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Environmental Assessment

Dragoon Allotment

Livestock Water Pipeline Project

**Douglas Ranger District, Coronado National Forest
Cochise County, Arizona**

Township 16 South, Range 23 East, Sections 26-28, 32-35

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CHAPTER 1 – PURPOSE AND NEED

Background

This Environmental Assessment (EA) describes a Forest Service proposal to install a new livestock water pipeline and burying existing livestock water pipeline on the Dragoon allotment in the Dragoon Ecosystem Management Area (EMA), Douglas Ranger District, Cochise County, Arizona. The EA discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and one alternative (no action).

Federal actions such as the installation of a livestock pipeline must be analyzed to determine potential environmental consequences pursuant to the National Environmental Policy Act of 1969 (NEPA). Supporting documentation for this analysis is on file in the project planning record in the Coronado National Forest Douglas Ranger District Office in Douglas, Arizona. Throughout this EA, references to supporting documentation are shown in parentheses. For example, a reference “(PR 53)” would indicate that a specific passage in the EA is linked to information contained in document No. 53 in the project record.

Where consistent with other multiple use goals and objectives, there is congressional intent to allow grazing on suitable lands. (*Multiple Use and Sustained Yield Act of 1960, Wilderness Act of 1964, Forest and Rangeland Renewable Resources Planning Act of 1974, Federal Land Management and Policy Act of 1976, National Forest Management Act of 1976*). By regulation, forage-producing lands will be managed for livestock grazing where consistent with land management plans (*36 CFR 222.2(c)*). Where consistent with the goals and objectives of Land and Resource Management Plans, it is Forest Service policy to make forage from lands suitable for grazing available to qualified livestock operators (*FSM 2202.1, FSM 2203.1*).

Purpose and Need for Action

The Dragoon allotment includes land identified as suitable for grazing in the Coronado National Forest Land and Resource Management Plan. A need to provide livestock water to an existing pipeline and drinker system that waters portions of the Dragoon allotment arose due to the recent inability to use a private land source of water that once fed the system. Without a permanent, reliable source of water for livestock, the two pastures that are fed from the system cannot be included into a sustainable, predictable livestock rotation plan.

The purpose of the proposed action is to install a new livestock water pipeline that would connect an existing well and pipeline system to the system that was once fed from private land, as well as bury existing livestock water pipelines to protect and prolong the systems functionality.

Existing Condition

The Dragoon allotment, consisting of approximately 4,581 acres, is located on the northern end of the Dragoon Mountain Ecological Management Area (EMA) in the Upper San Pedro Watershed (Figure 1). Elevations across the Dragoon allotment vary from 4,750 feet at the northern Forest boundary to approximately 6,550 feet at the top of Dragoon Peak.

Lower elevations of the allotment support desert grasslands. At middle elevations, the grasslands transition into broadleaf evergreen woodlands and chaparral. Higher elevations support a plant community dominated by coniferous woodlands. There are several drainages on the allotment, some of which support small areas of riparian vegetation. There are no perennial streams and available water is limited to one ephemeral spring and existing livestock water developments.

There are five pastures, divided by fences in the lower country and by natural barriers in the higher elevations. The allotment, being permitted for livestock grazing yearlong, most recently has been grazed intermittently throughout the year and incorporated into the previous permittee's private and state-leased land pasture rotation. The most recent actual use and occupancy on the Forest averages 7-8 months per year.

Range NEPA analysis in the form of an Environmental Assessment and subsequent Decision Notice was completed on the Dragoon allotment in 1998, authorizing livestock grazing in a manner consistent with Forest Service policy and that maintains or improves the allotment resource conditions while achieving the objectives and desired conditions described in the Coronado National Forest Plan.

The determination of this analysis resulted in a Finding of No Significant Impact and through an Allotment Management Plan (AMP) livestock were authorized to graze on the allotment. An interdisciplinary approach was applied in the analysis in designing livestock management actions consistent with the Coronado National Forest Land Management Plan.

