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January 11, 2008

Edward W. Shepard
State Director
U.S. Bureau of Land Management
Western Oregon Plan Revisions
Post Office Box 2965
Portland, Oregon 97208

RE: Oregon Chapter AFS Comments on Western Oregon Plan Revision DEIS

Dear Mr. Shepard,

The Oregon Chapter of the American Fisheries Society (ORAFS) is comprised of over 400 fisheries and aquatic science professionals from federal, state, and tribal agencies, colleges and universities, and diverse private employers. The ORAFS was established in 1964 as part of the American Fisheries Society. Our mission is to improve the conservation and sustainability of Oregon fishery resources and their aquatic ecosystems for long-term public benefit by advancing science, education and public discourse concerning fisheries and aquatic science and by promoting the development of fisheries professionals.

This letter provides comments on behalf of the ORAFS on the Bureau of Land Management's (BLM) Western Oregon Plan Revision Draft Environmental Impact Statement (WOPR). The intent of this letter is to provide both general and pointed feedback on how we believe fishery resources and their habitat may be affected by the Alternatives described in the WOPR. We would be willing to assist appropriate BLM staff in the future, as work continues on this project, to address the concerns described below.

We believe that the WOPR – and all of the proposed Alternative Action Plans –

1. do(es) not place enough emphasis on the value of maintaining and protecting riparian and aquatic habitat,

2. do(es) not adequately provide protection for non-fish-bearing streams

3. weakens current Aquatic Conservation Strategy objectives,

4. weakens protections of "late-successional reserves" thereby weakening the contribution of instream large wood into streams,

5. do(es) not adequately elaborate or clarify several key model and projection assumptions or uncertainties,

6. weakens current riparian zone protections,

7. is inadequate for the protection of riparian and aquatic habitat function, and

8. will not likely maintain or improve riparian or aquatic habitat.

Currently federal lands in Western Oregon are managed by the BLM and U.S. Forest Service under the provisions of the Northwest Forest Plan. The Northwest Forest Plan includes an Aquatic Conservation Strategy (ACS) that is scientifically-sound, ecologically-based, and provides significant benefits to riparian and aquatic habitat. Although the ACS has only been in effect for slightly more than a decade (just the "beginning" from an ecological perspective), it has resulted in improved aquatic conditions in over 60% of the Northwest Forest Plan-covered watersheds that were sampled (Reeves, et al. 2006)[1]. The ACS, or a similar commitment in all Alternative Action Plans presented in the WOPR, should continue to guide BLM management of riparian and aquatic habitat and ensure long term benefits to riparian and aquatic habitats eventually accrue under the Northwest Forest Plan. All of the Alternative Action Plans (Alternatives 2, 3, and 4) in the WOPR weaken current ACS objectives, and thus will not maintain and/or improve riparian and aquatic habitat either on BLM lands or at the watershed scale. Additionally, none of the proposed Alternatives fulfill the long-term vision set forth in the Northwest Forest Plan.

In general, more value needs to be placed within the Alternative Action Plans on the importance of maintaining and protecting riparian and aquatic habitat on BLM lands. Even though the "checkerboard" pattern of BLM land ownership within a watershed may represent a small proportion of the total watershed, the BLM-managed lands may provide the highest quality aquatic habitat in the watershed, due to agricultural and industrial timber conversion in other areas. Current BLM lands will continue to play a critical role in terms of large wood recruitment to aquatic habitat, sediment retention and transport, connectivity to other habitats, and stream temperature. The entire watershed needs to be kept in perspective, as actions taken on BLM lands have consequences to both upstream and downstream habitats. To this end, all of the proposed Alternative Action Plans specifically weaken protections of "late-successional reserves". Since large wood is so essential for aquatic habitat and fish, this has serious implications to riparian and aquatic habitat on BLM and non-BLM lands.

[1] Reeves, G.H., Williams, J.E., Burnett, K.M. and K. Gallo. 2006. The Aquatic Conservation Strategy of the Northwest Forest Plan. Conservation Biology 20(2):319-329.

The WOPR contains many references to models and projections linking land management to aquatic habitat and fish production. These models and projections are necessary given the objectives of the WOPR. In order to best support the decisions that will emerge from this process, however, it is essential that the models and projections be transparent, scientific, and well-justified. To that end, there are three key assumptions or uncertainties that require further elaboration or clarification.

- First, the modeling exercise needs more justification and clarification regarding key assumptions. For example, it is not clearly laid out how wood is linked to pools, pools to habitat, and habitat to fish.

- Second, estimates of uncertainty are given too little weight, leading to concerns about how the model outputs are used to justify management decisions. For example, the fish productivity model is highly speculative and the sources of uncertainty and levels of confidence for all model outputs are not explicitly or clearly stated. Furthermore, it is unclear how potential error propagation associated with linking multiple models was accounted for.

- And third, the Alternatives differ very little in their projected amounts of wood inputs and fish productivity. These results seem counterintuitive and overly optimistic, especially given the increased timber harvest activities within previously undisturbed riparian areas as proposed under each of the three Action Alternatives. More modeling information and explanation on these projected wood inputs and fish productivity is needed.

