

ENVIRONMENTAL ASSESSMENT

Title: Peck's Milkvetch Test Burning

EA Number: OR-056-03-074

Date of Preparation: July 2003

Name and Location of Preparing Office:

Prineville District Office
Bureau of Land Management
3050 NE 3rd St.
Prineville, Oregon 97754



CHAPTER I. INTRODUCTION: PURPOSE OF AND NEED FOR ACTION

Description of the Proposed Action

Three study sites, two less than one acre and one less than five acres, would be burned to test the response of Peck's milkvetch (*Astragalus peckii*) to fire. Associated unburned sites would be used as a study control. Analysis conducted in subsequent years will help to answer the question: "What, if any, effect does fire have on the survival, vigor and reproduction of Peck's milkvetch?" This proposal is needed to answer the above question associated with a challenge cost share project with the US Forest Service and Oregon Department of Agriculture.

Burning would occur under the supervision and execution of trained fuels treatment crews and would be conducted in late August or September, depending on weather conditions and strength-of-force. Burning during this time of the year allows for cooler temperatures and higher humidity to prevail in the early evening which provides for easier management of the burn. Along with adequate personnel present during the burning operation, fire control would be accomplished through the use of existing roads, natural breaks in vegetation, the application of water around the burn perimeter and fire line constructed manually with hand tools.

To alleviate any concerns of the local residents, personal contacts with adjacent landowners will occur prior to project initiation, including notification of this environmental assessment. These people will also be included on a notification list to be called prior to burning.

The proposed action would occur at three study sites, all NW of Bend, Oregon (see map):

Brandywine – T. 16 S., R. 11 E., Sec. 8 (10 meter square quadrats in less than five acres)

Innes Mkt. – T. 16 S., R. 11 E., Sec. 10 (10 meter square quadrats in less than one acre)

Driveway – T. 16 S., R. 11 E., Sec. 18 (approximately one acre burned)

Purpose and Need

Peck's milkvetch is a pea-like plant, endemic to Central Oregon, listed as "Threatened" by the State of Oregon. Due to its location within and near the wildland-urban interface, it faces intense pressure related to recreation and other human activities. It is also found in areas on public land that may be subjected to hazardous fuels reduction treatments in an effort to protect adjacent private property. As with most listed or "special status" vascular plants, little is known about its response to certain impact agents, in this case, fire. This knowledge is essential for public land managers to tailor management that will protect and/or enhance the habitat of these species.

Issues

One issue is the response of Peck's milkvetch to fire and the impact this would have on the species or populations as a whole should the plants not recover.

Another issue is the perceived "threat" that any fire might have to residences in the wildland-urban interface. Although fire control measures would be more than sufficient to protect adjacent lands, some residents might be uneasy with fire, or the appearance of fire, in their "neighborhood".

There are no other resource concerns or issues.

Conformance and Consistency

It is not anticipated that this project would contribute to the need to list (federally) this species; therefore, this project is consistent with Bureau policy. While two of the sites (Brandywine and Driveway) are within

the Peck's Milkvetch ACEC (established in the Brothers/LaPine Resource Management Plan/ROD), this document allows for prescribed burning in the ACEC consistent with management of the resources for which the ACEC was designated. Completion of this project would assist in the management of Peck's Milkvetch ACEC.

Decision to be Made

The decision to be made is whether or not to allow burning of portions of three populations of Peck's milkvetch, and if so, how.

CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

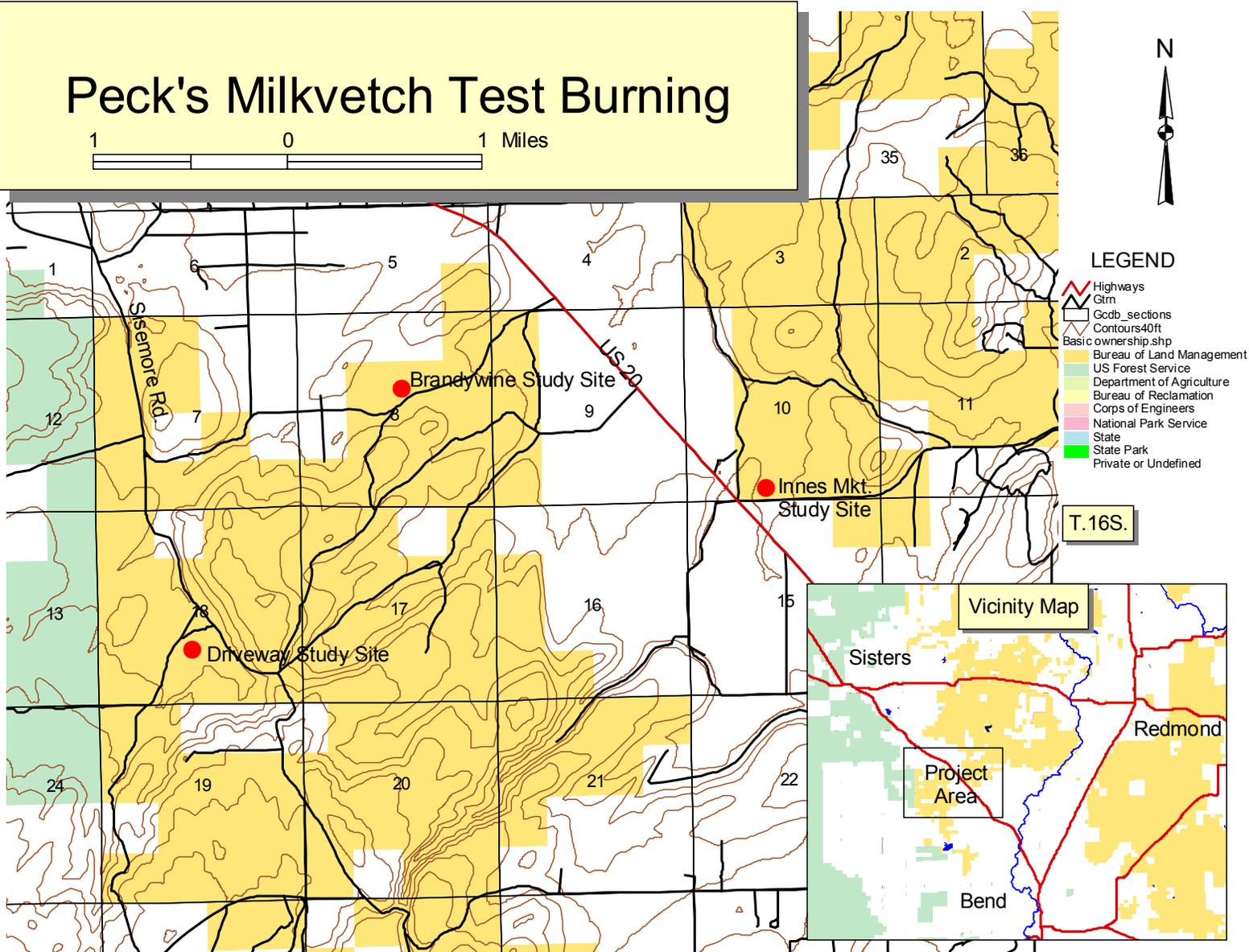
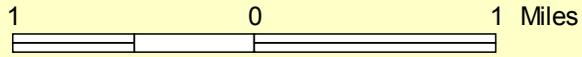
Alternative 1: Preferred Alternative. For the Brandywine and Innes Mkt. study sites, 20 meter-square quadrats containing Peck's milkvetch would be established throughout (Brandywine, up to 5 acres; Innes Mkt., up to 1 acre). At each location ten quadrats would be randomly selected for burning and ten selected as statistical control (no treatment). As the natural vegetation at these two locations is not sufficient to carry fire except under extreme fire conditions, the vegetation within each quadrat would be individually burned using a propane flame thrower, with water as a means of fire control. A drip torch would not be used at these sites to avoid chemical contamination of the quadrats. As a result, up to 10 square meters would be burned at each site. For the Driveway study site, 10 meter-square quadrats would be established in an area approximately one acre in size. After hand construction of a fire line and the application of water to the surrounding vegetation, the entire study area would be burned. The actual burning is expected to take less than one hour. Another 10 meter-square quadrats would be established outside the burn area as a statistical control. For all three sites about 0.4 hectare (1 acre) would be burned. As stated previously, all operations would be done under the direction and supervision of trained fuels personnel, involving 8-10 people and two engines, during times where fire behavior is within acceptable parameters. Adjacent landowners would be contacted prior to project initiation.

Alternative 2: Burn individual plants only. This would be similar to the preferred alternative except individual plants would be burned at all sites with a propane torch. Control would be accomplished through the use of water. No hand line would be constructed and the total area burned would not exceed 30 square meters.

Alternative 3: No Action. Application of fire would not occur and the effects of fire on Peck's milkvetch would not be quantified.

Alternatives considered but eliminated from further study: Originally the proposal involved burning all three sites in similar fashion to the Driveway site. However, based on a field visit, it was determined that the Brandywine and Innes Mkt. sites would not carry fire as traditionally applied.

Peck's Milkvetch Test Burning



CHAPTER III. AFFECTED ENVIRONMENT

Soil, Water and Air – Soils are the typical deep, well-drained pumice soils characteristic of this part of Central Oregon. There are no live streams or surface water in the project area. Air quality is generally good.

