

DECISION RECORD
 CCA Fence and Pipelines Project
 DOI-BLM-NM-P010-2015-0043-EA

DECISION: It is my decision to authorize the construction of 0.90 miles of water pipeline and 1 drinker on Allotment 65029; 21.16 mile of water pipeline, 7 drinkers, 2.17 miles of new barbed wire fence, and removal of 6.50 miles of interior barbed wire fence on Allotment 65032; and 3.41 miles of new barbed wire fence on Allotment 65050. The water pipelines placed on public land ensure water supply and availability of water.

Location of the range improvements is as follows in Chaves County, New Mexico Prime Meridian:

Name	Legal Description
Allotment 65029 Water Pipeline	T8S, R31E, Sections 4, 9
Allotment 65032 Water Pipeline	T8S, R31E, Sections 14, 15, 16, 23,24, 27, 34, 35, 36
	T8S, R32E, Sections 13, 16, 19, 20, 21, 22, 23,24, 31, 32, 33, 34, 35
Allotment 65032 Interior Fence	T8S, R31E, Section 24
	T8S, R32E, Sections 19, 20
Allotment 65032 Fence Removal	T8S, R31E, Sections 13, 24, 25, 36
	T8S, R32E, Sections 15, 19, 20
Allotment 65050 Interior Fence	T9S, R32E, Sections 6, 7, 8, 17, 20

Actual construction of the projects will be done by a contractor. Construction could take place as soon as authorization is given. The surface protection procedures set forth in the proposed action have been incorporated into the Environmental Assessment. Any comments made to this proposed action were considered and addressed.

Rationale for Recommendations: The decision to authorize the proposed action does not result in any undue or unnecessary environmental degradation. The action is consistent with planned actions presented in the Roswell Resource Management Plan, Oct., 1997.

The protection procedures for the proposed action are included in the Cooperative Agreements and are attached as stipulations. Any additional mitigation measures identified for the proposed action in the environmental impacts sections of the attached environmental assessment have been formulated into stipulation. This decision incorporated by reference the attached stipulations.

In accordance with 43 Code of Federal Regulations, Part 4100, Sec 4160.2, any applicant, permittee, lessee or other affected interests may protest this proposed decision in person or in writing to the authorized officer within 15 days after receipt of this decision. Please be specific in your points of protest.

In the absence of a protest, this proposed decision will become the final decision without further notice. Any person who is adversely affected by a final decision of the authorized officer may file a written appeal to the Final Decision for the purpose of a hearing before an administrative

law judge under 43 CFR 4.470. A period of 30 days after the decision becomes final is provided in which to file an appeal and a petition for stay of the decision in this office (43 CFR §§4160.3 [c] and §§4160.4).

/s/ Kyle S. Arnold
Kyle Arnold
Assistant Field Manager, Resources

8/20/2015
Date

STIPULATIONS

1. No blading will occur on public land, unless authorized by the Authorized Officer.
2. Fences shall be flagged to warn big game of the new structures. White topped fence posts may be used along with flagging.
3. Fence post spacing shall be up to 16 feet.
4. Wire spacing will be at 16", 6", 8" and 12" measuring from the ground up.
5. BLM reserves the right to alter any fence on Federal land should it be necessary for wildlife purposes.
6. No road is authorized as a part of this project for construction or maintenance.
7. Gates or cattle guards will be installed on existing roads to ensure public access.
8. Brush will be cleared by hand with hand tools.
9. The co-operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public land under this authorization.
10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the co-operator/contractor or any person working on the co-operator's/contractor behalf, on public or Federal land shall be immediately reported to the authorized officer. The co-operator/contractor shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The co-operator/contractor shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer, after consulting with the co-operator/contractor.
11. Any cave or karst feature, such as a deep sinkhole discovered by the co-operator/contractor or any person working on the co-operator's/contractor behalf, on public or Federal land shall be immediately reported to the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate action(s). Any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the co-operator/contractor.
12. The co-operator/contractor is hereby obligated to comply with procedures established in the Native American Grave Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of the implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours

for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes.

13. The co-operator/contractor shall be responsible for maintaining the site in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
14. The approval of the Permit/Agreement does not convey the right to prevent other lawful uses from occurring. The applicant/cooperator understands that other lawful users with proper authorizations may pass over, under, or through the range improvement authorized by the Permit/Agreement. Appropriate stipulations by the BLM to other users will protect the stability and purpose of this improvement.

FINDING OF NO SIGNIFICANT IMPACT
CCA Fence and Pipelines Project
DOI-BLM-NM-P010-2015-0043-EA

I have determined that the BLM Preferred Alternative (Alternative A), as described in the Environmental Assessment (EA) will not have any significant impact, individually or cumulatively, on the quality of the human environment. Because there would not be any significant impact, an environmental impact statement is not required. The NEPA handbook (p. 83) indicates that the FINDING OF NO SIGNIFICANT IMPACT (FONSI) must succinctly state the reasons for deciding that the action will have no significant environmental effects. It also recommends that the FONSI address the relevant context and intensity factors.

In making this determination, I considered the following factors:

1. The activities described in the BLM Preferred Alternative (Alternative A) do not include any significant beneficial or adverse impacts (40 CFR 1508.27(b)(1)). The EA includes a description of the expected environmental consequences constructing the project.
2. The activities included in the proposed action would not significantly affect public health or safety (40 CFR 1508.27(b)(2)).
3. The proposed activities would not significantly affect any unique characteristics (40 CFR 1508.27(b)(3)) of the geographic area such as prime and unique farmlands, caves, wild and scenic rivers, designated wilderness areas or wilderness study areas.
4. The activities described in the proposed action do not involve effects on the human environment that are likely to be highly controversial (40 CFR 1508.27(b)(4)).
5. The activities described in the proposed action do not involve effects that are highly uncertain or involve unique or unknown risks (40 CFR 1508.27(b)(5)).
6. My decision to implement these activities does not establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration (40 CFR 1508.27(b)(6)).
7. The effects of authorizing construction of the project would not be significant, individually or cumulatively, when considered with the effects of other actions (40 CFR 1508.27(b)(7)). The EA discloses that there are no other connected or cumulative actions that would cause significant cumulative impacts.
8. I have determined that the activities described in the proposed action will not adversely affect or cause loss or destruction of scientific, cultural, or historical resources, including those listed in or eligible for listing in the National Register of Historic Places (40 CFR 1508.27(b)(8)). Pages 20-21 of the EA describe the affected environment and impacts of the proposed action and alternatives on cultural resources.

9. The proposed activities are not likely to adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (40 CFR 1508.27(b)(9)).

10. The proposed activities will not threaten any violation of Federal, State, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)). Page 10 of the EA describes the conformance with land use plans and relationships to statutes, regulations, or other plans.

APPROVED:

/s/ Kyle S. Arnold
Kyle S. Arnold
Assistant Field Manager, Resources

8/20/2015
Date

United States Department of the Interior Bureau of Land Management

Environmental Assessment DOI-BLM-NM-P010-2015-0043-EA

Installation of fences and pipelines; fence removal, Allotment Numbers 65029, 65032, 65050

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Roswell Field Office

Confidentiality Policy

Any comments, including names and street addresses of respondents, that you submit may be made available for public review. Individual respondents may request confidentiality. If you wish to withhold your name or street address from public review or from disclosure under the Freedom of Information Act, you must state this prominently at the beginning of your written comment. Such requests will be honored to the extent allowed by law. All submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, will be made available for public inspection in their entirety.



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1.0 Purpose and Need for Action

1.1 Introduction

The Center of Excellence for Hazardous Materials Management (CEHMM) has submitted on behalf of the allottees, project proposals for several range improvements on three grazing allotments in Lesser Prairie Chicken (LPC) habitat. These projects would improve livestock grazing distribution and therefore improve LPC habitat.

The allotments are enrolled in Candidate Conservation Agreements (CCA) and Candidate Conservation Agreements with Assurances (CCAA). These agreements allow CEHMM, BLM, and the private landowners to work together to implement habitat restoration projects that benefit the LPC. The projects are exclusive to areas identified as significant habitat to the LPC. CEHMM manages and administers the funding for these type of projects. CEHMM will contract the fence and pipeline installation and the fence removal, and will provide oversight during the construction of the fences and pipelines.

CEHMM is a non-profit corporation that provides cooperative conservation and environmental services to support habitat management of the lesser prairie-chicken. The non-profit develops projects that provide for the conservation of the species while affirming and supporting traditional, multiple land uses.

The federal lessors and permittees on these three allotments have signed Certificates of Participation that address additional mitigation measures that each cooperator has agreed to implement on the enrolled lands. The certificates also place conditions on activities that will be required on the cooperators' land.

