

5 - Narrative Biological Standard

Justification

DWQ is currently using an empirical model, which was openly discussed with the public and the Board, to assess biological use support in streams. While DWQ believes that the model provides a quantitatively rigorous interpretation of our existing narrative criterion, the relationship is not clearly made in the current standards. The proposed change to the standards provides greater transparency to our stakeholders about our biological assessment program, establishes a process for developing "numeric translators" of the standard, and makes the use of approved standards more legally defensible.

Relevant Definitions

From R-317-1-1

1.* "Assemblage" means an association of aquatic organisms of similar taxonomic classification living in the same area. Examples of assemblages include fish, macroinvertebrates, algae, and vascular plants.

1.* "Aquatic organism" means any plant or animal which lives at least part of its life cycle in water.

1.* "Biological condition" means the taxonomic composition, richness, and functional organization of an assemblage of aquatic organisms at a site or within a water body.

1.* "Functional organization" means the number of species or abundance of organisms within an assemblage which perform the same or similar ecological functions.

1.* "Metric" means an expression of biological community composition, richness, or function which displays a predictable, measurable change in value along a gradient of pollution or other anthropogenic disturbance.

1.* "Reference sites" are sites that are determined to be representative of sites or waterbodies of similar type (e.g., hydrology and ecoregion) and are least impaired with respect to habitat, water quality, watershed land use, and riparian and biological condition.

1.* "Richness" means the absolute number of taxa in an assemblage at a site or within a water body.

1.* "Taxonomic composition" means the identity and abundance of species or taxonomic groupings within an assemblage at a site or within a water body.

Proposed Rule

7.3 Narrative Biological Standards

The taxonomic composition, richness or functional organization of an assemblage of aquatic organisms shall not differ from comparable measures observed at reference sites. Violations of this criterion will be determined using scientifically defensible and statistically rigorous methods and other information.

This biological criterion alone shall not be used for regulatory and enforcement actions, such as the development or enforcement of Utah pollution discharge elimination system permits. However, biological assessment methods that have been approved by the Executive Secretary, following consultation and review by the Board and other interested parties, may be used to assess support of biological uses as assigned in R-317-2-6. Biological assessment methods may also be used, in combination with other information, to support the development of site-specific standards, new or refined aquatic life use categories, or to support the need for new permit limits.