Monitoring data since 1998 indicates that resource conditions across the allotment are stable or improving. This is in concert with the objectives of the 1998 analysis. The most recent ecological condition data were collected on the allotment in 2009 and 2010 also substantiate these trends with vegetation condition on one site rated at a fair condition, and the other rated at a good condition (Dragoon allotment 2210). The allotment has not been used on a regular basis for several years due to its vacant status, until recently.

Management Direction

The proposed pipeline project falls within Forest Plan Management Area 4 (Figure 3). Management emphasis for this area is described below.

Management Area (MA) 4 includes a variety of vegetation types on lands under 40% slope. They are generally considered capable and suitable for livestock grazing. Management emphasis is on a "sustained harvest of livestock forage and fuel wood while maintaining or improving game animal habitat" (Forest Plan p. 62). Lower and mid-elevation uplands throughout the Dragoon EMA fall within MA 4.

Desired Condition

The Coronado National Forest Plan identifies the following goals for the range, wildlife, soil, water and lands, wilderness and recreation programs on the Forest (Forest Plan pp. 9-11).

- To restore rangeland to at least moderately high ecological condition (70% to 75% of potential production, fair range condition) with stable soil and a static to upward trend.
- Produce livestock products consistent with other resources and uses.
- Eliminate grazing from areas not capable of supporting livestock without significant detriment to range or other resources.
- Balance permitted grazing use with grazing capacity.
- Provide habitat for wildlife populations consistent with the goals outlined in the Arizona and New Mexico Department of Game and Fish Comprehensive Plans and consistent with other resource values.
- Allow the use of available National Forest lands for appropriate public or private interests consistent with National Forest Policies.
- Protect significant cultural resources from damage by project activities or vandalism.

Proposed Action

The Forest's proposed action is to construct and bury a new livestock water pipeline from an existing livestock water pipeline system to a separate existing livestock water pipeline system that is currently without a source of water. The proposal also includes the burying of the existing water pipelines that are currently on top of the ground. The pipelines are to be buried with heavy machinery. The proposed action is described in detail as Alternative 2 in Chapter 2.

Decision Framework

The Douglas District Ranger is the official responsible for decisions regarding installation of a new range improvement on the Dragoon allotment. Based on the results of the NEPA analysis, the Ranger will issue a decision document that includes a determination of the significance of the environmental effects and whether an environmental impact statement will be prepared. The decision will also include a determination of consistency with the Forest Plan, National Forest Management Act, National Environmental Policy Act and applicable laws, regulations and executive orders.

If the District Ranger determines it is not necessary to prepare an environmental impact statement, the Ranger will decide whether or not the proposed pipeline project will be implemented.

Public Involvement

The proposal was listed in the Schedule of Proposed Actions in January 2014. The proposal was combined with another proposal on the Middlemarch allotment, and was provided to the public and other agencies for a combined scoping and comment period in May and June,

2014 (PR 9). Five comment letters were received in response to scoping (PRs 13-17). Using the comments from the public and other agencies, the interdisciplinary team developed a list of issues to address (PR 18).

Issues

The Forest Service categorized and sorted comments received into issues and non-issues. Issues are defined as a concern or debate about the effects of the proposal. Issues were further categorized as key issues (significant issues used to develop alternatives to the proposed action) and other issues (concerns that are addressed through mitigation measures or project design). The effects analysis is built around the identified issues. Comments not considered issues to analyze in this EA were identified as those that were: 1) outside the scope of the proposed action and thus irrelevant to the decision being made; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) conjectural and not supported by scientific or factual evidence.¹ An analysis of the issues and scoping responses is included in the Record as PR 18.

Several issues arose, both through public input and internal discussions that led to the separation of the two proposals described in the scoping and comment document into separate analyses. It was determined that consultation with the US Fish and Wildlife Service would not be necessary for the Dragoon allotment proposal, but would be required for the proposal on the Middlemarch allotment. Due to the timelines required for consultation, it was decided to proceed with the Dragoon allotment proposal analysis by itself.

