DECISION MEMO

NORTH EAST – RICHFIELD RANGER DISTRICT

Sagebrush Dixie Harrow Project

USDA Forest Service
Richfield Ranger District, Fishlake National Forest
Sevier, Utah
Legal Land Description:

Designated Site					
Name	**Township**	**Range**	**Section**	**District**	**Estimated Acres**
Richfield NE Harrow					
Duncan Mtn. North	T 22 South	R 4 East	1	Richfield	
	T 21 South	R 4 East	25,26,27,28,2932,33,34,35,36	Richfield	
	T 22 South	R 5 East	5,6,7	Richfield	
	T 21 South	R 5 East	31, 30	Richfield	465
Duncan Mt. South	T 22 South	R 4 East	2,3,10,11	Richfield	621
Jolly Mill	T 22 South	R 4 East	13,14,15, 22, 23, 24	Richfield	415
Salina Cr. Admin Site	T 22 South	R 3 East	15	Richfield	150

Total Acres 1651

Background

The purpose of this project is to enhance winter, transition and summer range in selected areas to improve browse quality and forage production for big game, small game and birds. Another purpose of the project is to reduce woody fuels build up by thinning over mature sagebrush that currently occupies much of the sagebrush steppe communities in the west. The need for this action has arisen over time as sagebrush and young pinyon/juniper continue to increase to a level where the understory grass and forb communities have or started to decrease dramatically. The decrease in understory component diminishes habitat value while increasing woody fuel build up. Under the right circumstances the woody fuel build up, if burnt, could burn hot enough to "type change" natural plant community to undesirable species. Dixie harrow work, with seeding in these areas, will enhance the grass, forbs and browse habitats. This in turn will enhance the areas for use by elk, mule deer, antelope, sage grouse and many other wildlife species that use these vegetation types**.** Once sagebrush densities reach climax densities, understory grasses and forbs suffer from competition for water and light. Trailing, trampling, and intense grazing of ungulates, also start to decrease the diversity of the sage community.

The "Dixie Harrow" method has proven to be an effective, cost efficient alternative to fire or chemical treatments. The "Dixie Harrow" treatment method can offer "total control", with results similar to fire. Factors such as treatment pattern, seed introduction, and timing can all be controlled. Deer and elk ranges can be treated differently. A "once over" method for deer range and a "twice over" method for elk range has different benefits. Mechanical treatment in sagebrush areas mixed with other browse plants, offers a stimulus for renewed growth by reducing the competition. Light treatments with the harrow in sage grouse summer range habitat can enhance forb and grass communities.

Areas that have been treated with the Dixie harrow on Forest Service and BLM provide the following six year post application data: (these data represent an average of treated sights over seasonal ranges) big sage decreased from 39.8% to 7.2%; grasses increased from 21% to 47.2%; forbs increased from 3.4% to 11.6% (Rasmussen, 2003).

With the use of the Dixie Harrow, hazardous fuel accumulations within sagebrush communities would be reduced and the continuity of these fuels broken up. Hazardous fuel reduction and breaking up the continuity of available fuels would change fire behavior, creating shorter flame lengths and lower fire intensity. Although some wildland fire may escape initial attack, the Dixie Harrow treatments would limit fire behavior within the project areas within the Richfield and Loa Ranger Districts. Fires within the treated units would exhibit lower flame lengths and lower fire intensities. This change in fire behavior would serve two purposes: (1) It will make initial attack safer and faster and make fighting the fire less risky. (2) It will create lower intensity and lower severity fires, which would reduce the possibility of other resource damage, i.e., loss of habitat, soil and watershed damage.

Ignitions will continue to occur. If no treatments are done, fuel conditions would continue to move to a more hazardous, dense, high dead to live ratio situation. Resistance to fire control would increase, while the ability to provide for firefighter and public safety in the case of wildland fire would continue to decrease.

Effects to the overall fuels profile across the analysis area would be minimal, but the purpose and need of the proposal would be met. The fire behavior would be much reduced within the project area allowing for safer initial attack and therefore lower risk of a fire reaching uncharacteristic size. The proposed Richfield and Loa Dixie Harrow fuels reduction project is not intended to be an overall ecosystem restoration project, but rather to reduce fire behavior and provide a space where firefighters can work safely to protect values at risk. Fire regimes in fuels adjacent to the project area would remain mixed to high severity. (Ivie 2004, Fuels Report for the Northeast Richfield Ranger District Sagebrush Project).

