

EPA's Detailed Comments
on the
Forest Service(FS) Advanced Notice of Proposed Rulemaking (ANPR) for Special Areas:
State Petitions for Inventoried Roadless Area (IRA) Management

Water Quality and Aquatic Resources

The following references and reports provide specific examples of road related impacts to water quality and aquatic resources. For example, the 1997 Sierra Nevada Ecosystem Project Report, USGS, and 1998 Sierra Nevada Science Review identified roads as a major cause of water quality problems and adverse impacts to aquatic ecosystems that should be addressed as soon as possible. The scientific literature documents many ways in which roads impair water quality and damage aquatic ecosystems (Coe, 2004). Roads directly affect natural sediment and hydrologic regimes by altering streamflow, sediment loading, sediment transport and deposition, channel morphology, channel stability, substrate composition, stream temperatures, water quality, and riparian conditions within a watershed. Road construction and reconstruction and timber harvest can result in measurable reductions of water quality by introducing sediment and nutrients, causing abnormal temperature fluctuations, and resulting indirect effects from human use. The 2000 Roadless Conservation Rule, Final Environmental Impact Statement (FEIS) states that even the best designed roads produce sediment, and unpaved roads continue to produce sediment for as long as they remain unvegetated.

Moreover, road-related water quality impacts have resulted in hundreds of miles of impaired streams and impairment is being addressed through the Clean Water Act §303(d) list and developing Total Maximum Daily Load (TMDL) requirements. Adding new roads to the over \$8.4 billion backlog of roads needing maintenance and repair at this time exacerbates these problems:

In summary, the adverse effects of roads on aquatic life through impairment of water quality standards on National Forest Service (NFS) lands is a very significant issue, particularly in the Pacific Northwest. The impact to ecological resources will continue due to the lack of funding for repairs and maintenance of existing roads on NFS lands. The Environmental Protection Agency (EPA) believes that the FS should consider minimum national criteria for identifying the characteristics and values found in IRAs and implement the necessary protections. Perhaps more importantly, there should be increased focus on providing adequate management and maintenance of the existing 386,000 miles of roads to address road-caused water quality problems before new rules are developed and implemented that could promote additional road building in roadless areas that are likely to create new road-caused water quality problems in some of the most pristine and valuable drainages.

Aquatic Habitat/Fisheries

The Interior Columbia River Basin Ecosystem Management Project (ICBEMP, 1997) addressed water quality and how new roads increase sediment yield to streams. Specifically, it found that high road densities and their locations within watersheds were typically correlated with areas of higher watershed sensitivity to erosion and sediment transport to streams. A review of the current literature summarizes the following effects of sedimentation to salmonid species and benthic habitat (ICBEMP, 1997):

Sediment in the water column (total suspended solids) results in increased turbidity which damages gills of juvenile and adult fish, and interferes with their breathing. It also interferes with the breathing and feeding of macroinvertebrates. Turbidity limits the amount of sunlight that can penetrate through the water and impairs sight feeding fish. It also limits photosynthesis, algae production, and insect growth, which in turn reduces key food sources for fish and macroinvertebrates.

Fine sediment which settles in between gravel spaces eliminates crucial habitat for spawning. Spaces between gravel are essential for the success of salmonid spawning. Sediment filling in gravel spaces reduces oxygen to embryos, accumulates metabolic wastes, physically entraps emerging fry, and eliminates key overwintering habitat for fingerlings. Sediment which accumulates in rivers and streams results in the loss of key rearing habitat by reducing pool volumes, depth, and cold water refugia. These are key habitat for juveniles and certain species such as bull trout. Mass failures and landslides may result in large amounts of habitat loss for fish spawning and rearing and the smothering of the benthic community. Sediment loading may result in the formation of upstream migration barriers.

Lastly, sediment may significantly affect temperature, since increased sedimentation results in wider and shallower streams, which increases a stream's surface area. This causes greater solar radiation and heat exchange with the air.

IRAs provide critical ecological aquatic habitat in Oregon and Idaho (Trout Unlimited Report, 2004).

- ▶ 83% of bull trout spawning and rearing habitat in Oregon is found in areas with roadless lands;
- ▶ Oregon's remaining Westslope Cutthroat trout have been reduced to just 41% of their suspected historical habitat and 18 of the 20 sub-watersheds where they remain contain roadless areas.
- ▶ Lahontan Cutthroat trout historically occurring in eight Oregon watersheds have been reduced to just two - both of which are predominately roadless.
- ▶ 54% of watersheds containing strong, healthy populations of Columbia River basin Redband Trout in Oregon derive their habitat quality from IRAs;
- ▶ 74% of Idaho's Chinook salmon habitat is located in IRAs;
- ▶ 68% of Bull Trout habitat is located in IRAs;

- ▶ 65% of Chinook salmon habitat is located in IRAs;
- ▶ 61% of Steelhead Trout habitat is located in IRAs; and
- ▶ 16% of Westslope Cutthroat trout is located in IRAs.

The ecological importance of IRAs are further highlighted in the report, An Assessment of Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins, USDA Forest Service and USDI Bureau of Land Management, June 1997. The report states that “many resource managers believe that management activities in IRAs will increase the risk to aquatic and riparian habitat and limit the potential to achieve aquatic conservation strategy objectives.” It characterizes IRAs’ areas as important refugia for strongholds of salmonids and documents that 68% of known and predicted strongholds in the Upper Columbia River basin are in unroaded condition, of which 37% is outside of wilderness.

