



Scoping Document

United States
Department of
Agriculture

Forest Service

Four Mile Hill Habitat Improvement Project

September 2015

Humboldt-Toiyabe National Forest
Bridgeport Ranger District

Lyon County, Nevada

Comments Welcome

The Bridgeport District Ranger welcomes your comments on the proposed Four Mile Hill Habitat Improvement Project which is located on National Forest System land within the Humboldt-Toiyabe National Forest. This project proposes to improve approximately 3,800 acres of Bi-State sage grouse habitat by removing pinon-juniper that is encroaching into sagebrush ecosystems.

For detailed information on how to provide comments please refer to the "Comment Process" section of this document.

This document initiates the scoping process pursuant to Council on Environmental Quality regulations at 40 CFR 1501.7.

Location

The Four Mile Hill project area is located within Lyon County, Nevada, approximately 20 miles north of Bridgeport, California and 5 miles south east of Wellington, Nevada.

The legal description is T9N, R24E sections 1, 2, 3, 4, 8, 9, 10, 11, 12, 13, 14, 15, 23 and T9N, R25E, section 7, Mount Diablo Meridian. Figure 1 is a vicinity map of the Desert Creek project area.

Purpose and Need

The Four Mile Hill project is a critical part of a comprehensive interagency strategy to provide for the long-term conservation of the Bi-State sage-grouse and its habitat through the implementation of a framework of habitat improvement treatments, administrative actions, monitoring, and research actions, identified in The Bi-State Action Plan (BTACNC 2012a). Actions identified in the Plan include developing and implementing site specific treatments designed to maintain, improve, or restore key seasonal ranges and habitat connectivity within and among breeding populations based on restoration potential.

The U.S. Fish and Wildlife Service proposed to list the Bi-State DPS of the greater sage-grouse as threatened in October 2013. In May of 2015 the USFWS withdrew the proposed rule to list the Bi-State DPS of greater sage grouse in California and Nevada as threatened under the Endangered Species Act of 1973, as amended (Act), as well as the proposed rule under section 4(d) of the Act and to designate critical habitat for the Bi-State DPS of greater sage grouse. The withdrawal in part was based on the following determination: “We find the best scientific and commercial data available indicate that the threats to the DPS and its habitat, given current and future conservation efforts, are reduced below the statutory definition of threatened or endangered.”

Threats identified in the original proposal to list included habitat loss caused by development, grazing, invasive species, piñon-juniper encroachment, and wildfire.

Piñon-juniper encroachment results in loss and fragmentation of suitable habitat for sage-grouse through removal of understory shrubs, grasses, and forbs needed for adult and chick survival, loss and drying of meadow (brood-rearing) habitat, increases in perching opportunities for raptors (increased predation rate), sage-grouse avoidance of piñon-juniper stands (Cassaza et al. 2011, Doherty et al. 2008, and Freese 2009), and increased risk of high severity wildfire (Bi-State Action Plan, 2012).

Piñon-juniper expansion in Bi-State sage grouse habitat has negatively impacted shrub-steppe vegetation. This is exhibited by declining habitat effectiveness and associated increases in hazardous woody fuels, losses of sagebrush habitats for sage dependent species, decreases in species diversity, reduction or loss of sage brush ecosystem seed banks,

decreases in aquifer recharge, and increases in soil erosion rates (Koniak and Everett 1982, Wilcox and Breshears 1994, Davenport et al. 1998, West 1999, Miller et al. 2000).

The Bi-State Acton Plan (BTACNC 2012a.) identified pinyon-juniper expansion as a high level of threat for 5 of the 6 Bi-State sage grouse population management units (PMUs) within the analysis area. Specific conservation goals identified in the Bi-State Action Plan include:

1. “Ensure no net-loss of greater sage-grouse breeding populations in the Bi-State Plan Area.”
2. “Maintain and improve sagebrush and associated habitats to provide for the long term viability of greater sage-grouse populations within the Bi-State Plan Area.

