

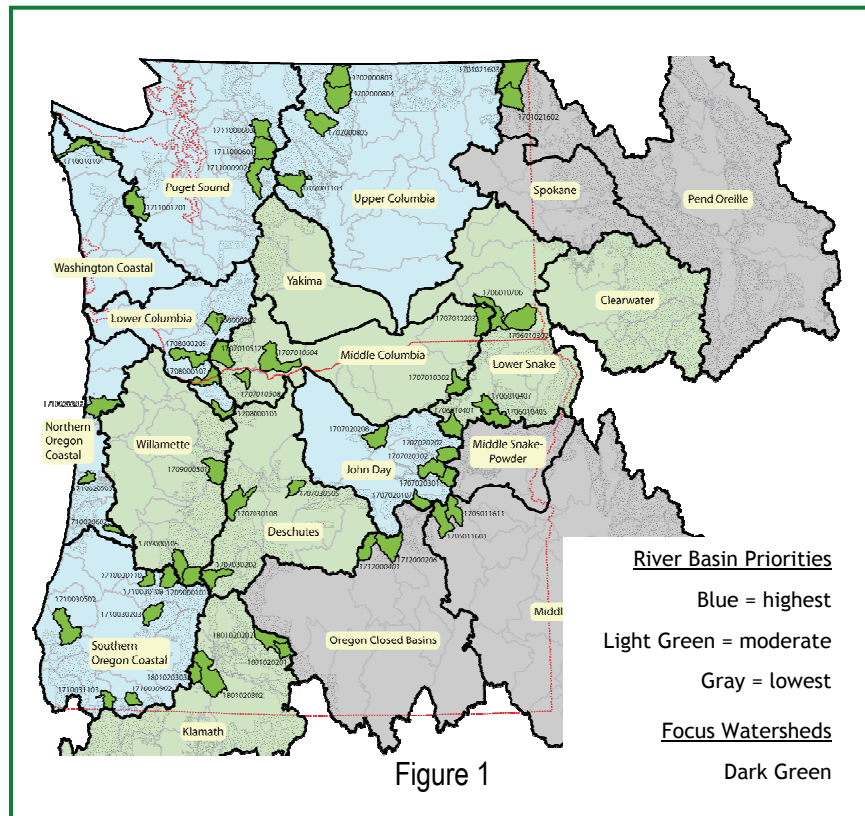


Regional Legacy Road Restoration Monitoring Studies

The purpose of this document is to inform you of the objectives and status of two Regional monitoring studies associated with the Legacy Roads and Trails Program.

Background

In FY08, Congress created and allocated \$40 million towards the Legacy Roads and Trails Program. The Pacific Northwest (PNW) Region received \$8.4 million. Consistent with the appropriations and national direction, *the Region is focusing this funding primarily towards activities designed to correct or reduce road and trail impacts and risks to watershed and aquatic resources, while meeting long-term travel management objectives.* The program is tied directly to the PNW Regional Aquatic Restoration Strategy, which focuses active restoration work towards Regional Priority River Basins and Forest Focus Watersheds (Figure 1). Six main categories of work are being implemented: 1) road decommissioning; 2) fish passage improvements; 3) road/trail maintenance & repair; 4) stormproofing; 5) planning; and 6) monitoring.



Given the importance of the Legacy Roads and Trails Program, Engineering and Natural Resource staffs in the Region Office decided to develop and implement two Regionally-consistent monitoring studies. One study is designed to evaluate the effectiveness of fish passage restoration projects. A protocol and study design for this project is currently under development and will be available at a subsequent date. The second study, described here in more detail, is designed to assess the effectiveness of road restoration activities from a hydrogeomorphic perspective.

Hydrogeomorphic Effectiveness Monitoring

The objective of this study is to assess the effectiveness of Region 6 road restoration and decommissioning methods in reducing the geomorphic and sedimentological impacts of forest roads on streams. Effectiveness will be determined by examining changes in the level of risk associated with the following key processes:

- 1) mass wasting; 2) road-stream hydrologic connectivity; 3) fine sediment production and delivery; and 4) stream crossing failure. This objective will be achieved in the near-term by comparing the risks of roads

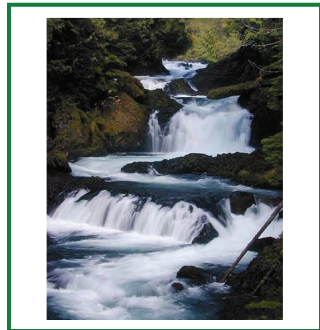


that have been treated to similar roads that have not been treated and by comparing the risks of treated roads, before and after projects are implemented. In the long-term, the actual observed response of treated and untreated roads to large storms will be evaluated and compared.

Road segments will be assessed with the Geomorphic Road Analysis and Inventory and Package (GRAIP). GRAIP is a suite of robust road inventory and GIS-based models and analysis tools developed by scientists at the USFS Rocky Mountain Research Station (RMRS) and Utah State University (GRAIP, see <http://www.fs.fed.us/GRAIP/index.shtml> and attached fact sheet). The road inventory protocol is used to systematically describe the hydrology and condition of a road system using GPS and automated data forms. The GIS models characterize mass wasting potential with and without road drainage, hydrologic connectivity, fine sediment production and delivery, and the potential for and possible consequences of crossing failures. GRAIP procedures will be applied before and after restoration work. These same segments will be evaluated

again after a significant storm event occurs or approximately five years have elapsed.

Field crews will begin collecting data in late June 2008 on legacy road projects. Crews will return to conduct post treatment monitoring after the project work has been completed. Due to the large number of projects, **Forest staff will be contacted throughout the summer to coordinate potential work locations and timing.** The intent is to sample a wide sample of decommissioning and drainage improvement projects. However, due to project timing issues and logistical constraints, it is likely that not all Region 6 forests will be visited in 2008.



Thank-you for your assistance in achieving the objectives of the Regional Legacy Roads and Trails Program.



If you have questions or comments on this project please contact the following:

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