Vegetation – The Brandywine and Innes Mkt. sites are characterized by mature western juniper on pumice soils, with an understory of big sagebrush, bitterbrush, Idaho fescue, granite gilia and other, common associated species. Peck's milkvetch tends to be found in the more open areas, away from the juniper trees and shrubs and total ground cover is relatively low (Figures 1 and 2). The Driveway site (Figure 3) is dominated by big sagebrush and bitterbrush, with only scattered, younger western juniper, and greater vegetative cover. All aspects are flat.



Figure 1 - Brandywine Study Site

Wildlife – The Brandywine and Driveway sites are within both mule deer and elk winter range. All sites are within areas populated by a variety of small mammals, birds and reptiles.

Recreation/Visual Resources – None of the study sites are used for recreation other than low impact hiking, birdwatching, etc. Both the Innes Mkt. and Driveway sites are adjacent to county roads, the former immediately north of the paved Innes Market Road and the latter immediately west of the graveled Sisemore Road. A public road serving as an access road to private land passes immediately north of the Driveway site.

Uncontrolled off-highway vehicle (OHV) use and illegal trash dumping are concerns in the general area of the project. BLM management activities often unwittingly encourage such uses by opening up new travel routes or otherwise making areas inviting for such “recreational” pursuits.



Figure 2 - Innes Mkt. Study Site



Figure 3 - Driveway Study Site

Human Habitation – Residences are near the study sites as follows: Brandywine, ¼ mile to the west; Innes Mkt., ¼ mile to the southwest; Driveway, ½ mile to the north and ½ mile to the southeast.

Consumptive/Commercial uses – The Innes Mkt. site is within a livestock grazing allotment, Home Ranch number 5078. There are no other authorized consumptive/commercial uses.

Critical Elements of the Human Environment present within or near the project sites:

Areas of Critical Environmental Concern – The Brandywine and Driveway study sites are within the Peck's Milkvetch ACEC. The Brothers/LaPine RMP allows for prescribed burning in the ACEC

consistent with management of the resources for which the ACEC was designated.

Cultural Resources – Historic canals and dump sites, associated with attempted development of the area in the early 20th Century, are found throughout the general area, however, none are within the immediate project area.

Threatened and Endangered Species – There are no federally-listed plant or animal species in the project area. The plant for which the project is designed to test the effects of fire on is Peck's milkvetch (*Astragalus peckii*), a plant listed as "Threatened" by the State of Oregon.

Critical Elements of the Human Environment not present within or near the project sites and therefore not a concern:

- Adverse Energy
- Environmental Justice
- Floodplains
- Hazardous and solid wastes
- Invasive and nonnative species
- Native American religious concerns
- Prime and unique farmlands
- Water quality
- Wetlands and riparian zones
- Wild and Scenic Rivers, Wilderness and Wilderness Study Areas (suitable and designated)

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

Unless specifically addressed, there are no impacts.

Soil, Water and Air – Under Alternative 1, small (<1m in diameter) areas of soil could become temporarily sterilized where woody vegetation is burned at the Driveway study site, although the burning overall is likely to be of low intensity. Also under Alternative 1, there will likely be some short-term (<1 hour) emissions of smoke which could affect air quality immediately adjacent to the Driveway project area. Smoke emissions would be negligible for the other two sites. Hand-line at the Driveway site would disturb less than 1/10 acre of soil, but likely much less as "barren" soil in the plant interspaces is substantial in these plant communities.

Vegetation – Under Alternative 1, woody vegetation would be removed above-ground at the Driveway study site. It is likely that such species as bitterbrush and rabbitbrush would re-sprout but big sagebrush would not. It is expected that most herbaceous species, including Peck's milkvetch, would survive. In general, the one-acre project area would change from a shrub-dominated plant community to a grass/herb community. Under Alternative 2, only Peck's milkvetch plants and herbaceous species immediately adjacent to them would be burned. There would be no noticeable change in vegetative aspect.

Wildlife – Under Alternatives 1 and 2, any small mammals, birds and reptiles remaining in the project areas after the human noise and disturbance prior to project implementation would leave the area once the project was initiated. Because of the size (acres) of the project and the timing (outside winter closure dates for deer/elk winter range), effects will be minimal and there will be no concerns.

Recreation/Visual Resources – Under Alternative 1, the Driveway study site would change from a juniper/shrub-dominated plant community to a grass/herb community. It is not anticipated that any of the alternatives would lead to, or encourage, trash dumping or OHV use in, or adjacent to, the study areas.

Human Habitation – Under Alternative 1, there may be short-term (<1 hour) annoyance and concern during the periods of the greatest smoke emission.

Consumptive/Commercial uses – No effects.