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1.2 Purpose and Need for Action

The purpose and need for the action is established by BLM's responsibility to respond to an application for a range improvement in accordance with 43 CFR 4120.3-3(a) which in part states, "*Any permittee or lessee may apply for a range improvement permit to install, use, maintain, and/or modify removable range improvements that are needed to achieve management objectives for the allotment in which the permit or lease is held.*" The fences construction, fence removal, pipelines, and drinkers are needed to improve livestock distribution in order to ensure that the New Mexico Standards for Rangeland Health are being met on the allotments, and to improve habitat for the Lesser Prairie Chicken (LPC).

1.3 Decisions to be Made

The Decisions to be made upon the completion of this Environmental Assessment are: to authorize or deny installation of livestock water pipeline on Allotments 65029 and 65032; authorize or deny fence removal on Allotment 65032; and authorize or deny fence installation on Allotments 65032 and 65050.

1.4 Conformance with Applicable Land Use Plan(s)

The proposed action conforms to the 1997 Roswell Approved Resource Management Plan (RMP) and Record of Decision as amended; 2008 Special Status Species Resource Management Plan Amendment (2008 RMPA), and the 2000 New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management and Record of Decision as required by 43 CFR 1610.5 3.

1.5 Relationship to Statutes, Regulations or Other Plans

The construction of range improvements, either under Cooperative Agreement or Range Improvement Application is addressed under the 43 Code of Federal Regulations, Part 4100, Grazing Administration, Exclusive of Alaska, Subpart 4120.3.

The proposal to authorize range improvements on these allotments is in conformance with the Federal Land Policy and Management Act of 1976 (FLPMA) (43 U.S.C. 1700 et seq.); the Taylor Grazing Act of 1934 (TGA) (43 U.S.C. 315 et seq.); the Public Rangelands Improvement Act of 1978 (PRIA) (43 U.S.C. 1901 et seq.); Federal Cave Resources Protection Act of 1988; The National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

1.6 Scoping, Public Involvement, and Issues

Appropriate scoping helps identify issues, resources, and resource uses that could be impacted, reducing the chances of overlooking a potentially significant issue or reasonable alternative. Scoping takes place both internally within the BLM via meetings with resource specialists, as well as externally where the public is invited to comment.

The BLM's interdisciplinary team of resource specialists conducted internal scoping on the Proposed Action February 2015. In addition, the BLM RFO published a NEPA log for public inspection. This log contained a list of proposed and approved actions in the RFO planning area. The log is located on the BLM New Mexico website (http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html).

2.0 Proposed Action and Alternative(s)

Under Alternative A, the proposed action is to construct 0.90 miles of water pipeline and 1 drinker on Allotment 65029; 21.16 miles of water pipeline and 7 drinkers on Allotment 65032; 2.17 miles of barbed wire fence on Allotment 65032; 3.41 miles of barbed wire fence on Allotment 65050; and removal 6.50 miles of barbed wire fence on Allotment 65032. The new drinkers will be wildlife accessible. The fences and pipelines will be located on public, state, and private surface and will be constructed under Cooperative Range Improvement Agreements.

The first water pipeline with one new drinker would be built on Allotment 65029 Wilcox Wells. This pipeline would tie into an existing pipeline in the East Tom Tom Pasture, and continue south to a new wildlife accessible drinker in the south end of the pasture.

The second water pipeline would be built on Allotment 65032 Button Mesa. It would run from an existing water well and continue west. It would provide water to three new wildlife accessible drinkers. The third water pipeline would be built on the same allotment. It would tie into an existing water source and run east for approximately eight miles to a new wildlife accessible drinker.

Three fences would be removed on Allotment 65032 Button Mesa. The first fence to be removed would be the fence that separates North Sampson and Polk Pastures. The removal of the second fence would combine South Sampson and Belcher Pastures. The fence between Belcher and Polk Pastures would also be removed. A new fence would then be built, approximately one mile south of the old fence. An additional mile of fence would also be removed on state land that falls outside of the allotment, but is part of the ranch unit.

Two four strand fences (3 barbed wire, bottom wire smooth) would be built on Allotment 65050 East Sand Tank. The first fence would run north and south and divide Plains Tank Pasture. The second fence would be on state land and divide High Lonesome Pasture.

All fence installed will be wildlife friendly and constructed to current BLM standards. The fences will be constructed using the standard construction methods. The fences will be constructed in Lesser Prairie Chicken (LPC) habitat and will therefore be marked for the benefit of the species. The drinkers will be wildlife accessible. These requirements would be written into the cooperative agreements as special conditions.

Table 1.1 Legal Description of Proposed Range Improvements

Name	Legal Description
Allotment 65029 Water Pipeline	T8S, R31E, Sections 4, 9
Allotment 65032 Water Pipeline	T8S, R31E, Sections 14, 15, 16, 23,24, 27, 34, 35, 36
	T8S, R32E, Sections 13, 16, 19, 20, 21, 22, 23,24, 31, 32, 33, 34, 35
Allotment 65032 Interior Fence	T8S, R31E, Section 24
	T8S, R32E, Sections 19, 20
Allotment 65032 Fence Removal	T8S, R31E, Sections 13, 24, 25, 36
	T8S, R32E, Sections 15, 19, 20
Allotment 65050 Interior Fence	T9S, R32E, Sections 6, 7, 8, 17, 20

See Attached Maps.

Standard measures that will be included in the authorization for these projects are:

No blading will occur on public land, unless authorized by the Authorized Officer.

Fences shall be flagged to warn big game of the new structures. White topped fence posts may be used along with flagging.

Fence post spacing shall be up to 15 feet.

BLM reserves the right to alter any fence on federal land should it be necessary for wildlife purposes.

Wire spacing will be at 16", 6", 8" and 12" measuring from the ground up.

No road is authorized as a part of this project for construction or maintenance.

Gates or cattle guards will be installed on existing roads to ensure public access.

Brush will be cleared by hand with hand tools.

The co-operator shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public land under this authorization.

Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the co-operator/contractor or any person working on the co-operator's/contractor behalf, on public or Federal land shall be immediately reported to the authorized officer. The co-operator/contractor shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The co-operator/contractor shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the co-operator/contractor.

The co-operator/contractor is hereby obligated to comply with procedures established in the Native American Grave Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of the implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes.

The co-operator/contractor shall be responsible for maintaining the site in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

The approval of the Permit/Agreement does not convey the right to prevent other lawful uses from occurring. The applicant/cooperator understands that other lawful users with proper authorizations may pass over, under, or through the range improvement authorized by the Permit/Agreement. Appropriate stipulations by the BLM to other users will protect the stability and purpose of this improvement.

2.1 Alternatives Considered by Not Analyzed in Detail

This alternative would re-route the entire proposed fences and pipelines. The alternatives would:

- add length to the fencelines and pipelines;
- would cause more impact to the affected resources on the alternate route or
- would not be economical to install, maintain or use.

To re-route the fencelines would cause a concentration of the livestock use to one side of the pastures or the other. This alternative will not be given further consideration in this report; fewer environmental impacts would result from the action as proposed.

2.2 No Action Alternative

Under this alternative, the BLM would not authorize or approve the request to install 22.06 miles of pipeline, 8 drinkers, 7.75 miles of barbed wire fence, and remove 6.50 miles of barbed wire fence on Allotments 65029, 65032, and 65050. This alternative would leave the existing pasture configurations as is. By not constructing the new fences and removing old fences, utilization patterns would remain the same. Livestock would continue to use only certain areas of the pasture. Modification of the fences will allow the allottee to implement a grazing system which will modify utilization patterns across the ranch, and allow areas in the existing pasture to be rested periodically from use during the growing season.

3.0 Affected Environment, Environmental Consequences, and Cumulative Impacts

The No Action Alternative reflects the current situation within the project area and will serve as the baseline for comparing the environmental impacts of the analyzed alternatives.

During the analysis process, the interdisciplinary team considered several resources and supplemental authorities. The interdisciplinary team determined that the resources discussed below would be affected by the proposed action.

The following resources or values are not present or would not be affected by the authorization of livestock grazing on these allotments: Prime or Unique Farmland, Minority/Low Income Populations, Public Health and Safety, Hazardous or Solid Wastes, Solid Mineral Resources, Fluid Mineral Resources, Recreation, Visual Resources, Areas of Critical Environmental Concern, and Wild and Scenic Rivers, and Wilderness.

Affected resources and the impacts resulting from the proposed range improvements are described below.

3.1 Soil / Water / Air

► Climate

Affected Environment

Climate is the composite of generally prevailing weather conditions of a particular region throughout the year, averaged over a series of years. Greenhouse gasses (GHG) and the potential effects of GHG emissions on climate are not regulated by the EPA, however climate has the potential to influence renewable and non-renewable resource management.

