



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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NOV 01 2017

Mary Barnett
Ecologist Coordinator
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Re: Draft 2018 Assessment Methodology

Ms. Barnett:

Thank you for the opportunity to comment on the Draft 2018 Assessment Methodology for Arkansas that resulted from the new stakeholder involvement process. The Environmental Protection Agency commends the Arkansas Department of Environmental Quality for the significant effort expended in assessing the State's waters and appreciates the emphasis Arkansas places on maintaining and enhancing the State's abundant natural resources.

Based on our initial review, the Region 6 office of the Environmental Protection Agency is providing the attached comments on Arkansas's draft 2018 Assessment Methodology. If you have any questions or need any clarification, please contact Selena Medrano of my staff by phone at (214) 665-2776 or via email at medrano.selena@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Wooster".

Richard Wooster
Chief
Assessment, Listing and TMDL Section

Enclosure (1)

Draft 2018 Assessment Methodology Comments

1. Section 3.2.2: The third paragraph states:

However, an evaluation of non-attainment will not be made for non-monitored AUs when the source or the origin of the impairment in contiguous monitored waters is unknown, and/or when the magnitude or frequency of the impairment is such that contiguous segments may not be impacted.

Who will conduct the source characterization to determine the source of the impairment? When will the source of impairment be determined? Generally speaking, most sources are unknown until a TMDL or other study has been completed; therefore, segments that could reasonably be determined to be impaired based on other information, save for knowing the actual source, will remain "unassessed" under this scenario. Would suggest to not limit impairment extrapolation based on source identification.

2. Section 3.4, the second paragraph states:

Tier I data fail to meet "essential" data quality requirements.

Specify means for failure – do the data fail when all requirements are not met or if only one of four requirements is missing, it fails to meet all together.

3. Table 1:

- a. What is the thought behind lumping Phase I requirements together with the "essential" requirements? Why not break Phase I out into 2 phases and have three total phases? It's not inherent which are the required elements.
- b. If don't separate into 3 phases, suggest to add a header to visually define which are "essential" requirements.

4. Section 5.0, Fish Community Analysis, Listing Methodology states:

when one or both of the toxicity test organisms (vertebrate and/or invertebrate) fail more than one ambient toxicity study acute or chronic toxicity test in a three-year period

Please provide clarity. Does this mean vertebrates have to fail twice in order to be called impaired? What if vertebrates fail one time and invertebrates fail another time, both failures within a 3-year period of each other? What if a vertebrate fails 1 chronic and 1 acute within 3 years? What if a vertebrate fails chronic and an invertebrate fails an acute within 3 years?

5. Section 5.0, Fish Community Analysis, Delisting Methodology states:

AUs will be listed as support when evaluated biological communities (macroinvertebrates and/or fish, which ever community led to the impaired attainment decision) do not indicate perturbation/degradation

This reads macros and/or fish -- indicating that only one needs to be meeting if have information on both communities. What if fish impaired it -- fish are now supporting, but macroinvertebrates now fail. Need to make it clear that both communities must be supporting.

6. Table 9: Why is there a "/or" here under "Type of Data Present"? Both communities should be evaluated for this part of the table.
7. Section 6.1, Phase II, 2, Minimum Distribution requirements, Long-Term Continuous data: Can long-term continuous data be used for assessments if only collected in one year or are 2 years of critical season required?
8. Section 6.2, Phase II, Minimum Distribution requirements: Is there no requirement of multiple years for turbidity?
9. Section 6.6, Assessment Methodology,
 - a. The first paragraph states:

If adequate data sets exist for both single sample and geometric mean assessment (within the same year), both methods will be assessed separately and the most protective result will be used as the final assessment decision.

This sounds as though geometric mean will be applied to waters that aren't ERW, ESW, NSW, lakes, reservoirs if data are available.

- b. Primary Contact, Individual Samples states:

Assessments can be made using data from only one primary contact season within the period of record; however, if complete data sets exist for more than one primary contact season within the period of record, data sets will be combined for assessment.

Combining data from more than one primary season is diluting the data set and is discouraged.

10. Section 6.6, Listing Methodology, individual samples states:

If the assessment of non-support is based on only one (1) season of data (eight (8) discrete samples within one primary contact season, or within one secondary contact season), the AU will be placed in Category 4b and more data will be collected for re-assessment in a future assessment cycle.

- a. This statement directly contradicts that an attainment decision can be made from one season as stated above in the "Minimum data distribution and quantity requirements" sections for both primary and secondary seasons.
 - b. Category 4b is reserved for those waters where there are alternative pollution control measures in place. It is inappropriate to place waters into this category based on an

introduced secondary metric of requiring a second season of data. This above referenced paragraph and the one below should be deleted.

If the assessment of non-support is based on more than one season of data, the AU will be placed in category 5, truly impaired.

11. Nutrient Flow Chart (page 62): In the third decision box (concerning 72-hour data sets), express that pH exceeds the water quality standard 10% of the time as per the methodology; otherwise, it appears as though one pH excursion causes it to fail.

12. Section 6.12, Chronic Criterion, Early Life Stage Present, states:

Data must be evenly distributed over at least two (2) years and three (3) astronomical seasons (spring, summer, fall, winter); unless an assessment of non-attainment can be reached in fewer than ten (10) samples.

Do early life stages span 3 astronomical seasons?

13. Section 6.12, Chronic Criterion, Early Life Stage Absent, states:

Data must be evenly distributed over at least two (2) years and three (3) astronomical seasons (spring, summer, fall, winter); unless an assessment of non-attainment can be reached in fewer than ten (10) samples.

Are early life stages absent for 3 astronomical seasons?