Decision

The following design features and mitigation measures would be implemented as part of the action:

1. A mosaic treatment pattern is to be used to preserve sagebrush areas that offer high wildlife habitat values, and to provide good sage grouse habitat and mule deer browsing areas.
2. Introduce seed (where needed) to improve habitat condition. The seed mix will be designed with a large percentage of forbs to enhance habitat for wildlife**.**
3. In cases where poor understory conditions existed prior to the treatment and seed need to be established, livestock will be deferred from using the treated areas for two years (or a proper grazing strategy to ensure the success of the treatment**).** Projects will be coordinated with grazing program to fit treatments and grazing rotations into proper order to benefit the resource.

Decisions may be categorically excluded from documentation in an environmental impact statement or environmental assessment when they are within one of the categories identified by the U.S. Department of Agriculture in 7 CFR part 1b.3 or one of the categories identified by the Chief of the Forest Service in Forest Service Handbook (FSH) 1909.15 sections 31.12 or 31.2, and there are no extraordinary circumstances related to the decision that may result in a significant individual or cumulative environmental effect. The proposed action falls within category 31.2(6) Timber stand and/or wildlife habitat improvement.

The categorical exclusion is appropriate in this situation because there are no extraordinary circumstances related to the proposed action. Extraordinary circumstances are those instances that could result in significant environmental effect to one or more of the following resource conditions, as described in FSH 1909.15-30.3, 2a-g.

a. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species

The Endangered Species Act requires that federal activities do not jeopardize the continued existence of any species federally listed or proposed as threatened or endangered, or result in adverse modification to such species' designated critical habitat. As required by this Act, potential effects of this decision on federally-listed or proposed species or their critical habitats have been analyzed and documented in a Biological Assessment, and effects on

Forest Service Sensitive species have been documented in a Biological Evaluation. These documents are located in the project planning record.

This decision will have a 'no effect' determination on federally listed or proposed species or their critical habitats known to exist on the Fishlake National Forest. This decision will have "no effect" on Region 4 Sensitive Species or their habitats. Further information about Threatened and Endangered species can be obtained from the Biological Assessment for this project. Further information about Sensitive species can be obtained from the Biological Evaluation for this project**.**

b. Floodplains, wetlands, or municipal watersheds

Executive Order 11988 provides for avoidance of adverse impacts associated with the occupancy and modification of floodplains. Floodplains are defined by this order as, ". . . the lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent (100-year recurrence) or greater chance of flooding in any one year."

Executive Order 11990 provides for avoidance of adverse impacts associated with destruction or modification of wetlands. Wetlands are defined by this order as, ". . . areas inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds."

There are no municipal watersheds in the proposed treatment areas. This has been validated by map and site-review in the Richfield Ranger District office, Fishlake National Forest.

Mitigations to prevent effects on floodplains and wetlands

Areas that are covered or ponded with water will be avoided. Also, areas identified as rated severe or unsuited for Dixie harrow type treatments based on GIS coverage map, would be avoided. The map is a GIS layer derived from soils information to show Dixie Harrow limitations and opportunities and is included in the project record.

Avoid areas within the project area that have wetland soils if they are wet, have hydric vegetation types, or could be excessively compacted by harrow types of treatment. Some wetland soils are covered with vegetation types that are currently non-hydric in nature and potentially could be treated at the time of treatment if they are not saturated or have water ponded on them. The Lizonbee Spring area is one area that is a good example of treating the sagebrush above the hydric soils that are currently and amply unsaturated enough (they are very dry) to be treating these soils without having effects on wetlands or floodplains.

Avoid areas within immediate locale of springs or smaller wetland areas that might not be located on the GIS map showing Dixie Harrow limitations and opportunities.

Avoid areas within the inner area of perennial streams and floodplains, and reservoirs (at least 100 feet) to prevent negative impacts on channels, floodplains, and wetlands.