Key Issues

No additional issues were identified that could not be addressed through mitigation or project design modifications.

Other Issues

Other issues and concerns are identified below. Project design features and mitigation measures have been developed to address these other issues.

Wildlife – Installation of the pipeline may have an effect on the Mottled Rock Rattlesnake, a sensitive species. The construction of the pipeline may harm individuals as well as directly affect their habitat.

Soil and watershed condition – Slight soil disturbance would occur during and continue directly after the project implementation, but would subside quickly. This disturbance could contribute to increased localized erosion and airborne particulate matter.

Heritage Resources – Installation of the pipeline using heavy equipment could have a detrimental effect in cultural or historic resources.

¹ The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)..."

CHAPTER 2 - ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This chapter describes and compares the alternatives considered for the pipeline proposal. This section presents the alternatives in comparative form, in order to define the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public. Mitigation and monitoring measures incorporated into the alternatives are also described.

Alternatives

Alternative 1

No Action

Under this alternative, the proposed new pipeline installation and burial of existing pipelines would not occur. The pipelines that are already in place would remain on the surface of the ground, and the existing pipelines intended to supply water to the East and Far East pastures would remain without a source of water, rendering them ineffective. The rest of the water system on the allotment would be maintained as-is. By not providing water to those two pastures, they would not be able to be included in a predictable pasture rotation system for the entirety of the Dragoon allotment.

Alternative 2

The Proposed Action

The Forest Service, in cooperation with the grazing permittee, proposes to implement the following range improvement practices on the Dragoon allotment:

1. A new livestock water pipeline will be constructed from existing pipeline 152024 north approximately 1 mile to existing pipeline 152015 (see map below). The pipeline is to be buried at a depth of 16 inches minimum in an excavated trench or ripped in with heavy machinery and will be placed along existing Forest Road 689. This pipeline will provide water to two existing storage tank and trough systems in both the East and Far East pastures.
2. Existing pipelines 152013, 152023 and 152024, totaling approximately 2 ¼ miles in length, are currently on top of the ground and will be buried at a depth of 16 inches minimum in an excavated trench or ripped in with heavy machinery along their current routes (see map below). Burying this series of pipelines will protect them from vandalism, wildfire and other damage. It will also prolong the life of the pipelines while preventing freeze-up during the winter, greatly increasing the functionality of the system as a whole.

Mitigation Measures

The proposed action would be implemented according to the following mitigation measures and attached NRCS Pipeline Installation Standards for resource protection:

Air Quality

- Potential dust generated during pipeline construction will be mitigated by installing the pipeline when soil moisture is high enough to prevent excessive dust and/or controlled through standard dust abatement measures

Heritage Resources

- If any cultural resource sites are discovered during construction and/or ground disturbing activities, all operation in the immediate vicinity will immediately cease, and CNF will be contacted immediately.

Soils, Hydrology, Vegetation and Watershed

- Soils will be managed in accordance with direction from CNF Plan and will include actions to retain the soil during construction, and to stabilize soil post construction as recommended by the Arizona Department of Environmental Quality (AZDEQ).
- During and after completion of the project, Best Management Practices will be maintained as identified in Forest Service Handbook (FSH) 2509.22.

Wildlife

- The proposed pipeline route would be designed to avoid the destruction of agaves, an important food source for the endangered Lesser Long-Nosed bat

Monitoring of Resources

The USFS would monitor implementation of the proposed action. Other resource specialists would be involved and/or consulted in monitoring of specific measures relating to their particular resource area. Monitoring items are listed below.

- USFS Range and Watershed staff would designate and mark the specific route before construction begins.
- The USFS Range and Watershed staff would periodically monitor disturbed areas to determine need for additional measures and noxious weed control.
- The USFS Range and Watershed staff would periodically monitor effectiveness of erosion control measures following installation.