The Four Mile Hill Project area is located within the Desert Creek portion of the Desert Creek-Fales Population Management Unit (PMU). There is currently one active lek within 2 miles of the Four Mile Project Area. The project area provides priority Bi-State sage grouse breeding, nesting and winter habitat. The Bi-State action plan states that in the Desert Creek portion of the PMU,” piñon - juniper encroachment has occurred in both upper and lower elevations adversely affecting nesting and winter habitats”. The proposal is to treat approximately 3,800 acres of priority Bi-State sage grouse nesting and winter habitat by removing pinon and juniper that is currently encroaching into the sagebrush habitat.

Objectives of the Project:

- Enhance sagebrush ecosystems and increase habitat suitability for Bi-State sage grouse by reducing piñon juniper encroachment in priority habitat.
- Increase the survival rate of Bi-State sage grouse by reducing perching opportunities for predators.
- Minimize the probability of large scale habitat loss due to wildfire, by reducing fuels.
- Treat up to approximately 3,800 areas using hand and mechanical treatments and pile burning.

Proposed Action

The Forest Service proposes to use a combination of hand cutting, mechanical methods, and pile burning to treat approximately 3,800 acres. Treatment methods are described below.

- **Hand Felling, Lop Limbs and Scatter**—Hand crews would use chainsaws and/or hand tools to fell trees and severe limbs from tree boles. Limbs would be lopped and scattered so they are within 18 inches of the ground or no higher than surrounding sagebrush height and in natural openings to facilitate decomposition. This method would be the sole treatment on approximately 3,670 acres of the project area - with 3,645 acres occurring in phase 1 areas and 25 acres occurring in phase 2 areas. The phase 2 areas would include areas that are isolated or less than an acre in size, some limbs would be pulled to the edges of the phase boundary to reduce fuel loadings. This treatment method may also be used in other areas proposed for mechanical treatment or pile burning.

- **Mechanical Treatment**—Mastication or chipping equipment would be used in 7 units totaling approximately 130 acres within Phase 2 areas. With mastication equipment whole standing trees would be ground and the shredded material left on-site. Use of chipping equipment involves felling trees by hand and hand feeding the cut woody material into a chipper with the chipped wood debris left onsite.
- **Hand Fell, Pile and Burn**—Hand crews would use chainsaws and/or hand tools to fell trees within phase II areas that are not suitable for mechanical treatment or too dense to lop and scatter. Limbs and possibly whole trees (bucked up), would be piled. Pile diameter would be between 6 and 10 feet. Wherever possible, piles would be constructed on top of cut stumps and in openings created by removing larger trees. Piles would be burned under favorable conditions once the material has cured.

In areas where wood is accessible along existing roads, tree boles may be removed as fuelwood and slash and boles may be chipped or utilized as biomass or biochar utilizing permits, contracts, and agreements, including stewardship.

For this analysis the following phase definitions are being used:

Woodland succession Phase 1(1)	Trees are present, but shrubs, grasses, and forbs dominate the vegetation that influences ecological processes (hydrology, nutrient cycles, and energy capture) on the site.
Woodland succession Phase 2(1)	Trees co-dominate with shrubs, grasses, and forbs. All vegetation layers influence ecological processes. Trees grow fast (have pointed tops), and bigger trees may produce many berries or pine nuts. Late Phase 2 has more fuel, produces more heat during fire, and has weaker understory vegetation for site recovery

(1) Adapted from Miller, et al.

After initial treatments, follow-up maintenance removal of piñon and juniper newly established from seed or missed in the initial treatment would be done by hand as needed to reduce future encroachment. Hand crews would use chainsaws and/or hand tools to fell trees, lop limbs and scatter from tree boles. Slash would be scattered to within 18 inches of the ground or no higher than surrounding sagebrush height and in natural openings to facilitate decomposition. All maintenance would follow the design features approved in the final decision.

Design Features

Below are proposed design features. These features may be changed as the analysis progresses. Specifically, any new design features from the Bi-State Sage-grouse Record of Decision would be included prior to the signing of any decision for this project.

General

- No permanent or temporary roads would be constructed.