All riparian habitats serve a critical role in the function and quality of aquatic habitat and associated fishery resources. All of the Alternative Action Plans, however, weaken current riparian zone protections, with Alternative 2, the Preferred Alternative, being the most extreme. Narrower buffer widths and increased riparian harvest can lead to decreased large wood recruitment, decreased fine sediment filtration capacity, and changes to fish and macroinvertebrate productivity and water quality (e.g., Barton et al. 1985[2], Van Dusen et al. 2005[3]), all of which can influence a number of critical ecological functions (e.g., pool formation, gravel accumulation, hyporheic development, productivity, etc.). For maintaining and improving aquatic habitat, we recommend a management strategy supported in the scientific literature (e.g., Castelle et al. 1994[4], Brosofske et al. 1997[5], Johnson and Jones 2000[6], Lee et al. 2004[7], Reeves et al. 2006,

[2] Barton, D.R., Taylor, W.D. and R.M. Biette. 1985. Dimensions of riparian buffer strips required to maintain trout habitat in Southern Ontario Streams. North American Journal of Fisheries Management 5(3):364-378.
[3] VanDusen, P.J., Huckins, C.J.F. and D.J. Flaspohler. 2005. Associations among selection logging history, brook trout, macroinvertebrates, and habitat in Northern Michigan headwater streams. Transactions of the American Fisheries Society 134(3):762-774.
[4] Castelle, A.J., Johnson, A.W. and C. Connolly. 1994. Wetland and stream buffer size requirements – review. Journal of Environmental Quality 23:878-882.
[5] Brosofske, K.D., Chen, J., Naiman, R.J. and J.F. Franklin. 1997. Harvesting effects on micro-climate gradients from small streams to uplands in western Washington. Ecological Applications 7:1188-1200.
[6] Johnson, S.L. and J.A. Jones. 2000. Stream temperature responses to forest harvest and debris flows in western Cascades, Oregon. Canadian Journal of Fisheries and Aquatic Sciences 57:30-39.
[7] Lee, P., Smyth, C. and S. Boutin. 2004. Quantitative review of riparian buffer width guidelines from Canada and the United States. Journal of Environmental Management 70:165-180.

Wenger 1999[8]) and requiring a riparian management zone of at least one site potential tree height. Currently, only Alternative 1 (status quo management) provides for a science-based approach to riparian and aquatic management. Furthermore, to minimize the impacts to aquatic resources (e.g., increased soil compaction, sedimentation and runoff, decreased shade cover, etc.), we recommend that, should harvesting within the riparian zone be allowed, it only be allowed if the harvest purpose is to promote and enhance riparian *and* aquatic conditions.

We have three additional concerns regarding Alternative 2:

- Alternative 2 greatly deviates from best available science on riparian buffers (e.g., Beechie et al. 2000[9], Brosofske et al. 1997, Castelle et al. 1994, Johnson and Jones 2000, Reeves et al. 2006, VanDusen et al. 2005), proposing a 25 foot no harvest buffer, and outer management targets and buffers of 80% shade retention (25-60 feet buffer), and 50% canopy retention (60-100 feet buffer) for all streams. Intermittent streams, important for multiple aquatic and riparian functions (e.g., Meyer et al. 2007[10], Wigington et al. 2006[11], Wipfli et al. 2007[12]), would have even less protection under Alternative 2;

- Modeling results for "Fish" and "Water" in Alternative 2 are overly optimistic. Even though the modeling results suggest no major differences among the No Action and Alternative Action Plans for most of the attributes, in our professional judgment, the differences in riparian and timber management are significant enough that there will likely be major differences in aquatic habitat and fish productivity under Alternative 2;

- And, Alternative 2 does not provide for protection of non-fish bearing streams. Non-fish bearing streams are critical to watershed health and overall riparian and aquatic habitat conditions (e.g., Meyer et al. 2007, Wigington et al. 2006, Wipfli et al. 2007) in terms of large wood recruitment, sediment transport, and water temperature in fish-bearing areas located further downstream.

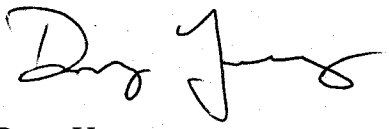
In summary, all of the proposed Alternative Action Plans in the WOPR are inadequate for the protection of riparian and aquatic habitats and are likely to hinder the recovery of threatened and endangered species. Alternative 2, WOPR's Preferred Alternative, would create the greatest risk of impacts to aquatic and riparian habitats. The ORAFS

[8] Wenger, S. 1999. A review of the scientific literature on riparian buffer width, extent and vegetation. Report from the Office of Public Service & Outreach, Institute of Ecology, University of Georgia.
[9] Beechie, T.J., Pess, G., Kennard, P., Bilby, R.E. and S. Bolton. 2000. Modeling recovery rates and pathways for woody debris recruitment in Northwestern Washington streams. North American Journal of Fisheries Management 20(2):436-452.
[10] Meyer, J.L., Strayer, D.L., Wallace, J.B., Eggert, S.L., Helfman, G.S. and N.E. Leonard. 2007. The contribution of headwater streams to biodiversity in river networks. Journal of the American Water Resources Association 43:86-103.
[11] Wigington, P.J., Jr., Ebersole, J.L., Colvin, M.E., Leibowitz, S.G., Miller, B., Hansen, B., Lavigne, H.R., White, D., Baker, J.P., Church, M.R., Brooks, J.R., Cairns, M.A. and J.E. Compton. 2006. Coho salmon dependence on intermittent streams. Frontiers in Ecology and the Environment 4:513-518.
[12] Wipfli, M.S., Richardson, J.S. and R.J. Naiman. 2007. Ecological linkages between headwaters and downstream ecosystems: transport of organic matter, invertebrates, and wood down headwater channels. Journal of the American Water Resources Association 43:72-85

recommends that all of the proposed WOPR Alternative Action Plans should propose actions that protect and enhance riparian and aquatic habitat.

On behalf of the ORAFS, thank you for the opportunity to comment on this important land management proposal. If you have any questions about our comments, please don't hesitate to contact me. Please let me know if the ORAFS can help in any way with future work.

Sincerely,



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