Greenhouse gases, including carbon dioxide (CO₂) and methane (CH₄), and the potential effects of GHG emissions on climate, are not regulated by the EPA under the Clean Air Act. However, climate has the potential to influence renewable and non-renewable resource management. The EPA's Inventory of US Greenhouse Gas Emissions and Sinks found that in 2006, total US GHG emissions were over 6 billion metric tons and that total US GHG emissions have increased by 14.1% from 1990 to 2006. The report also noted that GHG emissions fell by 1.5% from 2005 to 2006. This decrease was, in part, attributed to the increased use of natural gas and other alternatives to burning coal in electric power generation.

The levels of these GHGs are expected to continue increasing. The rate of increase is expected to slow as greater awareness of the potential environmental and economic costs associated with increased levels of GHG's result in behavioral and industrial adaptations.

Global mean surface temperatures have increased nearly 1.0°C (1.8°F) from 1890 to 2006 (Goddard Institute for Space Studies, 2007). However, observations and predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHGs are likely to accelerate the rate of climate change.

In 2001, the Intergovernmental Panel on Climate Change (IPCC) predicted that by the year 2100, global average surface temperatures would increase 1.4 to 5.8°C (2.5 to 10.4°F) above 1990 levels. The National Academy of Sciences (2006) supports these predictions, but has acknowledged that there are uncertainties regarding how climate change may affect different regions. Computer model predictions indicate that increases in temperature will not be equally distributed, but are likely to be accentuated at higher latitudes. Warming during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures is more likely than increases in daily maximum temperatures.

A 2007 US Government Accountability Office (GAO) Report on Climate Change found that, "federal land and water resources are vulnerable to a wide range of effects from climate change, some of which are already occurring. These effects include, among others: 1) physical effects such as droughts, floods, glacial melting, and sea level rise; 2) biological effects, such as increases in insect and disease infestations, shifts in species distribution, and changes in the timing of natural events; and 3) economic and social effects, such as adverse impacts on tourism, infrastructure, fishing, and other resource uses." It is not, however, possible to predict with any certainty regional or site specific effects on climate relative to the proposed permitted allotment and subsequent actions.

In New Mexico, a recent study indicated that the mean annual temperatures have exceeded the global averages by nearly 50% since the 1970's (Enquist and Gori). Similar to trends in national data, increases in mean winter temperatures in the southwest have contributed to this rise. When compared to baseline information, periods between 1991 and 2005 show temperature increases in over 95% of the geographical area of New Mexico. Warming is greatest in the northwestern, central, and southwestern parts of the state.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Climate change analyses are comprised of several factors, including greenhouse gases (GHGs), land use management practices, the albino effect, etc. The tools necessary to quantify climatic impacts from the Proposed Action are presently unavailable. As a consequence, impact assessment of specific effects of anthropogenic activities cannot be determined. Additionally, specific levels of significance have not yet been established. Therefore, climate change analysis for the purpose of this document is limited to accounting and disclosing of factors that may contribute to climate change. Qualitative and/or quantitative evaluation of potential contributing factors within the planning area is included where appropriate and practicable.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to climate if a no action alternative is selected.

Cumulative Impacts

There will be no cumulative impacts to climate if a no action alternative is selected.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities.

➤ Soils

Affected Environment

The Soil Conservation Service, now the Natural Resource Conservation Service (NRCS), has surveyed the soils in Chaves County. Complete soil information is available in the Soil Survey of Chaves County, New Mexico, Northern Part (USDA Soil Conservation Service 1980) and online at <http://websoilsurvey.nrcs.usda.gov/app/>. The soil map units represented in the project area are:

Blakeney-Ratliff association, 0 to 5 percent slopes (BRB) Permeability of the unit soil is moderately rapid. Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

Chispa-Malstrom association, 0 to 4 percent slopes (CMB) Permeability of the Chispa soil is moderate. Runoff of the soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high. Permeability of the Malstrom soil is moderately rapid. Runoff of the soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

Faskin-fine sand, 0 to 2 percent slopes (FaA) Permeability of the Faskin soil is moderate. Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

Faskin-Malstrom association, 0 to 2 percent slopes (FMA) Permeability of the Faskin soil is moderate. Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high. Permeability of the Malstrom soil is moderately rapid. Runoff of the unit soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

Jalmar fine sand, moist, 0 to 2 percent slopes (JaA) Permeability of the Jalmar soil is moderate. Runoff is slow, hazard of water erosion is slight, and the hazard of soil blowing is very high.

Jalmar-Roswell-Pyote association, 0 to 15 percent slopes (JRC) Permeability of the Jalmar soil is moderate. Runoff of the unit soil is slow and the hazard of water erosion is slight and the hazard of soil

blowing is high. Permeability of the Roswell soil is rapid. Runoff of the unit soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is high. Permeability of the Pyote soil is moderately rapid. Runoff of the unit soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is very high.

Ratliff Redona association, 0 to 2 percent slopes (RBA) Permeability of the Ratliff soil is moderate. Runoff of the Ratliff soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is high. Permeability of the Redona soil moderate. Runoff of the Redona soil is slow and the hazard of water erosion is slight and soil blowing is high.

Roswell-Jalmar fine sand, hilly., 0 to 25 percent slopes (RPD) Permeability of the Roswell soil is rapid. Runoff of the soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is very high. Permeability of the Jalmar soil is moderate. Runoff of the unit soil is slow and the hazard of water erosion is slight and the hazard of soil blowing is very high.

Sharvana fine sandy loam, 0 to 2 percent slopes (ShA) Permeability of the Sharvana soil is moderate. Runoff of the soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is high.

Stromal-Faskin-Malstrom fine sands, Sharvana fine sandy loam, 0 to 2 percent slopes (SOA) Permeability of the Stromal soil is moderately rapid. Runoff of the soil is slow and the hazard of water erosion is high and the hazard of soil blowing is very high. Permeability of the Faskin soil is moderate. Runoff of the soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is very high. Permeability of the Malstrom soil is moderately rapid. Runoff of the soil is medium and the hazard of water erosion is moderate and the hazard of soil blowing is very high.

The Soil Conservation Service, now the Natural Resource Conservation Service (NRCS), has surveyed the soils in Lea County. Complete soil information is available in the Soil Survey of Lea County, New Mexico, (USDA Soil Conservation Service 1967) and online at <http://websoilsurvey.nrcs.usda.gov/app/>. The soil map units represented in the project area are:

Brownfield-Springer association, 0 to 3 percent slopes (BO) Runoff class is very low. These soils are well drained.

Kimbrough-Lea complex, 0 to 3 percent slopes (KU) Runoff class is very high. These soils are well drained.

Sharvana loamy fine sand, 0 to 3 percent slopes (SA) Runoff class is medium. These soils are well drained.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

The construction of the project would physically disturb topsoil during the placement of the pipeline, drinkers, posts and gates. Direct impacts resulting from the construction of the project include removal of vegetation along the pipeline and fence line, exposure of the soil, compaction by livestock trailing along the new fence, loss of top soil productivity and susceptibility to wind and water erosion. Wind

erosion would be expected to be a minor contributor to soil erosion with the possible exception of dust from vehicle traffic. These impacts could result in increased indirect impacts such as runoff, erosion and off-site sedimentation.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to soils if the no action alternative is selected.

Cumulative Impacts

Roads, fences, stock trails and water well development have occurred in the past and may contribute to the cumulative impacts of the area. This is in addition to oil and gas field development in the area. The proposed actions will not contribute significantly to the cumulative impacts of the area.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities. The disturbed area should naturally re-vegetate within two growing seasons or less with adequate precipitation, resulting in cessation of project related erosion or runoff.

➤ Air Quality

Affected Environment

BLM is required to comply with the Clean Air Act, as amended, and State Implementation Plans. The proposed area has not been identified as a non-attainment area. Additionally, throughout most of the year the air quality throughout Chaves County is very good and is considered clean. Air quality will be temporarily impacted only during the dry spring months, windstorms and blowing dust can become a problem throughout the area.

The area of the proposed action is considered a Class II air quality area. A Class II area allows moderate amounts air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed soil and exhaust emissions from motorized equipment.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Air quality would temporary be directly impacted with pollution from exhaust emissions, chemical odors, and dust that would be caused by the motorized equipment used to construct the project. Dust dissemination would discontinue upon completion of the construction phases of the project. Air pollution from the motorized equipment would discontinue at the completion of the project. The winds that frequent the southeastern part of New Mexico generally disperse the odors and emissions. The impacts to air quality would be greatly reduced as the construction of the project is completed. Other factors that currently affect air quality in the area include dust from livestock herding activities, dust from recreational use, and dust from use of roads for vehicular traffic.

There would be some impact to air resources in the short term resulting from construction activities. The construction activities would cause temporary increase in dust concentrations in construction areas. The use of standard construction dust mitigation procedures would help control emissions.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to air quality if a no action alternative is selected.

