of the ACEC. Riparian fencing would be maintained or reconstructed to ensure livestock use continues to be limited to crossing lanes and watering areas. Construction of pasture division fences and other upland livestock fencing is consistent with implementing the ongoing rest-rotation grazing management that maintains watershed conditions.

3.2.2 Impacts of the No Action Alternative:

Only routine fence maintenance would occur. Impacts would be similar to the No New Construction Alternative.

3.3 Impacts to Wildlife Movements

The Empire-Cienega allotment encompasses habitats for a number of wildlife species known to be impacted to various degrees by typical western rangeland livestock fencing. These species include white-tailed deer, mule deer, and most notably pronghorn antelope. Deer will readily jump typical range fences and do not appear to regard them as barriers to movement; however, pronghorn are known to not readily jump fences and they generally appear to regard typical livestock fencing as impediments to movements across suitable habitat.

3.3.1 Impacts of the Proposed Action:

The proposed action is to construct approximately 6 miles of new livestock fencing designed to allow wildlife movement (smooth bottom wire, bottom wire 18" above ground, top wire no more than 42" above ground, etc.). As such, no impacts to wildlife movement are expected.

3.3.2 Impacts of the No Action Alternative:

No impacts to wildlife movements will occur.

3.4 Cultural Resources

The Las Cienegas National Conservation Area contains archaeological sites that date from the Middle Archaic temporal time period (5,000 B.C.) through the Historical period (1540-1950). Areas containing high and medium probability for locating cultural resource sites will receive priority for survey. In 2010, over 8,000 acres of the Las Cienegas National Conservation Area were surveyed for the presence of cultural resources. As a result many new cultural resource sites and site types were located.

All proposed project areas where ground disturbing activity will take place will require a Class III cultural resource survey be performed prior to project implementation. This survey will follow requirements set forth under Section 106 of the National historic Preservation Act. In addition, Project Design Features (PDF's) will be followed. If archaeological sites are located they will be protected. Protection measures include avoidance.

3.4.1 Impacts of the Proposed Action:

Ground disturbing activities, such as new fence construction are subject to Section 106 NHPA requirements, which involve a Class III survey be performed prior to project implementation. Therefore,

areas where cultural resources are found to occur and new fence construction is proposed will require the fence location to be moved to avoid disturbance to cultural resource sites.

3.4.2 Impacts of the No Action Alternative:

No impacts anticipated due to no new ground disturbing activity proposed.

3.5 Native American Religious Concerns

All areas of the proposed project will be surveyed at Class III levels in compliance with Sect. 106 of the National Historic Preservation Act. If cultural resource sites are located they will be protected and the proposed fence installation project will be altered to avoid impacts to cultural resource sites. Currently, there are no known areas that have been identified by Native American Tribes as containing TCP's (Traditional Cultural Places).

3.5.1 Impacts of the Proposed Action:

If cultural resource sites are located they will be protected and the proposed fence installation project will be altered to avoid impacts to cultural resource sites. Currently, there are no known areas that have been identified by Native American Tribes as containing TCP's (Traditional Cultural Places).

3.5.2 Impacts of the No Action Alternative:

No impacts anticipated.

3.6 Vegetation

The LCNCA has five of the rarest habitat types in the American Southwest: cienegas, cottonwood/willow riparian areas, sacaton grasslands, mesquite bosques, and semi-desert grasslands. The new fence construction in the North Pasture and Springwater Pasture will occur in semi-desert grassland ecological sites. Both Springwater and North Pastures have permanent vegetation monitoring Key Areas (KA's) set up that BLM monitors on a schedule of at least once every three years. Some KA's are read every year. These KA's have been in place since 2004. The BLM uses the Point Intercept monitoring protocol which measures the percentage of bare ground basal cover and the percentage of perennial grass basal cover. The following table shows the most recent monitoring results.

3.6.1 Vegetation Monitoring Results Table

Pasture	Key Area	Ecological Site	Most Recent Results	Bareground Basal Cover %	Perennial Grass Basal Cover %
North	2	Loamy Hills	2015	4.9	10.8
North	3	Loamy Hills	2015	9.9	9.3
North	4	Volcanic Hills /Limy Slopes	2014	0.9	6.5

Springwater	16	Sandy Loam Upland/Loamy Upland	2013	38.5	13.9
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3.6.2 Impacts of the Proposed Action:

Common vegetative components such as mesquite trees will be trimmed and removed in limited instances to facilitate fence maintenance and construction. Short term impacts of trampling, crushing or damage to grasses and other ground level vegetation will occur in a narrow band of less than 10 feet along new fence line construction. Small areas of soil disturbance will occur during fence construction including some soil compaction along the new fence lines. Soils will be protected by the proposed action as a more even livestock utilization of forage resources will occur due to improved fencing.

3.6.3 Impacts of the No Action Alternative:

No impacts as new fence will not be constructed.

3.7 Visual Resources

The current visual rating applied to public lands in LCNCA is a visual resource management Class II. The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes are required to repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

3.7.1 Impacts of the Proposed Action:

Fence lines are an existing character of the landscape on Las Cienegas NCA. There would be short term impacts to visual resources from disturbed soil and trimmed vegetation along new fence lines.

