PPR Greater Sage-Grouse Habitat Mapping Summary – Update 4/30/08

Purpose and Need

In order to develop landscape-scale conservation strategies, the BLM (White River Field Office) initiated a 3 year, landscape-level greater sage-grouse habitat inventory for the Piceance Basin in the summer of 2006. The habitat inventory is being conducted on both public and private land and will provide critical local information. First, there is currently no biologically-based and generally agreed-upon estimate for the number of acres of sage-grouse habitat in the Piceance Basin. Second, we do not know the spatial arrangement of suitable habitat and unsuitable habitat. Finally, we do not know the quality of available habitat (i.e. herbaceous understory, encroachment from pinyon/juniper, etc).

The primary objective of the Piceance Basin sage-grouse habitat inventory is to create a relatively simple landscape-scale map of the different vegetation types found within potential sage-grouse habitat. Since the map is GIS-based, it can easily be shared, updated, and overlaid with other landscape features such as leks, roads, well pads, etc. We plan to use the habitat inventory map as a means to:

1) Determine the suitability of specific areas as potential sage-grouse habitat.
2) Prioritize areas in need of habitat restoration.
3) Evaluate land uses that may impact either suitable habitat or restoration efforts.

Computer Model of Potential Habitat

We began by developing a computer model of potential sage-grouse habitat within the overall range established by the CDOW for the PPR population. We identified potential sage-grouse habitat using a GIS (geographic information system) model based on slope ($\leq 20\%$) and vegetation type. We did not include drainages. Not including the Magnolia area, the computer model estimated 55,170 acres of potential sage-grouse habitat (including both public lands and private property) for the PPR population.

Habitat Inventory Map

The next step was to ground-truth the vegetation types within the computer model. We went to areas identified by the computer model as potential habitat and classified them into general habitat categories based on the vegetation type present at the site. At representative sites, we used 30m line transects to measure both shrubs and herbaceous vegetation.

Approximately 9,885 acres and 29,205 acres were mapped during the 2006 and 2007 field seasons, respectively. Vegetation transects were used to measure forb, grass and shrub composition at 205 representative mountain shrub sites and sagebrush sites. In addition, photos were taken at another 162 non-habitat sites that were considered potentially suitable habitat by the computer model (e.g. pinyon-juniper woodlands, Gambel oak thickets, aspen stands, etc).

One of the primary products of the sage-grouse habitat inventory is the habitat type map. The map is GIS-based and can be overlaid with other shapefiles to see the spatial arrangement of

habitat types in relation to other landscape features such as leks, roads, etc. The map shows the spatial arrangement of the habitat types but it does not show areas in need of habitat restoration. We found it difficult to map encroachment and habitat quality and instead use the site photos and transect data to convey that information. All of the transects and photo points are incorporated into the GIS map so that vegetation information and site photos are easily accessed by simply clicking on the transect point.

While this data is preliminary and incomplete, it is already proving valuable. We are using this information to improve our estimate of the acreage of sage-grouse habitat. We have also used this information to identify several potential areas for habitat restoration work based on dense shrub cover, low understory cover, tall serviceberry shrubs, or the encroachment of pinyon/juniper.

Remaining Unmapped Areas

Our goal over the 2008 summer field seasons is to complete the PPR habitat inventory for all sage-grouse habitat within the White River Resource Area. We estimate that there are roughly 16,000 acres identified by the model that still need to be evaluated and included in the habitat inventory map. To do so, it is critical that we continue our existing partnerships with private landowners and establish new partnerships. A final report will be sent out to the PPR Local Work Group members and partners in the fall/winter of 2008.

More Information

More detailed information on methods used for the computer model and the habitat inventory map as well as pictures and maps can be found in the 2006 annual report, which can be accessed on the BLM WRFO's webpage at:

http://www.blm.gov/co/st/en/fo/wrfo/wildlife.html

Additional questions should be directed to Heather Sauls.

(heather_sauls@blm.gov 970-878-3855).

Partners

As mentioned above, the habitat inventory is being conducted on both public and private land. We are grateful to the following landowners for allowing us permission to use their land to access public land and/or to conduct the habitat inventory on their land: Jim Brennan, ConocoPhillips, J. Lynn Dougan, EnCana, ExxonMobil, Torrence Hughes, Dan Johnson, Pat Johnson, Tim Mantle, Jerry Oldland, Orion Energy Partners, Shell, and Tim Uphoff.

We would also like to thank EnCana for providing $34,000 to help fund this project in 2006 and 2007. In 2007, CDOW provided one technician and also provided housing for another technician at the Little Hills bunkhouse.

We hope to continue these partnerships in the future and to develop new partnerships with other landowners in the Piceance Basin.