Cumulative Impacts

Roads, fences, stock trails and water well development have occurred in the past and may contribute to the cumulative impacts of the area. This is in addition to oil and gas field development in the area. The proposed actions will not contribute significantly to the cumulative impacts of the area.

Mitigation Measures and Residual Impacts

The use of standard construction dust mitigation procedures would help control emissions.

➤ Watershed Hydrology

Affected Environment

The watershed and hydrology in the area is affected by land and water use practices. The degree to which hydrologic processes are affected by land and water use depends on the location, extent, timing and the type of activity. Factors that currently cause short-lived alterations to the hydrologic regime in the area include livestock grazing management, recreational use activities, groundwater pumping and also oil and gas developments such as well pads, permanent roads, temporary roads, pipelines, and power lines.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Construction and surface disturbance activities from construction of the project can result in long and short-term alterations to hydrologic regime. Peak and low flow of perennial streams, ephemeral, and intermittent rivers and streams would be directly affected by an increase in impervious surfaces resulting from construction of this pipeline. Potential hydrologic effects to peak flow is reduced infiltration where surface flows can move more quickly to perennial or ephemeral rivers and streams, causing peak flow to occur earlier and be larger. Increased magnitude and volume of peak flow can cause bank erosion, channel widening, downward incision, and disconnection from the floodplain. Potential hydrologic effects to low flow is reduced surface storage and groundwater recharge, resulting in reduced baseflow to perennial, ephemeral, and intermittent rivers and streams. Direct impacts would be that hydrologic processes may be altered where perennial, ephemeral, and intermittent river and stream systems respond by changing physical parameters, such as channel configuration. These changes may in turn impact chemical parameters and ultimately the aquatic ecosystem.

Long-term direct and indirect impacts to watershed and hydrology would continue for the life of the project and would decrease once natural re-vegetation of the project has taken place. Short-term direct and indirect impacts to the watershed and hydrology from pipelines that are not buried with material would occur and would likely decrease in time due to natural re-vegetation. The disturbed area should naturally re-vegetate within two growing seasons or less with adequate precipitation.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to watershed hydrology if a no action alternative is selected.

Cumulative Impacts

Roads, fences, stock trails and water well development have occurred in the past and may contribute to the cumulative impacts of the area. This is in addition to oil and gas field development in the area. The proposed actions will not contribute significantly to the cumulative impacts of the area.

Mitigation Measures and Residual Impacts

No new roads would be authorized as a part of this project for construction or maintenance. No blading would occur on public land, unless authorized by the Authorized Officer. Brush would be cleared by hand with hand tools. Vegetation, soil and rocks left as a result of construction or maintenance activity would be randomly scattered over the project area and would not be left in rows, piles or berms, unless otherwise approved by the Authorized Officer.

The disturbed area should naturally re-vegetate within two growing seasons or less with adequate precipitation.

➤ Water Quality - Surface

Affected Environment

Surface: Surface water within the area is affected by geology, precipitation and water erosion. Factors that currently affect surface water resources include livestock grazing management, recreational use and brush control treatments. Ephemeral surface water within the area may be located in tributaries, playas, alkali lakes and stock tanks. No perennial surface water is found on public land in this area.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Potential impacts to water resources during construction would be primarily associated with surface disturbing activities, but could also be a result of accidental spills and handling and storage of hazardous chemicals.

Use of construction equipment would cause compaction of near surface soils that could result in increased runoff and, subsequently, increased sedimentation. Clearing and grading during construction would expose the soils to erosion. Construction activities could also temporarily alter the overland flow and consequently the groundwater recharge patterns. The

alteration of the natural soils strata by earthworks could reduce the soils ability to absorb water resulting in ponding and/or alter existing groundwater pathways for groundwater. These effects, if they occurred, would be temporary and minor.

Potential direct impacts that would occur due to construction of the project include increased surface water runoff and off-site sedimentation brought about by soil disturbance and increased salt loading and water quality impairment of surface waters. The magnitude of these impacts to water resources would depend on the proximity of the disturbance to the drainage, channel, slope aspect and gradient, degree and area of soil disturbance, soil character, duration and time within which construction activity would occur, and the timely implementation and success or failure of mitigation measures.

Direct impacts would likely be greatest shortly after the start of construction activities and would likely decrease in time due to natural stabilization, and reclamation efforts. Construction activities would occur over a relatively short period; therefore, the majority of the disturbance would be intense but short lived. Direct impacts to surface water quality would be minor, short-term impacts which may occur during storm flow events.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to surface water quality if a no action alternative is selected.

Cumulative Impacts

Roads, fences, stock trails and water well development have occurred in the past and may contribute to the cumulative impacts of the area. This is in addition to oil and gas field development in the area. The proposed actions will not contribute significantly to the cumulative impacts of the area.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities. The disturbed area should naturally re-vegetate within two growing seasons or less with adequate precipitation, resulting in cessation of project related erosion or runoff.

➤ Water Quality - Ground

Affected Environment

Ground: Groundwater within this area is affected by geology and precipitation. Factors that currently affect groundwater resources in this area include livestock grazing management, groundwater pumping and possible impacts from brush control treatments. The approximate depth to groundwater ranges from 100 to 300 feet in the area (New Mexico Office of the State Engineer data).

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Potential impacts to water resources during construction would be primarily associated with surface disturbing activities, but could also be a result of accidental spills and handling and storage of hazardous chemicals. The alteration of the natural soils strata by earthworks could reduce the soils ability to absorb water resulting in ponding and/or alter existing groundwater pathways for groundwater. These effects, if they occurred, would be temporary and minor.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to ground water quality if a no action alternative is selected.

Cumulative Impacts

Roads, fences, stock trails and water well development have occurred in the past and may contribute to the cumulative impacts of the area. This is in addition to oil and gas field development in the area. The proposed actions will not contribute significantly to the cumulative impacts of the area.

Mitigation Measures and Residual Impacts

A rangeland health assessment has been completed and the allotment meets the Standards for Public Land Health. Rangeland monitoring would help ensure that adequate vegetation cover is maintained to protect the soil from erosion which would decrease dust levels resulting from allotment management activities. The disturbed area should naturally re-vegetate within two growing seasons or less with adequate precipitation, resulting in cessation of project related erosion or runoff.

3.2 Archaeology

➤ Cultural and Historical Resource

Affected Environment

The projects fall within the Southeastern New Mexico Archaeological Region. This region contains the following cultural/temporal periods: Paleoindian (ca. 12,000-8,000 B.C.), Archaic (ca. 8000 B.C. –A.D. 950), Ceramic (ca. A.D. 600-1540) Protohistoric and Spanish Colonial (ca. A.D. 1400-1821), and Mexican and American Historical (ca. A.D. 1822 to early 20th century). Sites representing any or all of these periods are known to occur within the region. A more complete discussion can be found in *Living on the Land: 11,000 Years of Human Adaptation in Southeastern New Mexico; An Overview of Cultural Resources in the Roswell District*, Bureau of Land Management published in 1989 by the U.S. Department of the Interior, Bureau of Land Management.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Direct and indirect impacts to cultural resources include, but are not limited to, fence and pipeline installation, future maintenance activities and upkeep, and possible erosion that results from installation.

A cultural resource inventory was conducted for the area of effect (15-005A, 15-019A, 15-020A, 15-021A, and protocol exclusion). No historic properties were identified: therefore, no direct or indirect impacts are anticipated.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to cultural resources if a no action alternative is selected.

Cumulative Impacts

No cumulative impacts are anticipated.

Mitigation Measures and Residual Impacts

There are no mitigation measures or residual impacts at this time.

➤ Native American Religious Concerns

Affected Environment

Native American groups may have places that can be described as Traditional Cultural Properties or other places that are important to their religions or cultures. The BLM uses the New Mexico Department of Cultural Affairs list of tribes/nations/pueblos concerned for individual counties to determine which of these groups may have concerns. To date, the areas to be affected have not been identified by interested tribes as being of tribal concern.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

The BLM conducts tribal consultation for many projects while preparing planning documents such as the Resource Management Plan and Resource Management Plan Addendums. A review of existing information indicates the proposed action is outside any known Traditional Cultural Property.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There will be no direct or indirect impacts to locations of Native American religious concern if a no action alternative is selected.

Cumulative Impacts

The cumulative impacts are unknown based on a review of existing information.

Mitigation Measures and Residual Impacts

There are no mitigation measures at this time.

3.3 Range

➤ Vegetation

Affected Environment

All three allotments are comprised of two major vegetation community types. The two types are arranged in a mosaic across the area. Perennial and annual forb production fluctuates widely from year to year. General objectives or guidelines for each vegetation community are described in the Roswell Approved RMP and Record of Decision (BLM 1997) and the Roswell Draft RMP/EIS (BLM 1994). The major community types are the Shinnery Oak Dune Community and the Grassland Community.

