

*Biological Assessments:
Aquatic Life Use Category Indicated
by Fish and Benthics Differences*

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Statement of the Issue

- Characteristics of the fish and benthic macroinvertebrate assemblages, vary in terms of species present, relative dominance, trophic organization, etc. as a result of change in ecological conditions, both natural and/or non-natural.
- Such changes in the characteristics of the biotic assemblages, may be reflected in the results of assessments of biotic integrity (Index of Biotic Integrity).
- Man induced change as well as natural variation in instream ecological conditions, and biotic interactions, can affect each assemblage in a different way with subsequent differences in IBI results for each.



Guidance for 2008 IR

- If either the fish or the benthic macroinvertebrate assemblage IBI results do not indicate support of the Aquatic Life Use category assigned, the water body is identified as not supporting the aquatic life use.



Proposed Guidance for 2010 IR

- When assessing a water body for which the ALU Category was established without bioassessments, the highest ALU category indicated by either the fish or benthic macroinvertebrates will be compared to the designated or presumed use, to determine support.
- If either the fish or benthic assemblage IBI mean indicates support of designated or presumed use, the water body will be identified as a concern, and an effort will be undertaken to properly define the ALU category for both assemblages for future assessments.
- If neither assemblage support the designated, or presumed use, the water body will be identified as impaired.



Proposed Guidance for 2010 IR

- When the ALU category was established based on a UAA including biological data, and the methods used in the UAA are current, the assessment should be consistent with the findings of the UAA for each assemblage.
- For example, if a high ALU category was established based primarily on fish, and the benthics IBI results were in a intermediate ALU category, then the fish will be assessed against the criterion for high ALU, and the benthics will be assessed against the criterion for intermediate ALU.



Summary

- This method is consistent with findings in the least disturbed streams study.
 - That the ALU indicated by each assemblage may differ from the other, and reduce the possibility of inappropriately listing a water body as a result of natural inherent differences between the integrity of the fish and benthic assemblages.
- In these cases, the water body will be identified as a concern, and an effort will be undertaken to properly define the ALU category for both assemblages for future assessments.
- If neither assemblage support the designated, or presumed use, the water body will be listed.