The Land Management Recommendations Related to the Value of Low Road Density Areas in the Conservation of Listed Salmon, Steelhead, and Bull Trout, 1996, (RDAT Report) completed a coarse-scale analysis using existing information and further described the relative value of low road density areas within each sub-basin for salmon, steelhead, and bull trout within the Upper Columbia and Snake River basins. The RDAT Report describes the results of this coarse-scale low road density analysis. The Road Density Class “*Undesignated Low Road Density*” (pg. 15) represents important areas for both short and long-term conservation and recovery of listed fish species. These areas should be considered critical component in any locally developed conservation strategy for listed fish species within the Interior Columbia River Basin.

The data derived from the ICBEMP, 1997, leads to the conclusion that adverse effects from roads cannot be completely eliminated by designing better roads. An increase in sedimentation of streams is unavoidable even using the most cautious roading methods (USFS, 1996). The direction on road building and management contained in the RDAT Report and the Biological Opinions should be incorporated into the proposed Rule.

Habitat Values and Invasives

Nationally, IRAs provide a stronghold for 280 threatened, endangered, proposed and sensitive species (Forest Roads Working Group, 11/21/2002). Building roads contributes to habitat loss and degradation, water quantity and flow modification, and the addition of nutrients, sediment, pathogens, and invasive species (EPA, June 2001). We are concerned that additional roads in these areas will undermine the recovery of species that are critical to ecosystems and the economy in this area. Therefore, we recommend that the areas that serve as key habitat for ESA listed salmon and trout be identified and considered for exclusion from the proposed rule.

Each year federal, tribal and state agencies, and others spend millions to abate the spread of invasives and noxious weeds. IRAs provide large, relatively undisturbed blocks of habitat for a wide variety of native plants. Competition by nonnative invasive species is one of the leading causes for native plant species listed as threatened or endangered (Roadless Final EIS, 2000). Roads have a considerable impact on the spread of invasive species (Gelbard, 2004). The studies

indicate that improved roads in wilderness areas spread more invasive weeds than primitive roads and roadless areas act as refuges for native species against invasion.

According to the FS, non-native species when introduced to an area can cause impacts that are extremely costly to both the U.S. economy and environment. Nearly 50% of the plants and animals on the Federal endangered species list have been negatively impacted by nonnative invasive plants, animals, insects and microbes. Invasive plants are choking 3.6 million acres of the national forests, an area the size of Connecticut. Estimates are that the United States spends \$137 billion per year in total economic damages and associated control costs. New roads will contribute to an already existing and costly problem.

National Environmental Policy Act

The Secretary of Agriculture has requested comments on establishing a national advisory committee to provide expert consultation on the nature and extent of appropriate National Environmental Policy Act (NEPA) documentation and on associated issues with development of a state-specific roadless rule. A state-specific roadless rule could substantially alter implementation of FS programs in states with IRAs (37) and if the rule is determined to be a major federal action that may significantly impact the environment the EIS requirement of NEPA. EPA supports an open public process to provide all stake holders, both local and national, the opportunity to participate in management of public lands administered by the FS. Accordingly, we support establishing a national advisory committee to provide expert consultation. The committee should include a balanced representation of stakeholders, including Tribal representation where appropriate.

State Petitioning Process

The proposed rule is developing a state petitioning process that “will allow state-specific consideration of the needs of IRAs.” The proposed rule states: “Collaborating and cooperating with states on the long-term strategy for the management of inventoried roadless areas on National Forest Service lands would allow for the recognition of local situations and resolution of unique resource management challenges within a specific state.” We concur that states have an important role in determining the long-term management of IRAs within their boundaries. But, we note that the national rulemaking process already provides for state collaboration and cooperation.

The proposed rule does not provide information on decision making and management issues such as the role of local, state, and federal land management agencies; the role of city, county and tribal governments; the process to use for the development of State-specific management proposals; and management of IRAs not included in State-specific management petitions. We suggest that additional information regarding these issues be included in subsequent rulemaking. In a related matter, we are concerned that the state petitioning process may be severely limited due to constrained state budgets and personnel and the need to develop an implementing plan. Also, the state petitioning process adds yet another layer to current forest management planning

increasing cost and time to completion. Consequently, we recommend that the FS reconsider or modify the proposed state petitioning process to one that protects and preserves all inventoried roadless areas that meet specific national criteria and that states would petition to have IRAs removed from protection based on area-specific management criteria.

The final rule should clarify how it could impact the current management of IRAs on the Tongass and Chugach National Forests in Alaska, which are currently governed by existing forest management plans. The USDA adopted a final rule on December 30, 2003, that temporarily withdrew the Tongass National Forest from the roadless rule pursuant to a June 10, 2003, settlement agreement in the *State of Alaska v. USDA* litigation. In particular, the USDA also agreed to issue an ANPR seeking public comment on permanently withdrawing both the Tongass and the Chugach National Forests. The proposed rulemaking does not provide information on future management of the Tongass and Chugach National Forests or request public comment on permanently withdrawing these forests from the roadless rule. We recommend additional information on the final management proposal for the Tongass and Chugach National Forests be included in subsequent rulemaking.