The Shinnery Oak Dune is a unique community type found primarily below the Llano Estacado, or Staked Plains, in an area known as Mescalero Sands. It lies in the southern desert plains ecosystem between the elevations of 4,100 feet and 4,300 feet. The topography can be described as gently sloping and undulating sandy plains, with moderate to very steep hummocky dunes of up to ten feet and more in height scattered throughout the area. Some of the dunes are stabilized with vegetation, while a number of them are unstable and shifting. Dune blowouts with shinnery oak and bluestem, either isolated or in dune complexes, are characteristic of the sand country.

The aspect vegetation is shinnery oak and bluestem. The deep sand community is a unique ecological area dominated by tall and mid grasses in a shortgrass ecosystem. The southern desert plains is characterized by such grasses as black grama, tobosa or galleta, and dropseed, but due to the sandy medium that occurs throughout the shinnery oak community, the dominant grasses are sand bluestem, little bluestem and three awn.

In many areas, the shinnery oak community has shifted from a dominant sand bluestem/little bluestem/hairy grama grassland with varying amounts of shinnery oak, sand sage and yucca. Composition is now dominated by sand dropseed, red and purple three awn and hairy grama, with increasing annual forbs, shinnery oak mesquite, sand sage and yucca.

Grassland is the climax vegetative aspect for large portions of the resource area. The grassland community group is the most widespread. It can be further subdivided into grass rolling upland, grass hill, grass flat, and mesquite grassland subtypes, depending on topographic relief or seral stage. In many areas the subtypes may overlap.

The grass rolling uplands is the predominant shortgrass habitat subtype in the resource area. It is found on broad, nearly level or gently undulating plains to rolling hills at elevations between 3,800 feet to 5,000 above sea level. Slopes are 0 to 9 percent. Vegetation is dominated by blue grama, black grama, galleta, tobosa, sideoats grama, dropseeds, muhlys, three-awns, burrograss, and fluffgrass.

Woody shrub species are scarce but include mesquite, fourwing saltbush, wolfberry, sumac, and cactus species such as yucca and cholla. Invasions of broom snakeweed, a halfshrub, are common in some areas. Forbs are a minor component of the subtype except following periods of rainfall. Ground cover may be too sparse in much of this subtype to provide the cover requirements of certain small mammals or ground-nesting birds.

Grassland is the most widespread of the community types found in the resource area. Approximately 30 percent (149) of the wildlife species found in the resource area use this community type.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Short term negative impacts would include vegetation disturbance that will be localized to the immediate area of the project. Vegetation will be destroyed where the pipeline trenches run and fence posts are set, but the disturbed area will naturally revegetate within two growing seasons with adequate precipitation. Approximately 72 acres of vegetation on public land will be subject to disturbance during the construction of the pipelines and fences, (based on the estimate of 11.89 miles * 50 ft. width). Positive long term impacts would include vegetation benefits due to the reduced stress caused by foraging animals. This will lower utilization levels around the current yearlong available water sources.

Impacts from the No Action Alternative

Direct and Indirect Impacts

Under the No Action Alternative, the pipelines and fences would not be constructed, and the associated impacts of that construction would not occur. The established sites for water needed for livestock and wildlife use would continue to be heavily utilized.

Cumulative Impacts

The proposed action would not contribute significantly to the cumulative impacts of the area. The results of the proposed action will not substantially change the plant and animal communities of the project area. However, decreasing the utilization levels near the existing water locations should aid in attaining increased plant vigor.

Mitigation Measures and Residual Impacts

No additional mitigating measures will be needed if the standard operation procedures and design features previously discussed are adhered to.

Implementation of the proposed action would have potential for unavoidable temporary adverse environmental impacts.

➤ Livestock Grazing

Affected Environment

All three allotments are permitted to be grazed yearlong by cattle. The permit for Allotment 65029 Wilcox Wells authorizes 232 Animal Units (AUs). The permit for Allotment 65032 Button Mesa authorizes 275 AUs. The lease for Allotment 65050 East Sand Tank authorizes 18 AUs.

The allotments contain about 16,485 acres of public land (see Location Map), 14,371 acres of private, and 19,118 acres of state land. Public landownership is intermingled with private and state land. Current range improvement projects for the management of livestock include earthen tanks, wells, and several drinking troughs with associated pipelines, pasture and boundary fences and corrals.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Under Alternative A, Proposed Action Alternative, no increase in AUMs will result. Grazing systems dependent on existing available waters will benefit by the additional flexibility provided by the more reliable location.

Impacts from the No Action Alternative

Direct and Indirect Impacts

Under the No Action Alternative, the fences and pipelines would not be constructed. Grazing systems would remain as they are. Livestock grazing would continue to rely on existing water points.

Cumulative Impacts

The incremental impact of authorizing range improvements must be analyzed in the context of impacts from other actions. Other BLM actions that could have impacts on the identified resources include: livestock authorization on other allotments in the area, oil and gas activities on the uplands, rights-of-way crossing the area and recreational use, particularly off-highway vehicles. All authorized activities which occur on BLM land can also take place on state or private lands.

Many of the actions which could contribute to cumulative impacts have occurred over many years. Impacts from open-range livestock grazing in the last century are still being addressed today. Oil and gas activity began in the early part of the 20th century. These activities are still occurring today, and are expected to continue into the foreseeable future.

The analysis of cumulative impacts is driven by major resource issues. The proposed action is the authorization of range improvements on three allotments. The cumulative impacts to this allotment and adjacent allotments are insignificant.

Mitigation Measures and Residual Impacts

No additional mitigating measures will be needed.

➤ Invasive, Non-Native Species

Affected Environment

A noxious weed is defined as a plant that causes disease or has other adverse effects on the human environment and is, therefore, detrimental to the public health and to the agriculture and commerce of the United States. Generally noxious weeds are aggressive, difficult to manage, parasitic, are carriers or hosts of harmful insects or disease, and are either native, new to, or not common, the United States. In most cases, noxious weeds are non-native species.

The list currently includes the following weeds: 1) African rue (*Peganum harmala*), 2) black henbane (*Hyoscyamus niger*), 3) bull thistle (*Cirsium vulgare*), 4) camelthorn (*Alhagi pseudalhagi*), 5) Canada thistle (*Cirsium arvense*), 6) dalmatian toadflax (*Linaria genistifolia* ssp. *Dalmatica*), 7) goldenrod, (*Solidago Canadensis*) 8) leafy spurge (*Euphorbia esula*), 9) Malta starthistle (*Centaurea melitensis*), 10) musk thistle (*Carduus nutans*), 11) poison hemlock (*Conium maculatum*), 12) purple starthistle (*Centaurea calcitrapa*), 13) Russian knapweed (*Centaurea repens*),

14) Scotch thistle (*Onopordum acanthium*), 15) spotted knapweed (*Centaurea maculosa*), 16) teasel (*Dipsacus fullonum*), 17) yellow starthistle (*Centaurea solstitialis*), 18) yellow toadflax (*Linaria vulgaris*), 19) Russian olive (*Elaeagnus angustifolia*), 20) Saltcedar (*Tamarix* spp.), 21) Siberian elm (*Ulmus pumila*).

Of the noxious weeds listed, the ones with known populations in the Roswell Field Office are African rue, non-native thistles (*Cirsium* spp.) such as bull thistle and Canada thistle, leafy spurge, poison hemlock, teasel, musk thistle, goldenrod, Malta starthistle, Russian knapweed, tamarix species, Siberian elm, Russian olive and Scotch thistle. Also "problem weeds" of local concern are cocklebur (*Xanthium* spp.), buffalobur (*Curcubita foetidissima*) and spiny cocklebur (*Xanthium spinosum*). "Problem weeds" are those weeds which may be native to the area but whose populations are out of balance with other local flora. Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Further, noxious weeds can negatively affect livestock and dairy producers by increasing their feed and animal health care costs. Increased costs to operators are eventually borne by consumers. Noxious weeds also affect recreational uses, and reduce realty values of both directly influenced and adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs using funds generated from the federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control prevention is not exercised.

There are known populations of African rue within the boundaries of Allotments 65029, 65032, and 65050.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

Noxious weeds affect both crops and native plant species in the same way, by out-competing for light, water and soil nutrients. Losses are attributed to decreased quality and quantity of agricultural products due to high levels of competition from noxious weeds and infestations. Noxious weeds can negatively affect livestock productivity by making forage unpalatable to livestock thus decreasing livestock productivity and potentially increasing producer's feed costs.