- Treatments within the project area would require vehicles to travel off designated motorized travel routes if specifically authorized. Following completion of mechanical treatments, any routes used by vehicles off of established roads would be blocked and reclaimed to ensure that unauthorized roads and or trails do not develop.
- Area closures may be implemented to provide for public safety during treatment operations.
- Different routes within treatment units would be used to avoid creating the appearance of trails.
- Debris would be spread and berms shoveled down to retain a natural appearance

Water and Soils

- Generally, mechanical equipment would operate on slopes less than 35 percent (30 percent on decomposed granite soils). Ground-based operations may occur on steeper slopes if ground conditions allow. Exceptions would be designed on a unit-by-unit basis only after soil stability, soil rock content, and the location of the steep slope in relation to the remaining portions of the treatment unit have been determined by the Forest Service to be appropriate.
- No trees would be removed where they provide stream bank stability.
- Ground-based equipment, including pickups, must use designated stream crossings.
- Pile burning would be minimized in riparian areas, along dry stream courses, and in or near meadows.
- Ground-based equipment, including masticators, would not be used when soils are saturated.
- To mitigate ground disturbance during mastication, track equipment operators would avoid making abundant sharp right angle turns. Instead, a gentle curved pattern with the least amount of sharp angles would be used during implementation to reduce ground disturbance.

Vegetation

- A native species seed mix appropriate for the site and collected locally, when possible, may be used if native recruitment is less than desired following treatment. Planting of bare root or containerized stock may also occur. Seeding and planting may be used immediately following treatment in areas where native recruitment is anticipated to be less than desired. Seeds would be certified “weed free” and seeding would occur through hand, mechanical, or aerial application.
- Non-natives seed species may be used as an intermediary in some sites below 7500 feet in elevations where cheat grass tends to dominate. Reestablishing natives in the long run is the objective.
- After soil disturbances or seeding, do not authorize soil-disturbing uses for a minimum of two annual growing cycles or until desired habitat conditions and project objectives have been met, whichever is longer.
- If increased bark beetle–related piñon mortality is identified in adjacent residual stands or is expected, the following additional mitigation to control the spread of piñon engraver bark beetle (*Ips confusus*) may be implemented:

- Piñon cutting or mastication would be restricted from January 1 through August 15
- Piñon trees that are cut but left onsite with boles greater than 4 inches diameter at breast height (dbh) would be cut into lengths less than 2 feet
- Piñon limbs left onsite would be cut into lengths no greater than 4 feet
- Piñon wood to be removed or processed (e.g., bio-char) must be handled within 6 weeks of cutting
- Insect traps would be placed within and adjacent to treatment areas

Wildlife

- Treatments would be timed to avoid potential destruction of migratory bird nests or young birds. If treatments are planned during the breeding season (May 15–August 31), nest surveys would be conducted prior to treatment to determine if nests are present. If nests or evidence of nesting are observed, a protective buffer would be delineated to prevent destruction or disturbance to nests until they are no longer active.
- No treatments in Phase I and Phase II piñon would occur during the sage-grouse breeding season (March 1–May 15).

Fire and Fuels

- All federal, State, and local regulations pertaining to pile burning and smoke management would be followed. A Forest Service (Region 4) burn plan is required to be completed and approved before pile burning is initiated.
- Prior to implementation of pile burning, a news release would be distributed to media contacts and public notification would occur to advise the local community of the pile burning and any temporary road closures.

Sensitive and Rare Plants

- Botanical clearance would be done for Lavin’s milkvetch (*Astragalus oophorus lavinii*) in staging/parking areas. Identified occurrences would be closed to staging or parking unless this would close more than half of staging/parking opportunities. Maintain 50% of staging/parking areas open.
- Botanical surveys for Few-flowered streptanthus (*Streptanthus oliganthus*) would be completed in the higher elevations of this project area prior to any ground disturbing treatment. If plants are located during pre-work survey, they would be flagged, and brush would not be piled on them during treatment.
- Potential habitat for Shevock rockmoss (*Orthotrichum shevockii*) would be mapped in the project area. No pile burning would be allowed near this habitat.

Noxious and Invasive Weeds

- As needed, control of noxious weeds and invasive species would be done under the Humboldt-Toiyabe National Forest’s approved treatment program. Treated sites would be reseeded according to seeding criteria under “Vegetation” above.