Comparison of Alternatives

The following table summarizes the findings of the effects analysis which are detailed in Chapter 3. Resources which show that there are no effects attributable to the Proposed Action or No Action are not elaborated upon in Chapter 3. Similarly, those resources which indicated there are no effects do not analyze cumulative effects. Resources which show that there are effects attributable to either the Proposed Action or No Action are further discussed in Chapter 3. Documentation of the effects analyses can be found in the project record.

Summary of Environmental Effects by Alternative

Resource	Alternative 1 No Action	Alternative 2 Proposed Action
Air Quality (no further analysis)	No Effects	<ul style="list-style-type: none"> No effects to air quality in the long term, however, some dust may be produced during the pipeline installation process Mitigation measures will be taken to minimize effects to air quality
Botany/Plants/Invasive Species (no further analysis)	No Effects	<ul style="list-style-type: none"> No Effects for Federally listed Threatened, Endangered, or Proposed plants. The proposed action would not contribute to the spread or establishment of invasive species
Engineering/Road Use (no further analysis)	No Effects	<ul style="list-style-type: none"> No Effects as the proposed pipeline will be buried in the margin of the existing road bed.
Environmental Justice (See Chapter 3 for further analysis)	No Effects	<ul style="list-style-type: none"> No Effects
Fire/Fuels (no further analysis)	No Effects	<ul style="list-style-type: none"> No Effects
Fisheries (no further analysis)	No Effects	<ul style="list-style-type: none"> No Effects for Federally listed Threatened, Endangered or Sensitive aquatic species.
Heritage/Tribal (see Chapter 3 for further analysis)	No Effects	<ul style="list-style-type: none"> Cultural Resources Report No. 2014-05-076 documents the results of a cultural resources survey for the proposed action finding that no historic properties would be affected by the proposed action. Design criteria were modified to eliminate effects to heritage or cultural resources
Recreation/Lands/Special Uses (No further analysis)	No Effects	<ul style="list-style-type: none"> No effects
Minerals (no further analysis)	No Effects	<ul style="list-style-type: none"> No Effects
Range Management (see Chapter 3 for further analysis)	<p>By not installing the proposed pipeline, the water systems in the East and Far East pastures would be ineffective.</p> <p>By not burying the existing pipelines,</p>	<ul style="list-style-type: none"> Installing the proposed pipeline would allow livestock to access the East and Far East pastures, distributing the grazing pressure across all of the pastures on the allotment. Burying the existing pipelines would help to protect the

Resource	Alternative 1 No Action	Alternative 2 Proposed Action
	weather and vandalism can compromise the infrastructure that is in place	investment in the infrastructure already on the allotment while lessening the maintenance requirements in the future.
Soils (See Chapter 3 for further analysis)	No Effects	<ul style="list-style-type: none"> • No long-term effects, but some soil disturbance and localized erosion may occur during and immediately after construction • Mitigation measures recommended by the Arizona Department of Environmental Quality (AZDEQ) will be adhered to during construction • NRCS Standards for livestock pipeline construction will be adhered to
Water Resources/Riparian (No Further Analysis)	No Effects	<ul style="list-style-type: none"> • No Effects, no riparian areas within project area
Wildlife (see Chapter 3 for further analysis)	No Effects	<ul style="list-style-type: none"> • No Effects for Federally listed Threatened, Endangered, or Proposed wildlife species. • Mitigation measures will be followed to minimize effects to wildlife • May Adversely Impact Individuals, but is not likely to result in a loss of viability nor cause a trend towards federal listing or a loss of species viability for the Mottled Rock Rattlesnake, a Region 3 Sensitive species.
Wilderness, Wilderness Study Areas, Wild and Scenic Rivers, Research Natural Areas, and Roadless Areas (See Chapter 3 for further analysis)	No Effects	<ul style="list-style-type: none"> • The proposed action would not create any roads, specifically within the Roadless Area • The proposed action doesn't lie within any Wilderness area, Wilderness Study Area, Wild and Scenic River or Research Natural Area

CHAPTER 3 - ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, and social environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in the chart above. The section is organized by resource.