Impacts from the No Action Alternative

Direct and Indirect Impacts

While the vector of construction equipment would be removed under this alternative, noxious weed populations would still have the potential to become established, generally through vehicular traffic or seed movement carried by wildlife, wind or dust. Once established, noxious weeds would compete with the vegetation, reducing the habitat for wildlife.

Cumulative Impacts

Infestations of noxious weeds can have a potentially disastrous impact on biodiversity and natural ecosystems. In order to combat the negative effects of noxious weeds on crop lands, grazing lands and waterways, herbicidal and other weed control strategies can be implemented at further costs to

producers and government agencies. Such costs would then likely be passed down to consumers, who would pay more for products due to increased producer costs.

Mitigation Measures and Residual Impacts

There is an opportunity for noxious weeds to become established within the proposed range improvement route. Noxious weeds could be introduced by the equipment used for construction and fence removal. Monitoring the area after installing and removal will be conducted to ensure that weeds do not become established. If new populations are discovered, they will be aggressively treated.

3.4 Wildlife Biology

➤ Wildlife

Affected Environment

These allotments provide a variety of habitat types for terrestrial wildlife species. The diversity and abundance of wildlife species in the area is due to the presence of a mixture of grassland habitat and mixed desert shrub vegetation.

Avian species potentially occurring within these allotments based on the presence of suitable habitat include the lesser prairie-chicken, bobwhite quail, scaled quail, mourning dove, white-winged dove, road runner, western king bird, scissor-tailed flycatcher, ash-throated flycatcher, pyrrhuloxia, Scott's oriole, Bullock's oriole, Chihuahuan raven, turkey vulture, Harris' hawk, northern harrier, prairie falcon, Swainson's hawk, Ferruginous hawk, red-tailed hawk, golden eagle, merlin, American kestrel, barn owl, great horned owl, burrowing owl, lesser night hawk, various hummingbirds, horned larks, lark bunting, logger-headed shrike, cactus wren, western tanager, curve-billed thrasher, mocking bird, various warblers and sparrows.

Mammals known to occur throughout the allotments include various bats, mule deer, pronghorn antelope, javelina, desert cottontail, black-tailed jackrabbit, spotted ground squirrel, pocket gopher, porcupine, coyote, gray fox, bobcat, raccoon, striped and spotted skunk, wood rat and various other small rodents. Resident bats in the area tend to be Townsend's Western Big-eared (*Corynorhinus townsendii*), Cave Bat (*Myotis velifer*), Small-footed Bat (*Myotis celiolabrum*) and Mexican Freetail (*Tadarida brasiliensis*). None of these bat species are threatened or endangered. This is not a complete list, as there are other mammal species that are highly likely to occur on these allotments.

Herpetofauna (reptiles and amphibians) potentially associated with the allotment include the Couch's spadefoot toad, green toad, Red-spotted toad, plains leopard frog, collared lizard, Texas horned lizard, short-horned lizard, roundtail horned lizard, prairie lizard, Texas spotted whiptail, six-lined racerunner, western whiptail, little striped whiptail, great plains skink, leopard lizard, lesser earless lizard, dunes sagebrush lizard, side-blotched lizard, many lined skink, New Mexico milk snake, ringneck snake, Texas blind snake, glossy snake, longnose snake, plains black-headed snake, checkered garter snake, coachwhip, striped whipsnake, gopher snake, western hognose snake, common kingsnake, blackneck garter snake, western garter snake, western rattlesnake, and massasauga.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

There will be short-term disruptions to wildlife during the installation phase.

Impacts from the No Action Alternative

Direct and Indirect Impacts

Short-term disruptions to wildlife would be avoided during construction but wildlife would not benefit from the removal of 6.5 miles of fence.

Cumulative Impacts

Cumulative impacts is of no concern being that 6.5 miles of fence are being removed and only 5.5 miles of new fence is being constructed. The more fence removed the greater the benefit to LPC.

Mitigation Measures and Residual Impacts

No additional mitigating measures would be needed if the standard operating procedures and design features are adhered to.

➤ Threatened or Endangered Species

Affected Environment

Lesser Prairie-Chicken

The lesser prairie-chicken (LPC) is a species of prairie grouse endemic to the southern high plains of the United States, commonly recognized for its feathered feet, stout build, ground-dwelling habit, and elaborate breeding behavior.

The historic range of the LPC encompassed habitats with sandy soils supporting shinnery oak (*Quercus harvardii*)-bluestem (*Andropogon* sp.) and sand sage (*Artemisia filifolia*)-bluestem communities in the high plains of southeastern Colorado, southwestern Kansas, western Oklahoma, west Texas, the Texas panhandle, and eastern New Mexico. In New Mexico, Ligon (1961) reported the historic range as being the sandhill-bluestem plains, an approximately 120 km (75 mi) wide swath from the northeast border with Colorado to the southeast border with Texas and in northern De Baca County to 48 km (30 mi) west of Ft. Sumner.

In the 1920s and 1930s, the former range of the LPC in New Mexico was described as all of the sandhill rangeland of eastern New Mexico as far west as De Baca County. Ligon (1927) mapped the breeding range as encompassing portions of seven counties, a small subset of what he described as former range. In the 1950s and 1960s, occupied range was more extensive, indicating reoccupation of some areas. Presently, the NMDGF reports that LPCs are known from portions of seven counties and the occupied range of the LPC in New Mexico is estimated to encompass approximately 5,698 km² (2,200 mi²) (Davis 2006) compared with its historic range of 22,390 km² (8,645 mi²). Private and State land supports approximately 40 percent of the LPC population in New Mexico, with the remaining occurring on lands managed by BLM (Davis 2006). In the 1950s, the LPC population was estimated at 40,000 to 50,000 individuals, but by 1972 the population had declined to an estimated 6,000 to 10,000 individuals. NMDGF currently estimates the LPC statewide population to be about 9,443 individuals (Beauprez 2008).

In New Mexico, the most recent LPC population decline began in 1989. LPC counts on leks dropped dramatically in the BLM Caprock Wildlife Habitat Management Area and in west-central Lea County

(Smith et al. 1998). Estimated hunter harvest also declined sharply (Cowley 1995), resulting in closure of hunting seasons in New Mexico in 1996. Although the decline may have been precipitated by drought conditions and reduced nest success, it is also likely that population recovery during the drought was hampered by habitat fragmentation and low recruitment. Since 2005, weather conditions have improved resulting in population increases, and Federal and State agencies have focused staff time and funding to address habitat concerns. From 1998-2008 LPC populations within the core area of southern Roosevelt, northern Lea, and eastern Chaves counties have increased (Beauprez 2008). The LPC population south of U.S. Highway 380 in southeastern Chaves County has shown a significant decline over the same ten-year period, even though 5 leks were detected in 2008, the largest number of leks detected since 1998 (Beauprez 2008). In 1995, conservation interests petitioned the USFWS to list the LPC as a threatened species under the Endangered Species Act. In 1998, the FWS ruled that such a listing was warranted, but precluded by the need to devote limited agency resources to other higher priority species. The species is currently considered a candidate species for listing. The 2008 Candidate Notice of Review elevated the species to a Listing Priority Number of 2, the highest priority ranking as a candidate species.

On November 30, 2012, the USFWS published in the Federal Register a proposal to list the lesser prairie-chicken as federally threatened under the ESA of 1973. On March 27, 2014 the USFWS published in the Federal Register the final rule to list the lesser prairie-chicken as threatened under the Endangered Species Act. The Roswell Field Office received the concurrence letter from U.S. Fish and Wildlife Service on February 6th, 2015 for the effects determination of the Programmatic Biological Assessment for Livestock Grazing (Consultation Number 02ENNM00-2015-I-0175).

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

There should be no impacts to LPC from the proposed action. Construction will not occur between 3am and 9am from March 1st through July 15th. LPC will benefit from the removal of 6.5 miles of fence by reducing the chance of collision during flight.

Impacts from the No Action Alternative

Direct and Indirect Impacts

Cumulative Impacts

LPC would not benefit from the removal of 6.5 miles of fence and would continue to risk collision with these fences during flight.

Mitigation Measures and Residual Impacts

No construction during the hours of 3am-9am from March 1st through July 15th.

➤ Special Status Species

Affected Environment

The DSL is native to a small area of southeastern New Mexico and west Texas. A habitat specialist, the DSL only occurs in sand dune complexes associated with shinnery oak (Degenhardt et al. 1996), with areas often separated by large stretches of unsuitable habitat.

The DSL prefers active and semi-stabilized sand dunes associated with shinnery oak and scattered sandsage. The oaks provide dune structure, shelter, and habitat for the species' prey base. DSL are found in large dunes with deep, wind hollowed depressions called blowouts, where they remain under vegetation or loose sand during the hot part of the day and at night. These large, deep dunal blowouts (greater than 3 m deep and 32.9 m long) provide superior habitat with more area for cover (for thermoregulation and predator avoidance) and steeper slopes needed as breeding habitat. DSL avoid shallow blowouts.

