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MONTANA CHAPTER

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Ms. Mindy McCarthy
Department of Environmental Quality, Water Quality Planning Bureau
P.O. Box 200901
Helena, MT 59620-0901

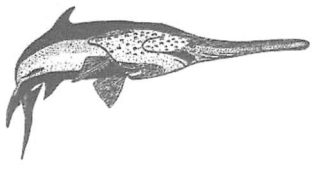
RE: Comments on DEQ's New Method for Assessing Water Quality

Dear Ms. McCarthy

The Montana Chapter of the American Fisheries Society (MCAFS) comprises over 300 professional fisheries scientists, ecologists, and students from across a spectrum of agencies, universities and the private sector throughout Montana. MCAFS focuses on the science behind maintaining the health and well-being of Montana's diverse aquatic ecosystems and the fisheries they sustain. We recognize the key role water quality plays in conserving Montana's fisheries and aquatic ecosystems. We appreciated the opportunity to review DEQ's proposed *Water Quality Assessment Method*. MCAFS recognizes that the proposed method significantly improves consistency in collection and analysis of water quality data and applauds your efforts. However, MCAFS is concerned that the proposed method may be so strict as to exclude readily available, relevant and significant water quality data from DEQ's determinations.

Our review of DEQ's *Water Quality Assessment Method* indicates a marked improvement from the previous sufficient, credible data (SCD) criteria. Specifically, the proposal calls for pollutant-specific methods for several categories of pollutants. In contrast, the SCD approach made no distinctions among pollutants in determining if the data were sufficient and credible. As a result, a stream could meet the criteria for SCD even in the absence of data to evaluate any specific pollutant. Under the SCD method, DEQ identified only the pollutants and impairments where sufficient data were available to evaluate certain pollutants, without collecting data or analyzing other pollutants potentially causing impairments. It remains unclear if DEQ will collect pollutant-specific data in cases where sufficient data may be unavailable to evaluate a specific pollutant but ancillary information suggests an impairment exists. For example, will DEQ collect water temperature data when hydrological or biological data suggest water temperatures are impairing beneficial uses such as coldwater fisheries?

A second deficiency in the proposed methodology relates to the specific steps in assembling available information. The *Water Quality Assessment Method* acknowledges that state and federal laws require DEQ to assemble and evaluate **all** existing and readily available data relevant to surface water quality in Montana. However, the document does not



describe how DEQ will assemble available data. Several state and federal agencies maintain web-accessible databases housing biological, physical, and chemical data, including the US Geological Survey, EPA (STORET), and Montana Fish, Wildlife & Parks (MFISH). Presumably, DEQ has the responsibility to download these data and include them in the assessment process, although the document does not state this explicitly. In our past assessments of 303(d) lists, the MCAFS noted inconsistency in types of data reviewed and that relevant data was omitted from review. For example, DEQ repeatedly omitted water temperature data collected by the US Geological Survey, an agency noted for high quality data, despite being repeatedly alerted to the availability of these data. Please revise the proposed *Water Quality Assessment Method* to clarify DEQ's position and responsibility to assess these readily available, online data sources.

A third concern relates to the method by which DEQ will solicit information.. In Section 3.0, DEQ states it will solicit "outside data and information from other local, state, and federal agencies ..." yet the proposed *Water Quality Assessment Method* does not explain how DEQ will solicit such information. In our experience, DEQ has not made effective efforts to solicit such information in the past. Furthermore, the schedule is unclear under which DEQ would review listed impaired streams to take into account any new information it acquires. Few MCAFS members recall receiving requests for information since the late 1990s, with the exception of a DEQ call for data from FWP in 2010. DEQ should explicitly state its approach to soliciting data from agencies and other entities, including a list of whom will receive requests and when requests will occur. Establishing a protocol will assist researchers in collecting suitable data and ensuring these data are included in a timely review process.

Our fourth concern regards several aspects of the minimum data requirements listed in Section 3.1, especially as it relates to fisheries data collected by universities and state and federal agencies. Although we support the need to maintain data quality objectives, the proposed criteria may preclude use of vital fisheries information. Montana FWP's biologists are renowned for collecting long-term, high quality fisheries data, yet FWP's fisheries database (MFISH) does not currently include specific quality assurance project plans or sampling analysis plans for individual sampling events. The MFISH database includes data quality ratings, which provide information on the quality of the information. Note that even peer-reviewed journal articles may not meet DEQ's proposed data requirements, because they are not published with QAPPs, SAPs, or field notes.

Overall, our concern for the data quality requirements is that relevant, high quality data may be dismissed based on technicalities. We strongly support the need for high quality data and reporting; however, DEQ must acknowledge that water quality assessments to list streams are initial screens, and should not be required to meet the stringent requirements of peer review.

Finally, we have considerable concerns regarding DEQ's approach to determining impairments associated with water temperatures. Again, we agree that water temperature data must meet some level of scientific rigor, but are concerned that excessively strict standards may exclude important data sets. For example, Table 6-6 requires that water temperatures be recorded at less than 30 min intervals for a 76 day period, while hourly temperatures recorded from July 15 to August 15 would likely capture the period of most significant thermal impairment for coldwater fishes. Furthermore, we applaud the use of fish tolerance thresholds as indicia of impairment, but are unclear which thresholds will be used. The fisheries literature uses multiple measures of tolerance including critical thermal maxima, upper incipient lethal temperature, and optimal temperature ranges in evaluating suitability of stream temperatures for various fishes. We recommend that DEQ: specifically state which index of thermal tolerance it will apply, apply thresholds that will protect fisheries from impairments, and state how it will make impairment determinations. Our membership certainly possesses the expertise to assist you in this endeavor.

The MCAFS is pleased that DEQ has developed the proposed *Water Quality Assessment Method* focused on pollutant-specific rigorous data standards. We believe that water quality assessments should be based on solid, repeatable and defensible scientific methods. However, we are concerned that in some cases, data quality standards may be so strict as to exclude quality data readily available from a variety of reputable sources. Arbitrary exclusion of reputable data sets may result in a failure to recognize and address water quality impairments that threaten Montana's treasured fisheries and aquatic life. We appreciate the opportunity to comment and your consideration of our recommendations.

Sincerely,

Craig Barfoot

Craig Barfoot, President
Montana Chapter of the American Fisheries Society