Within each section, the affected environment is briefly described, followed by the environmental consequences (effects) of implementing each alternative.

Past, present and future activities identified for consideration of cumulative effects

Cumulative effects are the past, present and reasonably foreseeable future actions that add to the direct and indirect effects considered in this EA. If a resource indicated there are no direct or indirect effects, then no cumulative effects were analyzed. The following activities have been identified as potentially contributing to the effects analyzed herein. These activities and occurrences have contributed incrementally to changes in ecological conditions in the project area and may continue to influence conditions in the project area over the term of the project. Foreseeable future actions are those for which a proposed action has been approved or those proposed for NEPA analysis in the future. No additional activities that would affect resources in the project area are listed in the Forest's July 2014 Schedule of Proposed Actions. Other possible future actions are considered too speculative to include in this analysis.

Historic uses. Livestock grazing has occurred within the analysis area for over 100 years (Bahre 1985). In the late 1800s, widespread unregulated grazing resulted in erosion, heavy surface runoff, flooding and down-cutting of streams throughout the southwest. Livestock consumption of herbaceous fine fuels, combined with active fire suppression beginning in the early 1900's has likely contributed to a decreased fire frequency and subsequent invasion of many grasslands by woody plants. The introduction of exotic grasses, most notably Lehmann lovegrass, has resulted in the displacement of native perennial grasses in some sites. The effects of these activities and events are still evident in the project area. The proposed action is designed to correct the effects of historic management, but these effects will likely continue to influence resource conditions, especially soil condition, for the foreseeable future.

Mining activity occurred within the area from the mid 1800's into the 1960's. The effects of historic surface and underground mining are still in evidence, primarily in the form of disturbed soils. At the turn of the 20th century, the mountains were extensively logged to provide fuelwood for mines and mills in nearby Tombstone and other towns. The depletion of fuelwood was the major incentive for the creation of the Dragoon National Forest in 1907.

Human Activities. Authorized activities in the project area include camping, hiking, hunting, wildlife watching and vehicle use on surfaced and unsurfaced roads. Impacts from these activities are short term and primarily consist of minor ground disturbance in popular

camping areas and minor wildlife disturbance. There are no developed recreational facilities (campgrounds and picnic areas) in the project area (a campground is located in Cochise Stronghold outside of the area). Private land inholdings are scattered throughout the area. Uses on these lands are largely rural and many are managed as part of ongoing grazing operations.

The Dragoon Mountains receive use by undocumented immigrants, smugglers and associated law enforcement and interdiction efforts (primarily U.S. Border Patrol). Individuals involved in these activities create trails and campsites which result in localized soil disturbance. Abandoned warming fires have been known to cause wildfires in other locations on the forest.

Wildlife

Affected Environment

Management of wildlife species and habitat, and maintenance of a diversity of animal and plant communities is an important part of the mission of the Forest Service. Management activities on NFS lands must be planned and implemented so that they: do not jeopardize threatened or endangered species; lead to a trend toward federal listing under the Endangered Species Act (ESA); or lead to a trend of loss of viability of Regional Forester's Sensitive species (RFSS). In addition, management activities should be designed to maintain or improve habitat for Management Indicator Species (MIS) to the degree consistent with multiple-use objectives established in the Forest Plan.

Environmental Consequences

Alternative 1 – No Action

Under the No Action alternative, there would be no effects to Forest sensitive or Federally listed Threatened, Endangered, or Proposed wildlife species, or their habitat. The existing system that is in place would remain without a source of water, and would not provide water for wildlife species.

Alternative 2 – Proposed Action

A detailed analysis of all applicable ESA and RFSS can be found in the Wildlife Report, a part of the Project Record. As mentioned in the wildlife report, there are some threatened and endangered species which are known to use/forage within the project area. However, there is no critical habitat within the project boundary. Only one sensitive species has the potential to have known individuals or habitat within the project area (Mottled Rock Rattlesnake). The Mottled Rock Rattlesnake was determined to have potential for effects from construction of the new pipeline and burial of the existing pipeline. As mentioned in the wildlife report, this project will likely impact individuals and their habitat, but will not trend toward federal listing or loss of viability. MIS species were determined to have no effect from the proposed action.