DSL feed on ants, small beetles, crickets, grasshoppers, and spiders. Most feeding takes place within or adjacent to patches of vegetation, usually shinnery oak habitat. Individuals are diurnal and wary, and will seek protection and shelter in burrows, under the sand, beneath leaf litter, and under the shinnery oak canopy (BLM 2006). Within a dune complex, the shinnery flats between dune blowouts are used for movement by females seeking nesting sites and for dispersal of recent hatchlings (Painter 2007). Therefore, it is imperative that connectivity be considered across interdunal areas.

Conservation interests petitioned the USFWS to list the DSL as a threatened species under the Endangered Species Act. In 2001, the FWS ruled that such a listing was warranted, but precluded by the need to devote limited agency resources to other higher priority species. The species is currently considered a candidate species for listing. The 2008 Candidate Notice of Review retained the species at Listing Priority Number of 2, the highest priority ranking as a candidate species. On June 12, 2012 the USFWS, withdrew the proposed rule to list the dunes sagebrush lizard as endangered under the Endangered Species Act of 1973.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

There could be temporary displacement of DSL during construction but overall DSL would benefit from the removal of 6.5 miles of fence. Predatory birds have been known to use fences as perches to feed on DSL.

Impacts from the No Action Alternative

Direct and Indirect Impacts

There could be temporary displacement of DSL during construction but overall DSL would benefit from the removal of 6.5 miles of fence. Predatory birds have been known to use fences as perches to feed on DSL. There is only approximately 0.5 miles of fence being removed in DSL habitat and no new fence being constructed in DSL habitat.

Cumulative Impacts

If more fence is removed in suitable DSL habitat short term displacement could occur. However, the long term benefit from fence removal is greater than the short term effects.

Mitigation Measures and Residual Impacts

No blading, removal of vegetation or use of heavy equipment in suitable DSL habitat.

3.5 Paleontology

Affected Environment

The BLM manages paleontological resources for their scientific, educational, and recreational values in compliance with the Paleontological Resources Preservation Act (PRPA) of 2009. The PRPA affirms the authority for many of the policies the Federal land managing agencies already have in place for the management of paleontological resources such as issuing permits for collecting paleontological resources, curation of paleontological resources, and confidentiality of locality data. The statute provides authority for the protection of paleontological resources on Federal lands including criminal and civil penalties for fossil theft and vandalism.

The BLM classifies geologic formations to indicate the likelihood of significant fossil occurrence (usually vertebrate fossils of scientific interest) according to the Potential Fossil Yield Classification (PFYC) System for Paleontological Resources on Public Lands (IM 2008-011). These classifications, Classes 1 to 5, determine the procedures to be followed prior to granting a paleontological clearance to proceed with a project.

All paleontological resource stipulations will be followed as indicated in the attached COAs. These stipulations may include, but are not limited to, altering the location or scope of the project, permanent fencing or other physical, temporary barriers, monitoring of earth disturbing construction, project area reduction or specific construction avoidance zones, and fossil recovery. If the assessment of a proposed action indicates a reasonable expectation of adverse impacts to significant paleontological resources, a field survey will be necessary to properly document and recover any fossil material and associated data. Upon review, a determination for final project clearance and stipulations shall be issued by the BLM RFO.

Most of the project area is designated as a Class 2 area (Quaternary piedmont and alluvial deposits). Ground disturbing activities are not likely to disturb paleontological resources in this area.

Impacts from the Proposed Action Alternative

Direct and Indirect Impacts

The Potential Fossil Yield Classification (PFYC) data indicate the Proposed Action is within an area designated as Class 2. The Proposed Action would not affect any known scientifically significant paleontological resources, however, surface disturbing activities and increased human access could produce unexpected discoveries and potential paleontological resource damage. Direct impacts could include damage or destruction during construction, with subsequent loss of information. Indirect impacts would include fossil damage or destruction by erosion due to surface disturbance.

Impacts from the No Action Alternative

Direct and Indirect Impacts

By not approving the Grazing Permit under the No Action Alternative there would be no impact to paleontological resources in the area.

Cumulative Impacts

While it is likely that there will be no significant cumulative impact from the proposed action, surface-disturbing activities in this area may potentially have negative cumulative impacts on paleontological resources.

Mitigation Measures and Residual Impacts

If previously undocumented paleontological sites are encountered during surface disturbing activities, the project proponent will immediately stop all surface disturbing activities in the immediate vicinity of the discovery. The proponent will then immediately notify the paleontological monitor (if required) or the BLM RFO paleontology resource staff. It is necessary to protect fossil material and their geological context upon discovered during surface disturbing activities. The BLM RFO paleontology resource staff would then evaluate the site. Should the discovery be evaluated as significant, it will be protected in place until mitigation measures can be developed and implemented according to guidelines set by the BLM. Mitigation measures such as data and fossil recovery may be required by the BLM to prevent impacts to newly identified paleontological resources.