3.7.2 Impacts of the No Action Alternative:

No impacts as new fence will not be constructed.

3.8 Recreation

Visitors to Las Cienegas NCA engage in a variety of permitted and dispersed recreation activities. Cross-country equestrian use is allowed and fence lines present an obstacle to this recreation activity. The North pasture has a designated group site at the old Air Strip which is used frequently by large groups with Special Recreation Permits as staging for equestrian events and bird-dog field trials. In addition, the Oak Tree Canyon camping area is frequently used for camping and OHV touring activities.

3.8.1 Impacts of the Proposed Action:

Any fence construction can impact equestrian users as fences are a barrier to this activity unless gates are present in the fence line. Fences can also be an obstacle where they cross roads if cattle guards are not installed. These impacts are expected to occur to visitors using the Air Strip group site and Oak Tree Camp Area due to the proximity of the North Canyon pasture division fence. As mitigation, cattle guards should be placed where the fence crosses roads in this area and equestrian gates should be placed along the fence line.

3.8.2 Impacts of the No Action Alternative:

No new impacts to recreation as new fence construction will not occur under this alternative. Any impacts from existing fence would remain.

4 CUMULATIVE IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

4.1 Cumulative effects issues:

Impacts to wildlife movements and wildlife displacement

4.2 Geographic scope:

Las Cienegas NCA

The Empire allotment is within the Las Cienegas NCA and is managed under the Las Cienegas Resource Management Plan.

4.3 Time frame:

1988-present, BLM management on the Allotment

BLM acquired the Empire allotment in 1988, which later became part of the Las Cienegas National Conservation Area.

4.4 Past, Present, and Foreseeable Future Actions:

Identify other actions (all federal, nonfederal and private actions) affecting the same resources, ecosystems, and human communities of concern:

Past Actions:

- A. Improvements to State Highways 82 and 83 which border Las Cienegas NCA may have displaced wildlife and in some areas created additional barriers.
- B. Road improvements including areas of widening and reconstruction on BLM Road 900 may have displaced some wildlife and affected movements for some species, especially small species.
- C. Motorized recreation use may affect wildlife movements across roads or around recreation group sites, causing wildlife to avoid these areas temporarily.
- D. Mesquite mechanical treatments and hauling of wood product may have displaced wildlife temporarily from treatment areas or prevented animals from temporarily crossing roads used for hauling. Most treatment units are 300 acres or less. After treatment more grassland is opened up benefitting species such as pronghorn and grassland birds,
- E. Prescribed burns temporarily displace wildlife species on Las Cienegas NCA. Most burns are less than 2,000 acres. Burned areas attract pronghorn and other species that forage on the green up of forbs and grass shoots.
- F. Fence modifications on Las Cienegas NCA improved wildlife passage
- G. Continued and increased human use of the NCA;
- H. Fence Modifications
- I. Growth of the communities of Sonoita and Tucson;
- J. Possible continued regional drought and possible climate change impacts
- K. Current world-wide economic situation

Present Actions

- A. Motorized recreation use is increasing and continues to affect wildlife movements across roads or around recreation group sites, causing wildlife to avoid these areas temporarily.
- B. Continuation of mesquite mechanical treatments and hauling of wood product that displace wildlife temporarily from treatment areas or prevent animals from temporarily crossing roads used for hauling. Most treatment units are 300 acres or less. After treatment more grassland is opened up benefitting species such as pronghorn and grassland birds.
- C. Continuation of prescribed burns temporarily displaces wildlife species on Las Cienegas NCA. Most burns are less than 2,000 acres. Burned areas attract pronghorn and other species that forage on the green up of forbs and grass shoots.
- D. Continued fence modifications on Las Cienegas NCA have improved wildlife passage

Future Foreseeable Actions

- A. Motorized recreation use continues to increase and continues to affect wildlife movements across roads or around recreation group sites, causing wildlife to avoid these areas temporarily.
- B. Continuation of mesquite mechanical treatments and hauling of wood product that displace wildlife temporarily from treatment areas or prevent animals from temporarily crossing roads used for hauling. Most treatment units are 300 acres or less. After treatment more grassland is opened up benefitting species such as pronghorn and grassland birds,
- C. Continuation of prescribed burns temporarily displaces wildlife species on Las Cienegas NCA. Most burns are less than 2,000 acres. Burned areas attract pronghorn and other species that forage on the green up of forbs and grass shoots.
- D. Continued fence modifications on Las Cienegas NCA improve wildlife passage.
- E. Continued development of private lands in Sonoita results in fencing and other barriers to wildlife movements.
- F. Mining activities on Forest Service lands displace motorized recreational users to Las Cienegas NCA and impacts under A. accelerate.