- Equipment used off of existing roads would be washed and inspected prior to entering NFS lands to remove any soil and debris that may harbor noxious weed seeds.
- Known or identified populations of noxious weeds would be treated and/or evaluated prior to implementation of mechanized treatments to determine the risk of spreading these weeds following implementation. Monitor and treat these locations until the noxious weed spread threat is gone.

Cultural

- All heritage resources (those recommended eligible or unevaluated for the National Register of Historic Places (NRHP)) will be avoided by flagging when possible.
- Other mitigation measures include: Felling away from site boundaries and/or providing an archeological technician to monitor tree removal when felling away is not practicable; hand cutting and carrying outside a site boundary; no lop and scatter or burn piles are allowed inside a site boundary;
- The project archeologist will communicate all cultural issues with the implementation team prior to and on a regular basis during project implementation.
- All access routes that have not been previously surveyed for cultural resources would require an archaeologist present during relocation of equipment
- An archeological monitor will be available at all times during implementation and called as needed.

Monitoring

Monitoring during and after implementation will be conducted to ensure treatment methods are being implemented effectively and to ensure project objectives are achieved.

Forest Plan Compliance

This project is designed to be consistent with the Toiyabe National Forest Land and Resource Management Plan (Forest Plan, 1986, as amended).

Specifically, it is consistent with Wildlife and Fish Goals:

- 1) Threatened, endangered, and sensitive species will be recognized and protected through habitat management and coordination with state wildlife agencies. Habitat will be in good-to-excellent condition.
- 2) Fish and game populations will be enhanced and managed at levels commensurate with habitat conditions with an emphasis on improving overall quality of wildlife habitat

Expected Analysis

A proposed action may be categorically excluded from further analysis and documentation in an environmental impact statement (EIS) or environmental assessment

(EA) only if there are no extraordinary circumstances related to the proposed action and the proposed action is with a category listed in 36 CFR section 220.6. The preliminary assessment is that this proposal fits within the following category:

“Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction. (36 CFR 220.6(e) 6)”

If during the analysis it is apparent that an environmental assessment or environmental impact Statement is required, then the Forest Service would reassess the project and adjust the analysis as necessary.

The following preliminary impacts have been identified as potentially occurring. This information is provided to give the public an initial understanding of the project effects and is subject to change as the Forest Service completes its analysis:

Resource Condition	Potential impacts
Fisheries	No impacts expected due to project activities not being near live water.
Wildlife	Long term beneficial impacts to the local population of sage-grouse. Minimal impacts to other wildlife species can occur
Rare plants	Potential for individual rare plants to be impacted while maintaining viable populations.
Vegetation	Potential for increase in noxious weeds due to ground disturbance and use of mechanized equipment.
Municipal Watersheds	None as no municipal watersheds are in the project area.
Water quality	Very minimal impact to water quality.
Public Health and safety	No impacts expected.
Air Quality	Minimal impact due to the limited pile burning and minimal use of mechanized equipment.
Cultural resources	Some impacts to cultural resources expected. Avoidance measures or other mitigation measures would be used to limit any impacts.
Wilderness, and other special areas	No impacts to these resources as none are in or near the project area.
Inventoried Roadless Areas	Some impacts would occur within Inventoried Roadless Areas
Recreation	Minimal impact to dispersed recreational uses.

Comment Process

The Forest Service encourages your comments on this proposed action, along with supporting reasons that the responsible official should consider in reaching a decision. Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record for this project, will be available for public inspection, and will be released if requested under the Freedom of Information Act.