4.0 Supporting Information

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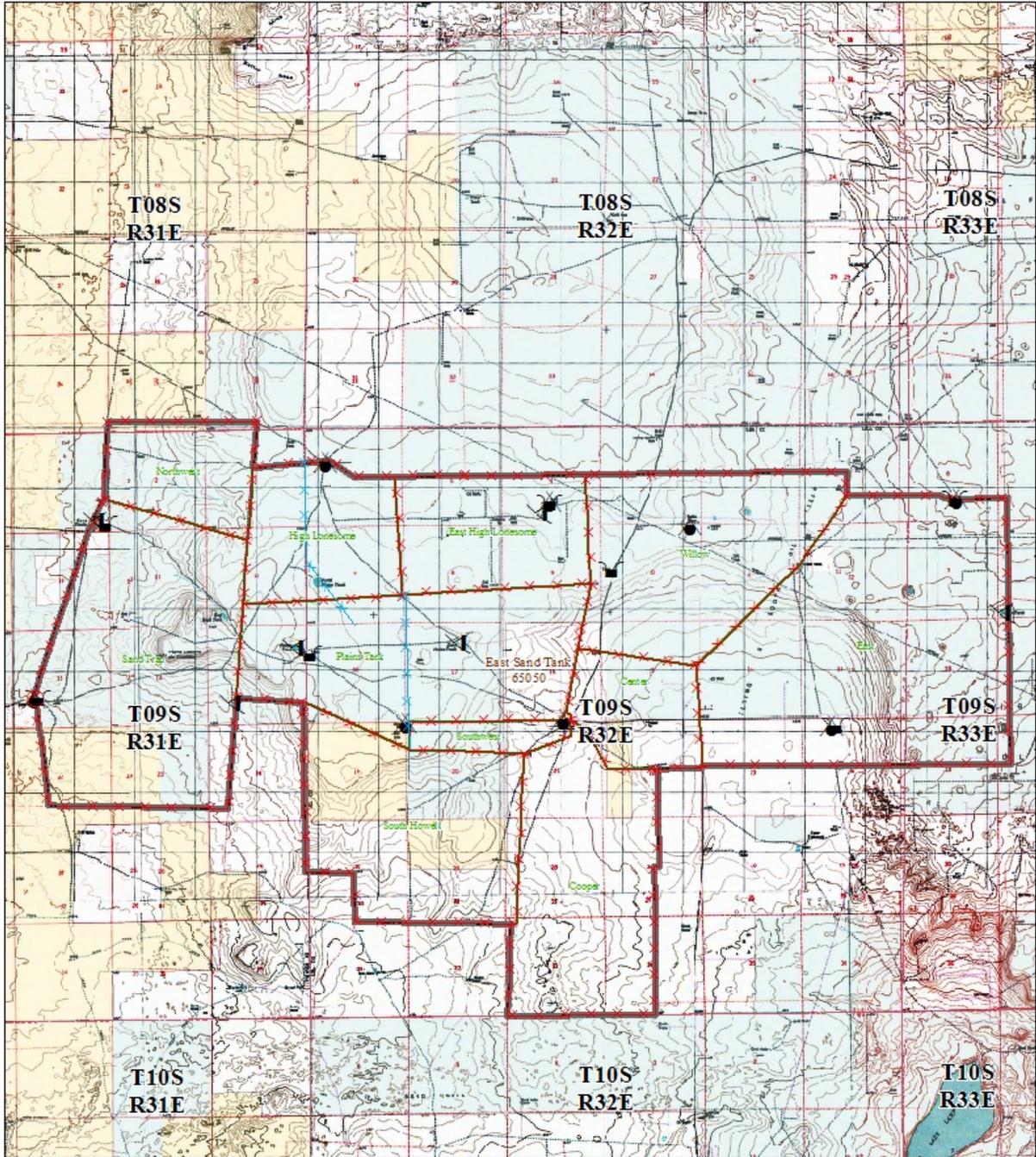
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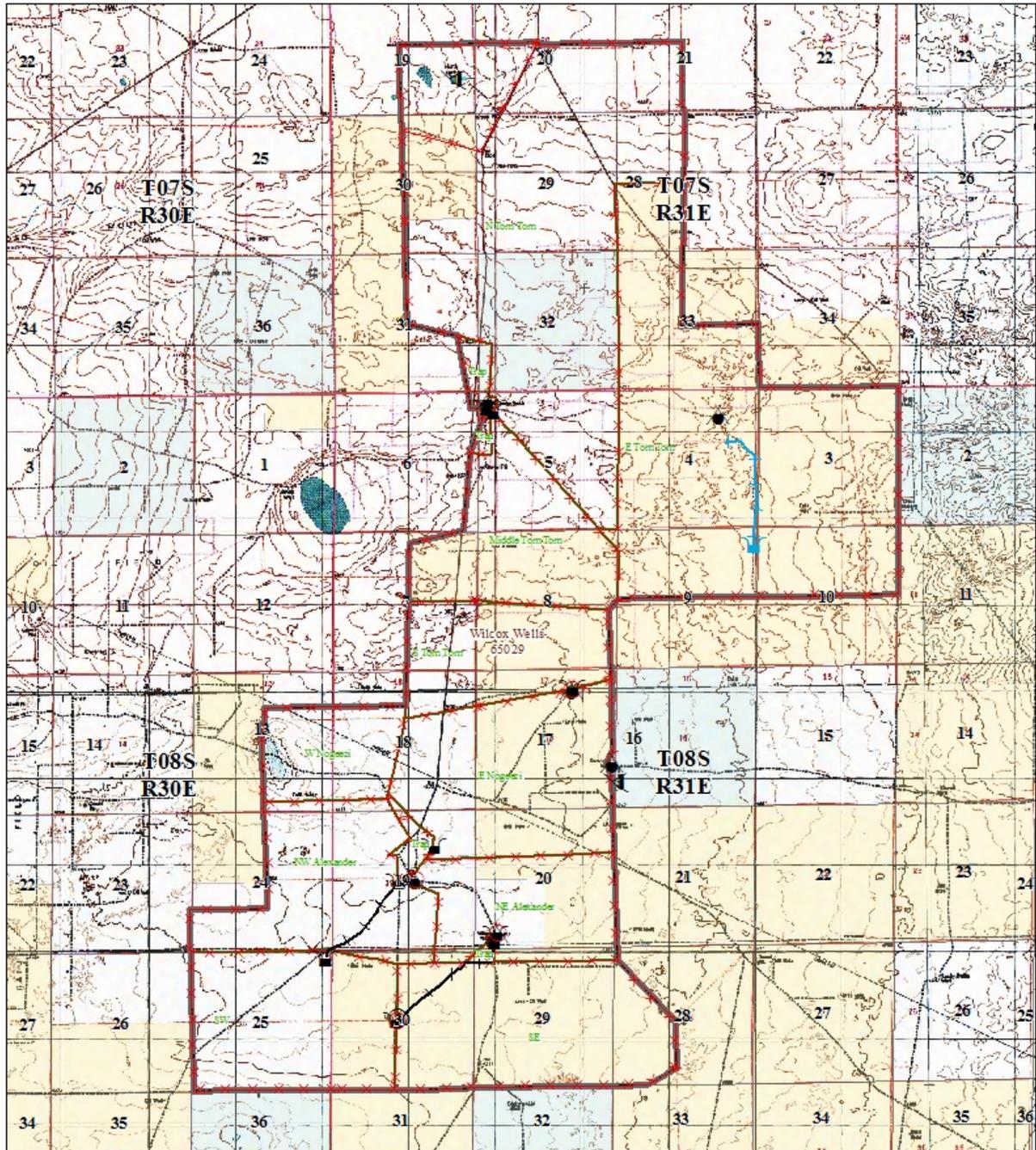





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65050 East Sand Tank LPC Fence Project

	Base Water		Grazing Allotments
	Retention Dam		Grazing Pastures
	Storage Tank		BLM
	Trough		Private
	Water Well & Storage		State
	Barbed Wire Fence		
	Proposed Fence		

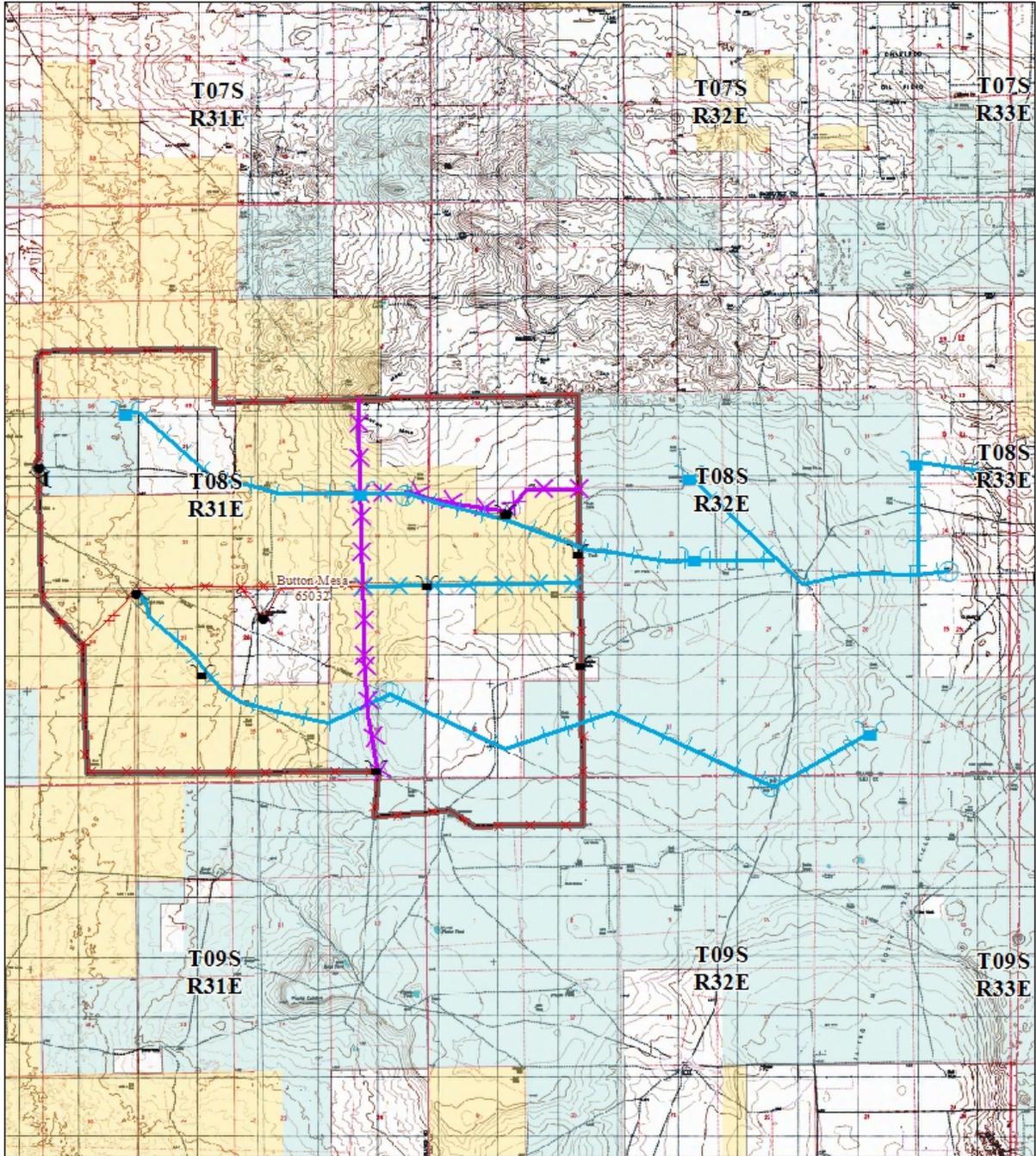





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65029 Wilcox Wells LPC Water Project

<ul style="list-style-type: none"> Proposed Drinker Proposed Pipeline Base Water Retention Dam Storage Tank Trough Water Well & Storage 	<ul style="list-style-type: none"> Barbed Wire Fence Water Pipeline Grazing Allotments Grazing Pastures BLM Private State
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65032 Button Mesa LPC Fence and Pipeline Project

Allotment
 BLM
 Private
 State

 Dirt Tank	 Proposed Fence	
 Proposed Storage	 Existing Fence	
 Proposed Trough	 Proposed Pipeline	
 Trough	 Proposed Removal	
 Water Well		

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