USDA Forest Service Northern Region Fish Passage Assessment at Stream/Road Crossings

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An assessment of aquatic passage at streams/road intersections in the Northern region is critical to address restoration needs for aquatic organisms. Fragmentation of fish populations is one of the key factors to address in recovery planning of threatened, endangered, and sensitive fish species including bull trout, steelhead salmon, Chinook salmon, westslope cutthroat trout and Yellowstone cutthroat trout. In 2002, the Northern Region identified the need for an assessment of stream crossings in the Region that were barriers to aquatic passage. This information was necessary to better define the issue in the Region and the anticipated program of work. This presentation summarizes survey efforts for aquatic passage in the Northern Region from 2002 to 2004 when > $750,000 was spent inventorying culverts at potential fish-bearing stream and road crossings. These surveys were performed primarily on Forest System roads and do not represent private, state, and county roads systems. Surveys were conducted using the guidelines of the National Inventory and Assessment Procedure for Identifying Barriers to Aquatic Organism Passage at Road-Stream Crossings (Clarkin et. al. 2003). Data are stored in an Access Database located at each Forest/Grassland and also available on the Regional Aquatic Organism Passage intranet website (http://fsweb.r1.fs.fed. us/wildlife/wwfrp/fisheries/Fish_Passage_Web_Page.htm). These data have been aggregated to determine the extent of fish passage issues. Approximately 2800 culverts have been inventoried and assessed for fish passage within the Northern Region and their results are summarized for adult and juvenile salmonids. The adult results indicate that approximately 80 percent of the inventoried crossings in the region are an upstream barrier to migrating fish during some timeframe throughout the year, 13 percent are indeterminate (Gray), and seven percent are not considered barriers. Results for juveniles were similar to the adults in that 84 percent are barriers, 9 percent were indeterminate, and 7 percent were passable. The Lolo National Forest completed a hydraulic assessment for their Gray culverts and used calculated flow values with the FishXing program. FishXing determined that approximately 80 and 20 percent of the Gray culverts (~ 45) turned to Red and Green, respectively. Although a small sample, it gives an idea of what Gray pipes from other Forests may be determined if flows were calculated and run through FishXing.