Road Inventory Update for the Lakeview District

Currently, the Lakeview District has several thousand miles of roads identified for management within its transportation plan network. Another several thousand miles of roads, trails, and other routes exist on the ground that are not officially part of the transportation plan.

Transportation Plan Maps

The Lakeview District's road network was most recently displayed on a series of Transportation Plan Maps for the Klamath Falls, Bonanza, Vistillas, Lakeview, Adel, Beaty Butte, Summer Lake, Lake Abert, Flagstaff Lake, Walls Lake, Fort Rock, Thorne Lake, Cliff, Wagontire, Harney Lake, Brothers, Hampton, and Riley 1 inch = 1 mile scale quads published in 1984. It is important to note that the recreation series maps which were published more recently for the Lakeview (1996-97) and Klamath Falls (2006) Resource Areas do not show all of the routes that are currently in the transportation plan or are present on the ground.

Facility Information Management System

The road network was re-inventoried in the early 1990's. The resulting field data (road number, road name, road class, number of lanes, surface type, surface condition, etc.) was input into the Facility Information Management System (FIMS). FIMS was a tabular engineering database that did not have a spatial component. To solve this problem, the Oregon/Washington State Office of the BLM began developing a statewide ground transportation layer (GTRN) using geographic information system (GIS) technology.

Ground Transportation (GTRN) Development

The original line work for the GTRN dataset was created by the State Office GIS staff in 1999 by making a copy of existing U.S. Geological Survey digital line graph (DLG) data. Route segments representing a given BLM Road were selected and attributed with the appropriate BLM Road number using the 1984 transportation maps as an important reference data source. In a few cases, new routes were digitized by the State Office staff from 1994-95 digital orthophotos and then attributed with the appropriate BLM Road number. Most of the attribute data for these BLM routes were populated by linking to the FIMS database and copying over attribute values using the road number as a link field. County roads were also attributed during this exercise with the County Road numbers found on the transportation plan maps.

Quality control (QC) plots were provided to Lakeview BLM staff for review and correction. The staff submitted corrections to the State Office for further update. The State Office staff also updated attributes for County Roads with surface type information readily discernable from the transportation maps during this iteration. A second set of QC plots was submitted to the Lakeview BLM staff for additional review. A few minor edits/updates were noted and sent back to the State Office for a third set of corrections. This initial effort was completed in 2001. (It should be noted that about half of the roads located on BLM-administered lands are not found in the BLM's transportation plan and were not updated during this initial data development stage).

Facility Asset Management System

This FIMS database was converted to the Facility Asset Management System (FAMS) in 2003. FAMS is also a tabular engineering database that does not have a spatial component, but the attribute fields for BLM Roads in GTRN continued to be populated by linking to the attribute data stored in FAMS, similar to the way it had been linked to FIMS data in the past.

All Oregon Roads Project

The State Office conducted another update of the road line work within GTRN for Lake, Klamath, and Harney Counties as part of the "All Oregon Roads" project, funded by the Oregon Department of Transportation, in 2005. Existing line work was compared to the 1994-95, 2000-01, and in some places, the 2003 digital orthophotos and corrected where needed. Some new road lines were also captured, but not field verified at that time. This update used the digital orthophotos as a backdrop for a "heads-up" digitizing process.

Current Road Inventory Efforts

Since 2005, the Lakeview BLM staff have been conducting additional road inventory and have been actively updating both GTRN and FAMS datasets. This update has focused on re-assessing the location and condition of existing BLM Roads, as well as, confirming the presence of many new routes on BLM lands in the field. The BLM began this road inventory update process by comparing existing routes in GTRN with the most recent digital orthophotos taken in 2005. The Lakeview BLM staff digitized potential new road lines using the orthophotos as a backdrop and a "heads-up" digitizing process. The BLM created field maps and then verified the presence and condition of each route in the field. The results have been recorded on field maps or, in some cases, have been collected using global positioning system (GPS) technology. This field data has been used to update both the GTRN and FAMS datasets.

In addition, the Washington Office also commissioned a field condition assessment for all roads in the transportation system (ie. FAMS database) with an assigned maintenance Level of 3, 4, or 5. Between 2005 and 2007, approximately 60% of these roads in the Lakeview District had detailed field condition assessments completed. The results of this assessment were reviewed by the District Engineer and, where approved, were used to update the FAMS database. These updates were automatically linked to the appropriate road lines within GTRN at the same time FAMS was updated.

This road inventory update is on-going and is expected to be completed within the Lakeview Resource Area in 2010. Currently, there is no estimated completion date for the Klamath Falls Resource Area. The most current version of this road inventory is stored within the GTRN dataset which is available at http://www.blm.gov/or/gis/data.php.

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