Written comments should be mailed to:

Jeff Ulrich
Bridgeport Ranger District
HC 62 Box 1000
Bridgeport, CA 93517

Electronic comments should be e-mailed to:

comments-intermtn-humboldt-toiyabe-bridgeport@fs.fed.us

For further information please: visit the project website at:

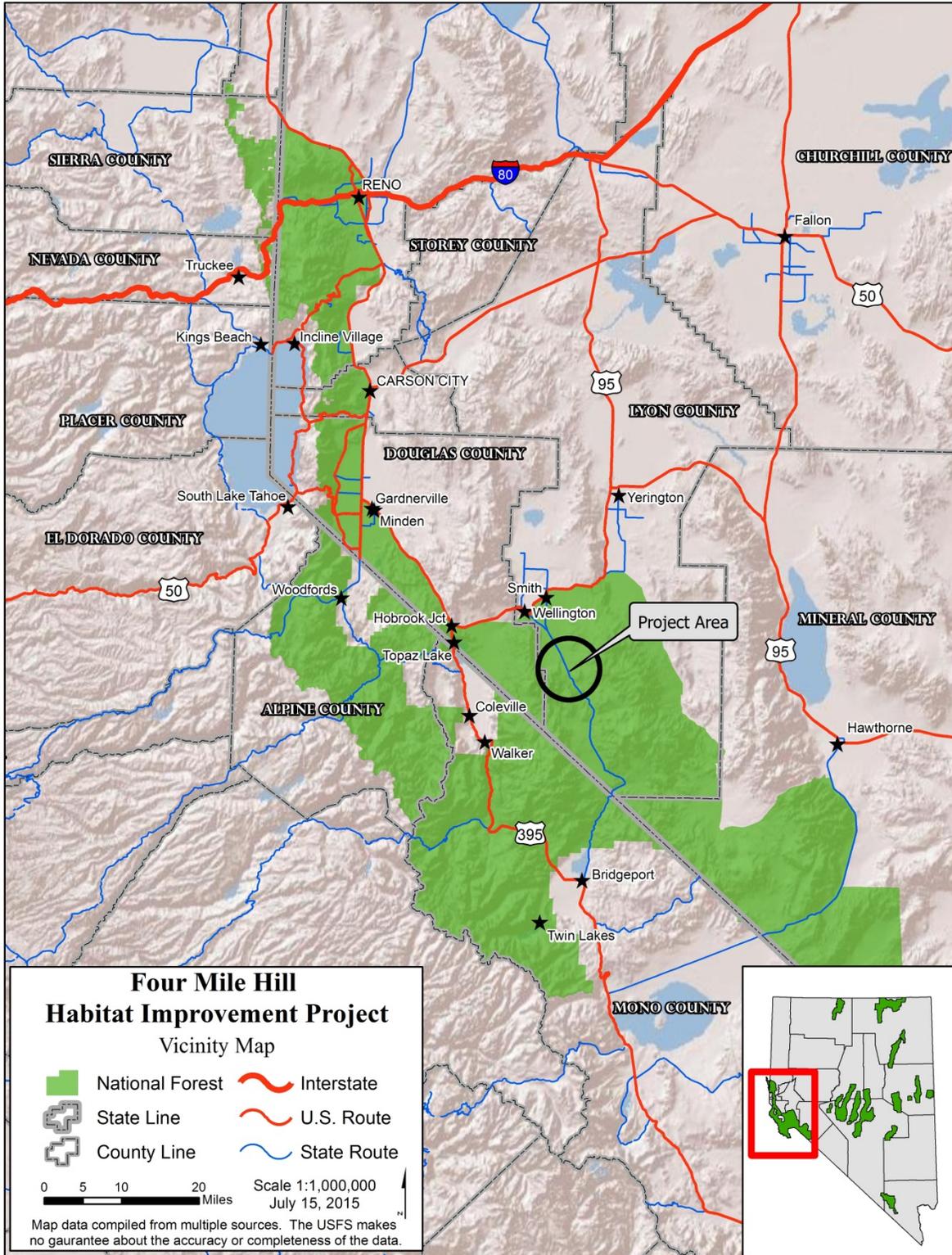
http://www.fs.fed.us/nepa/nepa_project_exp.php?project=47712

or contact, Jeff Ulrich, District Ranger at (760) 932-7070 or jlulrich@fs.fed.us.

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Figure 1: Vicinity Map



By: C. Daugherty; July 15, 2015/ File Path - T:\FS\NFS\HumboldtToiyabe\Project\Bridgeport\FourMileHill\GIS

Figure 2: Proposed Action