Leave vegetation below road drainage ditches for 50 feet below (can be a narrow band where the water has evidence of having flowed) to allow the road drains to function properly, and to prevent the drainage ditches from increasing in length (Burroughs and King 1989-Reduction of Soil Erosion on Forest Roads).

Where soils seem highly erosive or show evidence of riling or gulling avoidance or less intense treatment is recommended. Seeding these areas is recommended to increase cover and decrease erosion of hill slopes and sedimentation of riparian areas and wetlands. (Solt 2004, Hydrologist Report for the Richfield-Loa Districts Wildlife Habitat and Fuels Reduction Project).

c. Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas.

There are no Wildernesses, Wilderness Study Areas, or National Recreation Areas on the Forest. This decision will not affect these areas.

d. Inventoried roadless areas

The projects are not located in within inventoried roadless area. This decision will not affect these areas.

e. Research natural areas

There are no Research Natural Areas in the project areas. This decision will not affect RNAs.

f. American Indians and Alaska Native religious or cultural sites.

All religious or cultural sites within the proposed area will be surveyed, documented, reported and avoided. This decision will not affect any religious or cultural sites.

g. Archaeological sites, or historic properties or areas.

Section 106 of the **National Historic Preservation Act** requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object that is included in, or eligible for inclusion in the National Register. Section 106 of the National Historic Preservation Act also requires federal agencies to afford the Utah State Historic Preservation Officer a reasonable opportunity to comment. The Archaeological Resources Protection Act covers the discovery and protection of historic properties (prehistoric and historic) that are excavated or discovered in federal lands. It affords lawful protection of archaeological resources and sites that are on public and Indian lands. The Native American Graves Protection and Repatriation Act covers the discovery and protection of Native

American human remains and objects that are excavated or discovered in federal lands. It encourages avoidance of archaeological sites that contain burials or portions of sites that contain graves through “in site” preservation, but may encompass other actions to preserve these remains and items.

The proposed project area was surveyed for heritage resources in June, 2004 (see report number FL-04-1021/U-04FS-0524f). No historic properties were inventoried and, on the basis of this, "no historic properties [will be] affected" by the harrowing.

In May and June, 2004, the proposed project on Duncan Mountain was surveyed for heritage resources (see report number FL-04-1125/U-04-FS-0605f). Nine sites were recorded but only one was determined as eligible for inclusion on the National Register (FL-2053/42SV2690). If this site is avoided, as recommended, then the harrowing project will cause "no historic properties [to be] affected".

No tribal concerns were identified for this project in the Richfield Ranger District office, Fishlake National Forest. This decision complies with the Acts cited above.

Public Involvement

The proposal was described in the winter 2003 edition of Fishlake National Forest’s Quarterly Schedule of Proposed actions, which is mailed four times a year to approximately 140 individuals, organizations and agencies. The proposal was provided to the public, interested parties and other agencies requesting comment from June 2, 2004 through June 30, 2004. A public scoping notice was published in the Richfield Reaper and Salina Sun (newspapers of local interest) requesting comments on the proposed North East Richfield Ranger District Dixie Harrow project.

Findings Required by Other Laws

This decision is consistent with the management direction contained in Chapter IV (pages IV-1 to IV-160) of the Fishlake National Forest Land and Resource Management Plan (Forest Plan) and associated amendments, as required by the National Forest Management Act. The project was designed in conformance with forest plan standards and incorporates appropriate Forest Plan guidelines. Relevant goals and objectives include, enhancing winter range, transition range and summer range in selected areas and improving browse quality and foraging production for big game, small game, and birds. “Sagebrush Ecosystems are restored and maintained, consistent with land uses and historic fire regimes, through Dixie Harrow use.” The Dixie Harrow can also be used as a tool to break up and thin sagebrush that has become a fuel loading problem next to private land. Also applied prior to prescribed burns, harrowed areas will break undesired fire runs in to critical habitats.

Implementation Date

This project will be implemented immediately.

Administrative Review or Appeal Opportunities

This decision is not subject to administrative appeal.

Contact Person

For additional information concerning this decision, contact Kreig Rasmussen District Wildlife Biologist Richfield Ranger District 115 East 900 North Richfield UT. 84701. Phone: (435) 896-1043

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D. FRED HOUSTON JR. Date

District Ranger