



AMERICAN FISHERIES SOCIETY

MONTANA CHAPTER



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Water Quality Planning Bureau
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December 20, 2010

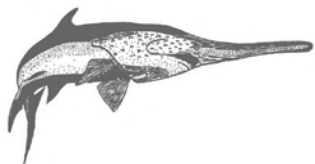
Dear Mr. Bostrum,

The Montana Chapter of the American Fisheries Society (MCAFS) appreciates this opportunity to comment on the *Draft 2010 Water Quality Integrated Report*. The MCAFS is an organization of over 300 professional fisheries scientists and students from multiple agencies and universities, and the private sector across Montana. We recognize the importance of the Clean Water Act in conserving Montana's fisheries, and understand the role the total maximum daily load (TMDL) process plays in restoring and maintaining the biological, chemical, and physical integrity of the nation's waters. Because the TMDL process has great potential in fisheries conservation, we are dedicated to seeing this process attain a high level of scientific merit, and meet the objectives of the Clean Water Act.

Given the scope of the draft report, an extensive review of all determinations was infeasible; therefore, we restricted our review to evaluating how DEQ responded to concerns we raised in our review of the 2008 draft integrated report (see attached). To summarize, our comments on the 2008 draft report addressed the following issues and concerns:

- clarification of the schedule for reviewing specific listed waters for the integrated report;
- omission of a considerable amount of information from the Shields River watershed,
- the presence of blank data assessment sheets for many listed waters, including streams in the Shields River watershed;
- the sizeable proportion of streams with review of the out-of-date STOREASE database, but no consideration of data housed in the STORET database;
- omission of years of daily temperature data collected at US Geological Service gage stations for several streams;
- concerns over DEQ's approach to determining thermal impairment in dewatered streams; and
- request for clarification on recipients of the 600 letters requesting data for inclusion into the review process.

DEQ's response to our comments on the 2008 draft report did not specifically respond to any of these concerns, but indicated DEQ "will factor information regarding specific waterbody assessments provided in the comment letter during subsequent assessments of the waterbodies identified." This brief response to a 12 page comment letter does not demonstrate a willingness to consider deficiencies in the data raised by Montana's experts on fisheries and aquatic ecology .



Regarding the current 2010 biennial report, DEQ was inconsistent in its response to parties alerting DEQ to availability of data not included. For example, Plum Creek Timber Company pointed out that substantial and readily available data for Swift Creek and its tributaries were not included in the current assessment records. DEQ appropriately responded by updating the assessment sheets, and making the indicated changes in the final integrated report. This inconsistent response between Plum Creek Timber Company's and AFS' comments has the appearance of being arbitrary and prejudiced against a broad class of Montana's fisheries professionals.

A review of the most recent assessment records suggests that DEQ conducted a review of Shields River data, as the assessment lists a June 2010 assessment date. Some of the previously vacant fields now have information; however, a considerable amount of information, including data collected by DEQ, is missing from this review. In light of our previous comments to DEQ pointing out deficiencies in data assessments for the Shields River, we have considerable concern with DEQ's failure to address these problems.

Available biological data not included in the citations, nor covered in the assessment includes fisheries investigations and evaluations of aquatic life referenced in the sediment TMDL for the Shields River watershed (DEQ 2009). DEQ has commissioned at least 4 evaluations of associated aquatic life in the Shields River within the past decade (Bahls 2001; Bahls 2004; Bollman 2001; Bollman 2002; and Bollman 2004); however, the attainment record references only the results of a macroinvertebrate survey from 1992. The assessment also does not summarize fisheries investigations that occur yearly along the main stem.

The chemistry data evaluation sheet for the Shields River watershed indicate the chemistry data scored a 1, which indicates substantial deficiencies in the available data in terms of number of samples, age of the data, spatial coverage, or some other measure of data quality. Information obtained from data queries to STORET and the USGS's NWIS database do not support such a low data quality score. STORET hold records of several sampling events from the 2000s evaluating nutrient concentrations and chlorophyll *a* concentrations at sites distributed along the length of the Shields River, as well as select tributaries. Collection efforts also spanned the seasons providing an opportunity to evaluate seasonality. STORET lists Montana DEQ as the agency responsible for collecting these data, so their collection must have followed standard operating procedures to ensure data quality in the field and in laboratory analyses. Ancillary information includes a series of photos taken by a Shields River landowner documenting accumulations of nuisance algae that likely exceed the recently developed chlorophyll *a* standards to address nutrient loading. We respectfully request that DEQ review its own nutrient and chlorophyll *a* data, and make the appropriate determination based upon it.

A similar scenario occurs with temperature data collected at the USGS gage station. The USGS has been monitoring mean, maximum, and minimum daily temperatures near the mouth of the Shields River for over a decade. The water quality standards attainment record for the Shields lists the USGS among agencies checked for data, and specifically references the NWIS database where these data are housed. In addition, the MCAFS and other entities have alerted DEQ to the availability of these data on several occasions; however, DEQ does not include this wealth of data in its current review. Nor does DEQ include the USGS temperature data for the Gallatin River, despite our comments and analysis of these data in our comments on the 2008 integrated report. Please include these data into the 2010 integrated report, or indicate when DEQ will review these high quality data.

Dewatering is a considerable constraint on Montana's fish populations, with elevated temperatures being a primary limiting factor. Our comments on the 2008 integrated report involved evaluation of DEQ's approach to evaluating beneficial use support determinations in dewatered streams. The data review for Indian Creek, a tributary of the Ruby River, embodies several of the deficiencies in DEQ's approach to evaluating, or not evaluating, thermal loading in dewatered streams. The assessment record lists periodic fish kills associated with dewatering as occurring in this stream, but does not acknowledge that elevated temperatures are typically a lethal result of dewatering. The assessment concludes that temperatures were within an acceptable range, but

the only temperature datum reviewed was a spot reading from September, which allows no inference on thermal regime during the height of the summer. Thermal tolerance information cited as the basis for making beneficial use determinations were for nonnative rainbow trout and brook trout; species that are far more tolerant of warm temperatures than the westslope cutthroat trout present in the stream. DEQ's beneficial use support determination for this stream does not protect sensitive, native westslope cutthroat trout, a factor that may increase the likelihood of their protection under the Endangered Species Act.

DEQ's apparent reluctance to address thermal loading associated with dewatering is inconsistent with the objectives of the Clean Water Act, and risks listing of certain species under the Endangered Species Act. As we pointed out in our comments on the 2008 integrated report, many of the dewatered streams support bull trout, westslope cutthroat trout, Yellowstone cutthroat trout, and arctic grayling, all species either listed, or petitioned for listing. All of these species rely on cold water for their persistence. Appropriate listing of temperature as a pollutant in dewatered streams would give fisheries managers a tool for pursuing actions to protect these sensitive species.

In conclusion, we continue to have most of the same concerns that we identified in our comments on the 2008 integrated report, and are troubled about DEQ's apparent prejudice against our professional organization, as evidenced by the failure to address the bulk of our concerns in either the 2008 or 2010 integrated reports. Specifically, we request that DEQ clarify its schedule for conducting true reviews, and update assessment records with noted deficiencies in data reviewed. In addition, the links between dewatering and thermal loading have dire consequences for Montana's fisheries, especially native salmonids, and DEQ should identify this important category of impairment. Thanks for your careful consideration of our concerns.

Sincerely,

Todd M. Koel, Ph.D.
President, Montana Chapter, American Fisheries Society

Literature Cited

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