



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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JAN 14 2011

Ref: 8EPR-EP

Mark Stanger
Utah Division of Water Quality
P.O. Box 144870
Salt Lake City, UT 84114-4870

Re: Clean Water Act Section 303(d) Total
Maximum Daily Load (TMDL) Waterbody
List

Dear Mr. Stanger:

The U.S. Environmental Protection Agency Region 8 office appreciates the opportunity to comment on the recently released draft 2008 and 2010 Integrated Reports on the condition of Utah's waters including the draft Clean Water Act (CWA) Section 303(d) waterbody lists (Section 303(d) lists) and supporting documentation and information. Comments on the draft reports/lists are enclosed. Additional formatting, methodology and ADB comments will be sent informally via email. We hope many of the comments will assist Utah in the finalization of these reports for approval.

Congratulations are in order for the superlative efforts of staff and management of the Water Quality Management Section of the Division of Water Quality in overcoming major logistical issues to complete these draft reports (as well as major revisions to the associated database (ADB)) and release them for public comment. These products represent a tremendous amount of work.

We appreciate your work to produce Utah's Draft 2008 and 2010 Integrated Reports, including the draft Section 303(d) lists. If you have questions, the most knowledgeable EPA staff person is Kris Jensen and she may be reached at (303) 312-6237.

Sincerely,

A handwritten signature in blue ink, appearing to read "Karen Hamilton".

Karen Hamilton
Chief, Water Quality Unit
Ecosystems Protection Program

Enclosure



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Detailed Comments

1. *Biological Assessment Results, Chapter 2.15*: Utah's 2008 Integrated Report includes the results of the newly implemented biological assessment procedures, allowing the state to directly quantify support of beneficial uses for aquatic life. These results and UDWQ's process for interpreting biological data are presented in Chapter 2.15: *Biological Assessment Results*. Following this process, DWQ has added waterbodies to the State's 303(d) list if the benthic macroinvertebrate data indicated impairment and sufficient data existed. Once listed, UDWQ plans to conduct additional studies to identify the pollutant causing the biological impairment. EPA supports this approach and commends UDWQ for using biological data in the State's assessment process.

Since biological data were not considered by UDWQ until the 2008/ 2010 IRs, we recognize there are situations where the biological data suggest that the waterbody is impaired but a TMDL has already been completed. In these situations, EPA recommends the following:

- Utah will submit additional documentation to EPA that describes why UDWQ believes that the completed TMDL adequately addresses the benthic macroinvertebrate impairment. This documentation may include: an examination of the taxa list; information linking the biological data to the pollutant; description of the possible sources in the watershed; etc.. EPA will consider this information in our review of the final IR.
- If the TMDL has been completed for more than 5 years, and current biological data indicate impairment, EPA recommends that UDWQ add these waters to the State's 303(d) list for biological impairment.

In situations where the TMDL has not yet been started or completed, we recommend adding "Benthic Macroinvertebrate Assessments" as a cause of impairment for the waterbody. We would also encourage UDWQ to incorporate biological data as one of the TMDL targets.

1. Appendix A-1, *Draft Great Salt Lake Assessment for Mercury*, page 10: EPA notes the statement "multiply the dry weight measurement by (1- percent moisture/100) is incorrect. This statement should read "divide the dry weight measurement by (percent moisture/100)." Utah should verify the nature of this error; whether it is merely typographical, or if this is actually the approach that was used to convert the data from dry weight to wet weight. If it is the approach used, then the data analysis in this appendix is incorrect. As the raw data were not available with the appendix, EPA is unable to determine if this is the case.

Appendix A-2, *Draft Great Salt Lake Assessment for Mercury, Part 2- 2010 Ecological Risk Assessment Approach*: EPA considers this draft approach a great addition to the assessment and hopes to be closely involved in future developments with this approach. The most knowledgeable EPA staff person to participate is Sandra Spence and she may be reached at 303-312-6947.

2. Page 18: Exceptions Based Upon Unusual Hydrologic or Climatic Conditions

“Severe or extreme natural conditions, such as a drought, can be considered during the beneficial use assessment. During severe to extreme drought conditions, streams can have temperatures greater than the standard but are rare in occurrence if the normal hydrological regime occurs. In this case, DWQ reserves the right to identify these waters, but not list the AU on the 303(d) list. A rationale for not listing will be provided whenever this occurs. The AU will be assessed again when normal flow conditions return. For example, during the extreme drought in southern Utah, the Paria River was listed as not being assessed because the stream dried up during several months of the year and samples could not be collected.” (Utah’s 2010 Integrated Report, Part 1: Methods for Assessing and Reporting the Condition of Lakes and Streams, p. 18/19.)

EPA has several question/comments concerning the above paragraph. First, this section appears to be confusing two issues: drought and “natural conditions” as specifically used in Utah’s water quality standards. The standards recognize that natural conditions may be taken into consideration when assessing attainment of *E.coli* criteria and when developing site-specific standards for temperature and TDS. EPA recommends this section be re-written with discerning attention to the meaning attributed to the term “natural conditions” in the standards (i.e., application to temperature, TDS and *E. coli* criteria). As currently written, the information on page 18 may be misleading. Is it implied that the State excluded parameters beyond temperature from their assessment?

Second, is it always reasonable to consider data collected under drought conditions as nonrepresentative? EPA will want to be assured in situations where exceedances occur under drought conditions and no site-specific standard is in place that the State evaluated other possible anthropogenic impacts to the waterbody (e.g., irrigation diversions).

We recommend that UT develop a protocol and/or water quality standards revisions that identify how climatic conditions should be taken into consideration for future assessments of temperature criteria. For example, Colorado’s temperature standards provide excursions from criteria on extremely hot days and during extreme low flows¹.

(i) ¹Colorado Regulation 31, Table 1, Footnote 5.(c): Air temperature excursion: ambient water temperature may exceed the criteria in Table 1 or the applicable site-specific standard when the daily maximum air temperature exceeds the 90th percentile value of the monthly maximum air temperatures calculated using at least 10 years of air temperature data.

Additionally, Colorado's Listing Methodology discusses representative data. In 303(d) listing hearings, long-term hydrographs and sample date/time-specific flows have been used to demonstrate the lack of the representative nature of specific samples. Without justification, as the default, samples should be regarded as representative.

EPA urges caution before ignoring data that seem unexpected and hence not representative. Many climate scientists and modeling results predict additional variability in the central Rocky Mountains precipitation - approximately 30% (+ & -) on top of the already variable historic conditions. Some of this variability appears to be already occurring with data from the past decade showing statistically greater variability than historic records. So the new norm, may not resemble the old norm. If ecosystems experience greater variability in flows and weather conditions, assessment analyses may merit additional care prior to being declared nonrepresentative. What may have been nonrepresentative in the past may indicate the first signs of a wider range of conditions becoming the new norm.

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- (ii) Low-flow excursion: ambient water temperature may exceed the criteria in Table 1 or the applicable site-specific standard when the daily stream flow falls below the acute critical low flow or monthly average stream flow falls below the chronic critical low flow, calculated pursuant to Regulation 31.9(1)
 - (iii) Air temperature excursion: ambient water temperature may exceed the criteria in Table 1 or the applicable site-specific standard when the daily maximum air temperature exceeds the 90th percentile value of the monthly maximum air temperatures calculated using at least 10 years of air temperature data.
 - (iv) Low-flow excursion: ambient water temperature may exceed the criteria in Table 1 or the applicable site-specific standard when the daily stream flow falls below the acute critical low flow or monthly average stream flow falls below the chronic critical low flow, calculated pursuant to Regulation 31.9(1)