The attached analysis discloses general effects of the installation and burial of the Dragoon allotment pipelines on wildlife habitat as well as summary of specific effects disclosures to the Mottled Rock Rattlesnake.

Cumulative Effects

The effects of past activities including livestock grazing, wildfire suppression and mining will continue to affect resource conditions into the foreseeable future. Lehmann lovegrass occurs throughout lower elevations in the analysis area. Cattle can contribute to the distribution of invasive plant seeds and can disturb soils, thereby creating conditions conducive to the growth of invasive plants. Monitoring of rangeland by the Forest Service and the permittee will lead to early identification of invasive exotic plant populations. No future actions have been identified that would contribute significant cumulative effects.

Ongoing activities such as hiking, hunting and vehicle driving are expected to continue within the project area over the life of the project. Hunting is regulated by the Arizona Game and Fish Department and is restricted to relatively few hunters, generally during the fall and winter. Hiking and off-highway vehicle driving occur year-round, but levels of activity are low and confined to a few roads and trails. Minor disturbance associated with smuggling and interdiction efforts will continue.

These activities and occurrences have contributed incrementally to changes in wildlife habitat conditions in the project area and may continue to influence conditions in the project area over the term of the project. However, because no significant direct or indirect effects of the proposed action and alternatives are anticipated, none of the alternatives is expected to contribute cumulatively to the effects of past actions.

Range Management

Affected Environment

The Dragoon allotment is an active livestock grazing allotment, although it is temporarily in a vacant status. The most recent term grazing permit, authorizing 75 head of cattle yearlong, was cancelled due to a violation of the terms and conditions of the permit by the most recent permittee. During the past two years, however, the neighboring permittee (Fourr allotment) has been authorized to graze livestock on a seasonal basis on the allotment, incorporating Forest and non-Forest pastures into a rest rotation grazing system. The most recent actual use and occupancy on the Forest averages 7-8 months per year.

There are five pastures on the allotment, divided by fences in the lower country and by natural barriers in the higher elevations. There are several unreliable earthen stock tanks across the allotment, one ephemeral spring, and several extensive pipeline systems, including storage tanks and drinkers, that supply livestock water. The water for the majority of the pipeline systems originates from a well on Forest Service land, pumped with a solar pumping plant. A critical pipeline system that supplies water to portions of the East and Far East pastures is currently without a source of water due to the loss of a private land well source.

Lower elevations of the allotment support desert grasslands. At middle elevations, the grasslands transition into broadleaf evergreen woodlands and chaparral. Higher elevations support a plant community dominated by coniferous woodlands. There are several drainages on the allotment, some of which support small areas of riparian vegetation. There are no perennial streams and available water is limited to one ephemeral spring and existing livestock water developments.

Range NEPA analysis in the form of an Environmental Assessment has been completed on the Dragoon allotment in 1998. The determination of this analysis resulted in a Finding of No Significant Impact and through an Allotment Management Plan (AMP) livestock were authorized to graze on the allotment. An interdisciplinary approach was applied in the analysis in designing livestock management actions consistent with the Coronado National Forest Land Management Plan (CNFLRMP) 1986, 1997).

Ecological condition data were collected using the dry weight rank methodology in 2009 and 2010. Resource conditions are considered stable or improving, although vegetation condition on some sites was rated poor due to the extensive presence of Lehmann lovegrass.

Environmental Consequences

Alternative 1 – No Action

By not installing the proposed pipeline, the water systems in the East and Far East pastures would remain without a source of water, and would remain ineffective. By not providing the East and Far East pastures with livestock water, the pastures would not be able to be grazed reliably, if at all. Livestock distribution in the pastures would be limited to the areas relatively adjacent to available livestock water in other pastures, and trailing may occur. By not burying the existing pipelines, the potential for weather and vandalism to compromise the infrastructure increases. This affects the integrity and reliability of the system as a whole.