4.4.1 Cumulative Impacts of the Proposed Action:

The impacts of the Proposed Action on wildlife movements and distribution are not expected to change current wildlife travel and flow when added to past, present, and reasonably foreseeable future actions that affect these resources. The Las Cienegas NCA and surrounding Cienega watershed are largely intact. Mitigations on fencing and road projects help to maintain connectivity. Connectivity is also maintained in stream and wash corridors which are largely intact and are avoidance areas for mesquite control and prescribed fire projects.

4.4.2 Cumulative Impacts of the No Action Alternative and No New Construction Alternatives

These alternatives do not result in new fence construction and do not change the impacts, past, present or future on wildlife movements or displacements.

5 MITIGATION MEASURES

The following Mitigation Measures including Conservation Measures, and Terms and Conditions from the Biological Opinion Rendered by the U.S. Fish and Wildlife Service on the Las Cienegas RMP will be followed for implementation of the **Proposed Action**:

5.1 Cultural Resource Mitigation Stipulations

Cultural resource mitigation stipulations will apply in case new sites are unearthed during project implementation or if fence line construction areas are changed during project operation. The following Cultural Resource stipulations apply to this project:

1. Any archaeological or historical artifacts or remains, or vertebrate fossils discovered during operations shall be left intact and undisturbed; all work in the area shall stop immediately; and the Tucson BLM Archaeologist shall be notified. Commencement of operations shall be allowed upon clearance by the Authorized Officer.
2. An additional cultural and paleontological resource survey may be required in the event the project location is changed or additional surface disturbing operations are added to the project after the initial survey. Any such survey would have to be completed prior to commencement of operations.
3. If in connection with operations under this authorization, any human remains, funerary objects, sacred objects or objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (P.L. 101-601; Stat. 3048; 25 U. S. C. 3001) are discovered, the lessee shall stop operations in the immediate area of the discovery, protect the remains and objects, and immediately notify the Authorized Officer of the discovery. The lessee shall continue to protect the immediate area of the discovery until notified by the Authorized Officer that operations may resume.

5.2 Wildlife Mitigation

1. New fence construction or reconstruction will not be allowed during breeding or nesting season of threatened or endangered species and migratory birds if they occur in the project area.
2. Pre-construction surveys for paniculate agaves along new fence line routes will be conducted prior to construction activities to ensure paniculate agaves will be avoided (Term and Condition for Lesser Long-nosed Bats from LCNCA RMP, page 2-102).

5.3 Other Mitigation Measures:

1. Rehabilitation of any temporary routes used in fence construction will be completed within 2 weeks of fence construction to avoid unauthorized travel along new fence lines. Methods may include brushing, placement of native vegetation cuttings from fence construction and temporary barriers.
2. Off-road travel to complete fence construction or any use of welding equipment will not occur during periods of fire restrictions unless a waiver is obtained.
3. Lessee will coordinate with BLM rangeland management specialist to ensure that equestrian gates are placed in new fence line in the North Canyon pasture.
4. Cultural Resource and Wildlife mitigation measures also apply to the **No New Construction Alternative and No Action Alternative**:

5.4 Compliance and Area Monitoring:

Compliance with BLM engineering standards, as applicable, will be ensured through project site inspection during and after project work.

6 PREPARERS

- Kristen Duarte, Rangeland Management Specialist
- Keith Hughes, Natural Resource Specialist
- Eric Baker, Rangeland Management Specialist
- Catie Fenn, Outdoor Recreation Planner
- Amy Sobiech, Archaeologist
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7 PERSONS AND AGENCIES CONSULTED

- Ian Tomlinson, Empire Grazing Lessee
- Alisha Phipps, Rangeland Management Specialist, Tucson Natural Resources Conservation Service
- Kristin Terpening, Habitat Specialist, Arizona Game and Fish Department

Appendix 1. Bird Species of Conservation Concern within the Sierra Madre Occidental region (BCR 34)

Sierra Madre Occidental (BCR 34)
Bald Eagle (b)
Common Black-Hawk
Peregrine Falcon (b)
Mountain Plover (nb)
Yellow-billed Cuckoo (w. U.S. DPS) (a)
Flammulated Owl
Elf Owl
Blue-throated Hummingbird
Elegant Trogon
Lewis's Woodpecker
Arizona Woodpecker
Northern Beardless-Tyrannulet
Buff-breasted Flycatcher
Rose-throated Becard
Bell's Vireo (c)
Gray Vireo
Pinyon Jay
Bendire's Thrasher
Sprague's Pipit (nb)
Phainopepla

Sierra Madre Occidental (BCR 34)
Olive Warbler
Lucy's Warbler
Yellow Warbler (sonorana ssp.)
Black-throated Gray Warbler
Grace's Warbler
Red-faced Warbler
Canyon Towhee
Rufous-winged Sparrow
Botteri's Sparrow
Five-striped Sparrow
Black-chinned Sparrow
Lark Bunting (nb)
Grasshopper Sparrow (nb)
Grasshopper Sparrow (ammolegus ssp.)
Baird's Sparrow (nb)
Chestnut-collared Longspur (nb)
Varied Bunting

(a) ESA candidate, (b) ESA delisted, (c) non-listed subspecies or population of Threatened or Endangered species, (nb) non-breeding in this BCR