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Integrated Report Coordinator
Water Quality Planning Bureau
Department of Environmental Quality
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To Whom It May Concern:

This letter provides comments from the Montana Chapter of the American Fisheries Society (MCAFS) to the draft 2004 303(d) list compiled by the Montana Department of Environmental Quality (DEQ). The MCAFS is an organization of professional fisheries scientists and students from state and federal agencies, universities, tribal governments, and the private sector across Montana. The mission of the American Fisheries Society is to improve the conservation and sustainability of fishery resources and aquatic ecosystems by advancing fisheries and aquatic science and promoting the development of fisheries professionals. We are keenly interested in the total maximum daily load (TMDL) process and its potential to promote conservation of Montana's fisheries.

We have numerous concerns about this list and appreciate the opportunity to provide comments. Our concerns include recent distinctions regarding impairment categories, ways of determining impairment from nutrients, and decisions regarding specific streams. We believe that these issues have enormous implications for Montana's fisheries and hope to see them resolved.

A primary concern with the draft 2004 list is classification of some impaired segments within the Water Quality Category 4C. TMDLs are not required for these waters because DEQ did not identify a pollutant-related use impairment. In our opinion, listing streams based on the distinction between "pollutants" and "pollution" is tenuous as there is tremendous interrelatedness between pollutants and pollution. Furthermore, this distinction overlooks an explicit objective of the Clean Water Act, namely to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Clearly, focusing on pollutants does not ensure restoration and maintenance of the biological and physical conditions in our waters.

A significant problem with this pollutant/pollution dichotomy is that DEQ has not adequately altered their 303(d) listing process to reflect this change. DEQ employs criteria for sufficient credible data (SCD) developed before the advent of this distinction, while this change results in a need for more data in order to make reliable beneficial use support determinations (BUD). For example, a reasonable assumption in a dewatered stream (pollution) is that thermal loading (pollutant), due to decreased flow volume, presents a constraint on aquatic life. Therefore, if dewatering is a concern for a given stream, it is incumbent on DEQ to disprove increased

temperatures as constraint on fisheries and aquatic life. Although the available temperature data may score within the range of sufficient, credible data, DEQ needs to evaluate whether impairment due to temperature can be ruled out before designating the stream as 4C. Because of the highly labile nature of temperature data, a significant amount of data is required to adequately evaluate temperature as a pollutant. Failure to take these steps constitutes an undue risk to Montana's fisheries from a very common cause of impairment.

Another concern is DEQ's approach to addressing nutrient enrichment as a probable cause of impairment. Review of information on the Environet database indicates that DEQ relies on nutrient investigations and target development from the Clark Fork River for making impairment listings for a wide range of streams. This approach has serious limitations in that it ignores the well-established relationship between stream size and trophic organization (Vannote et al 1980). Moreover, this approach is unlikely to protect smaller streams that tend to be oligotrophic compared to large rivers such as the Clark Fork. Any beneficial use support determination based on use of values developed for the Clark Fork River should be reevaluated to assess the appropriateness of the listing.

The Gallatin River (MT41H001_010) provides an example of our concerns regarding 4C classification. In this case, we believe that the 4C classification is inappropriate, as there is substantial evidence of impairment from temperature. If DEQ applied the same logic statewide in the beneficial use support determinations, we have concerns regarding the overall value of the 2004 303(d) list.

A significant amount of evidence does not support 4C classification of the Gallatin. There is substantial evidence that thermal modifications limit cold-water fisheries and aquatic life in the river, necessitating development of a TMDL. Thermograph data collected by Montana Fish, Wildlife & Parks, but not included in the analysis clearly indicate summer temperatures result in stress to this fishery. In addition, macroinvertebrate communities suggested warm temperatures, a condition noted in DEQ's analysis but not included in the impairment determination.

An important consideration in including thermal alterations as a probable cause for the Gallatin River is its importance in the recovery and conservation of fluvial Arctic grayling. Montana Fish, Wildlife & Parks has reintroduced grayling to the Gallatin River. Arctic grayling, as the name implies, are especially sensitive to thermal loading. Therefore, DEQ needs to include efforts surrounding conservation of this candidate for the endangered species list in water quality planning for the Gallatin River.

In conclusion, our concerns regarding the draft 2004 303(d) list relate to exclusion of streams from requirements for TMDL development through the 4C Classification, criteria for nutrient impairment determinations, and the failure to list the Gallatin River and possibly numerous other waters across the state due to thermal modifications. The very large number of waters on the draft 2004 list precluded us from conducting a stream-by-stream assessment of the appropriateness of listings. However, the emergence of the Gallatin River in a cursory review of 4C streams suggests that thermal modifications and other impairments associated with "pollution" may not be addressed through the TMDL process. We recommend that DEQ strengthen its SCD and BUD requirements to ensure currently listed 4C waters and their fisheries receive adequate protection under the Clean Water Act.

Sincerely,



Steve Leathe, President

LITERATURE CITED

Vannote, R.L., G.W. Minshall, K.W. Cummins, J.R. Sedell, and C.E. Cushing. 1980. The river continuum concept. *Canadian Journal of Fisheries and Aquatic Science* 37:130-137.

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