Alternative 2 – Proposed Action

Installing the proposed pipeline would provide a reliable, permanent source of water, originating from a Forest Service owned well, allow livestock to access the East and Far East pastures, distributing the grazing pressure across all of the pastures on the allotment. Burying the existing pipelines would help to protect the investment in the infrastructure already on the allotment while lessening the maintenance requirements in the future.

Soil Condition

Affected Environment

In 2013 a draft Terrestrial Ecosystem Draft Inventory was conducted by the Forest Service (excerpt, PR 23). The geology underlying the project area is generally granite, limestone and alluvium that originated in the upper reaches of the mountain. In general, the soils range from sandy loams to sandy clay loams, often calcareous, from very shallow to moderately deep, occurring on gently sloping (0 to 15 percent) to moderately sloping (15 to 40 percent), undulating alluvial fan aprons and lower mountain base slopes.

Environmental Consequences

Alternative 1 – No Action

Under the no action alternative, the soil surface will remain in its current condition and will not be disturbed.

Alternative 2 – Proposed Action

The proposed action would involve a small amount of short-term soil disturbance, very localized to the pipeline route. The burial of the pipeline will be completed in one of two ways:

- A tracked dozer pulling a single ripper shank that has been modified with a steel “shoe” that the pipeline feeds down through. As the ripper is pulled through the ground, the friction of the soil on the pipeline holds it in place as the dozer moves, effectively depositing the pipeline under the soil surface.
- A trencher, backhoe or excavator will excavate a ditch, depositing the soil adjacent to the ditch, and after the pipeline is laid in the ditch, the soil will be replaced.

The proposed action would be carried out according to the NRCS Standard for Livestock Pipelines and Best Management Practices, mitigating any effects to soil and rendering the effects unmeasurable. Where necessary during construction, water bars or erosion control structures will be placed to prohibit erosion. Also, appropriate signage will be installed where necessary to prevent off-road travel along pipeline route.

Cumulative Effects

The effects of past activities including livestock grazing, wildfire suppression and mining will continue to affect soil conditions into the foreseeable future. Historic fuelwood harvesting both for mining and personal uses was conducted prior to the implementation of Best Management Practices. This has contributed to historic soil loss. Soil loss is likely irretrievable in human time frames, so historic activities will continue to affect soil conditions in the area. Ongoing activities such as dispersed recreation, smuggling and traveling on existing roads will continue to affect soil condition in small areas where these activities are concentrated. No future activities are identified that would affect soils in the project area. The proposed action is designed to minimize or mitigate direct and indirect soil effects, and therefore would not contribute significant cumulative effects.

Special Management Areas

Affected Environment

The Dragoon Mountains do not contain designated wilderness, wild and scenic river segments, research natural areas, zoological botanical area or other areas that would require special management by regulation or Forest Plan direction. However, portions of the project area fall within inventoried roadless areas (Figure 4). Inventoried roadless areas are managed to preserve their roadless characteristics (FSM 1925.03, WO Interim Directive 1920-2006-1). Roadless area characteristics are defined in the 2001 Roadless Rule (36 CFR Part 294, Subpart B) as the following: (1) High quality or undisturbed soil, water and air; (2) Sources of public drinking water; (3) Diversity of plant and animal communities; (4) Habitat for

threatened, endangered, candidate and sensitive species dependent on large, undisturbed areas of land; (5) Primitive, semi-primitive non-motorized and semi-primitive motorized classes of dispersed recreation; (6) Reference landscapes; (7) Natural appearing landscapes with high scenic quality; (8) Traditional cultural properties and sacred sites; and (9) Other locally identified unique characteristics.

Environmental Consequences

Neither alternative would result in the construction of new roads or the maintenance of existing roads within inventoried roadless areas. Therefore, there will be no direct, indirect or cumulative effects on the roadless status or roadless characteristics of the IRAs.

Heritage Resources

Affected Environment

Heritage resources (also called “cultural resources”) include archaeological and historical sites and other properties important to maintaining the traditional beliefs and lifeways of local social groups (“traditional cultural properties”). Archeological surveys in Forest Service files have recorded several sites adjacent to the project area. Most of the recorded sites represent the remnants of pre-European contact occupation and use by indigenous people of the area. These sites include mainly lithic scatters. The remaining sites are associated with occupation during the Historic Period and include structures and numerous 19th century artifacts. The Dragoon Springs Stage Station, listed on the National Register of Historic Places, is located directly adjacent to the proposed project.

Environmental Consequences

Construction of range improvements can directly damage artifacts or structures and alter their spatial relationships. These impacts can compromise various aspects of the integrity of historic properties and diminish their research and interpretive potential.

Cultural Resources Report No. 2014-05-076 documents the results of a cultural resources survey for the proposed burial of several water pipelines within the Dragoon grazing allotment. The pipelines are located near Dragoon Springs, within the Douglas Ranger District of the Coronado National Forest. The pipeline locations were surveyed for cultural resources, and no historic properties were identified within the area of potential effects. The report determined that no historic properties would be affected by the proposed action, and it was approved by the Forest Archaeologist and the Forest Supervisor on September 5, 2014.

In Section IV-E of the *Forest Service Region 3 Programmatic Agreement (PA) with State Historic Preservation Officers in Arizona, New Mexico, Texas, and Oklahoma*, the FS and SHPO have agreed that when a project results in a determination of “no historic properties affected,” the undertaking may proceed following approval of the inventory report by the Forest Archaeologist or other authorized FS professional cultural resource specialist and approval of the undertaking by the Forest Supervisor. For these reasons, no further National Historic Preservation Act review and consultation is required. Also, there are no extraordinary circumstances that may result in adverse effects on American Indian religious and cultural sites.

Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Executive Order 12898 (February 11, 1994) directed all Federal agencies to evaluate their proposed actions to determine the potential for disproportionate adverse impacts to minority and low-income populations. The memorandum from the President to heads of departments and agencies that accompanied the Executive Order states that “each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by [NEPA].”

The project area is located in rural Cochise County. The area is sparsely populated, primarily by ranchers and a few owners of private parcels adjacent to Forest Service lands. Selection of any of the alternatives would not result in adverse or disproportionate effects on low income or minority populations. The alternatives, including the no action alternative, are consistent with activities that have been implemented throughout the Coronado National Forest over many years. As such, the effects are predictable. There would be no displacement of minorities or increases in taxes or fees that would constitute an economic hardship to minorities under any of the alternatives. There would be no effects to public health. Therefore, disproportionate direct, indirect or cumulative adverse impacts on low income or minority populations would not occur.

CHAPTER 4 - CONSULTATION AND COORDINATION

ID TEAM MEMBERS:

Kevin P. Warner, District Ranger Douglas Ranger District	Responsible Official
Joseph E. Harris, Team Leader	Team Leader, Proposed Action, Rangeland, Soils, Air and Watershed Analysis, Writer/Editor
Reuben Gay, Wildlife Biologist Douglas Ranger District	Wildlife Analyses
David Mehalic, Zone Archeologist, Douglas/Nogales/Sierra Vista Ranger Districts	Heritage Resource Analysis

The Forest Service consulted the following Federal, State, and local agencies and organizations during the development of this environmental assessment.

Due to the determination that no cultural or historic properties would be affected, consultation with the State Historic Preservation Office was not required. It has also been determined that there are no extraordinary circumstances that may result in adverse effects on American Indian religious and cultural sites, so consultation with the tribes was also not required.

Several individuals not identified specifically below also participated in this process.

FEDERAL, STATE, AND LOCAL AGENCIES:

Arizona Department of Environmental Quality
Arizona Game and Fish Department
USDI Fish and Wildlife Service
Hidalgo County, New Mexico

OTHERS:

Center for Biological Diversity
Jeff Burgess

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