



Focus

New Water Quality Standards Implementation

Issue

The Washington State Department of Ecology (Ecology) is proposing to revise the state surface water quality criteria for rivers, lake, and reservoirs. Transition strategies have been developed to facilitate the changes.

Getting from 'here' to 'there'

Proposed changes to the surface water quality standards would require adjustments to monitoring programs, wastewater discharge permits, Water Cleanup Plans – also called Total Maximum Daily Loads (TMDLs), and the 303(d) listing process. Coordination with the U.S. Environmental Protection Agency (EPA) regarding transition strategies is ongoing. The transition raises questions relating to:

- Switching from a class-based to a use-based system.
- Applying the new antidegradation policy.
- How to address changed data needs.
- How to prioritize future efforts to update existing work to meet the new standards.

Guiding the transition efforts is the principle to minimize added expense and additional effort, while moving towards compliance with the new standards and criteria. Existing work will be recognized for its contribution to progress towards healthy aquatic systems. Revisions to existing work should be required when there is a reasonable expectation that better protection of aquatic resources will result.

Applying standards under the use-based approach

The current classification system of AA, A, B, C and Lake Classes assigns characteristic uses to each class with lower classes supporting fewer uses. The revised standards must be applied so that they support the same uses covered under the current class-based structure. Where more sensitive existing uses are identified in a waterbody than are designated under a class the appropriate, more protective standards will automatically be applied under the existing state antidegradation requirements. Where more sensitive uses are currently protected but they don't naturally occur, a Use Attainability Analysis will need to be done. This would allow removal of the more protective criteria for the identified area.

Some state waterbodies have been assigned unique water quality criteria as special conditions under the existing rules in WAC 173-201A-130. Waterbodies currently assigned these special conditions will retain them under the use-based system. Appropriate uses consistent with the existing special conditions have been identified in a table in the draft rule.

The new standards recognize that stormwater ditches and constructed farm ponds are unique waters that generally involve only incidental contact by people. Consequently, while still applying aquatic life criteria, they allow relaxed bacteria standards. The aquatic life and

relaxed bacteria standard would apply up to some point shortly before actual discharge to other surface water in order to retain compliance with the higher standards at the point of discharge. The boundaries of these waters will need to be identified.

The following table lists the proposed sensitive uses that will be provided with new water quality criteria in the new rules. The table indicates which classes the uses are currently assigned to. The last three uses are not listed in the current classes.

Designated uses covered by the proposed changes. Last three uses are not separated out in current class system and haven't had specific standards before.	Class where designated uses are currently protected				
	AA	A	B	C	Lakes
Water supply – agricultural (Irrigation)	x	x	x		x
Salmonid spawning	x	x			x
Salmonid rearing			x		
Other fish rearing and spawning (non-anadromous rainbow trout)	x	x	x		x
Recreation –primary contact, sport fishing and boating	x	x			x
Bull trout and char - Documentation of existing use triggers this new standard. A rule change is required to identify these areas.					
Warm-water aquatics – A Use Attainability Analysis is required to document natural conditions and to remove more sensitive uses. A rule change is required to designate these areas.					
Incidental contact – A Use Attainability Analysis is required to document natural conditions and to remove more sensitive uses from designated areas. A rule change is required to identify these areas.					

Applying antidegradation

The antidegradation section of the standards is designed as a set of steps, to ensure that beneficial uses are supported. Antidegradation is an ongoing implementation strategy in itself. These steps are spelled out in the proposed rule. Tier 1 protects existing beneficial uses by developing and applying appropriate WQ standards. Tier 2 protects high quality waters by requiring potentially harmful activities to use less harmful alternatives and to show clear public benefits. Tier 3 identifies waters that are outstanding national resources and prohibits any further decline in their quality.

Applying changes to criteria

The proposed changes in standards include using a different bacteria indicator for human health protection and using rolling averages for temperature and dissolved oxygen instead of single data points. These changes will require different monitoring to be done in the future and effect the way existing data and analysis can be used.

MONITORING

Bacteria Standards: Existing monitoring programs would need to shift to analyzing enterococci. Marine waters adjacent to shellfish beds and contributing freshwaters will also continue to be tested for fecal coliform. Testing laboratories will need to be certified for the new test procedures and training for facility operators will be provided by Ecology. Ecology's ambient monitoring program began in the fall of 2000 to include enterococci samples along with fecal coliform.

Dissolved Oxygen and Temperature: Data collection for these two parameters, particularly temperature, would need to shift from grab samples to continuous monitoring for a minimum of seven days. Monitoring must be done during specified seasons to more accurately reflect the time of sensitive use. Finally, discussions are needed to develop consistent sampling approaches to accurately reflect overall waterbody condition.

Ammonia: The freshwater acute criterion for ammonia will be made slightly less stringent. The new criteria will be applied after rule adoption.

TMDLs

Bacteria Standards: Bacteria based TMDLs should continue sampling fecal coliform to track bacteria trends against target allocations while the enterococci data trends are established. Implementation plans are assumed to be effective for either bacteria and should continue forward. However, implementation effectiveness will be evaluated using enterococci data. Adaptive management will focus on using enterococci data over time.

TMDLs still under development will sample both enterococci and fecal coliform, and would need to ensure that allocations, implementation and adaptive management address enterococci.

Dissolved Oxygen and Temperature: It is assumed that implementation measures to address temperature and dissolved oxygen will be the same regardless of the specific numeric value. Adjustments to meet the final standard, if required, will be addressed through adaptive management over time.

Ammonia: None are in effect or in progress. Future TMDLs would use new number.

WASTEWATER DISCHARGE PERMITS

Bacteria: Dual testing will be done to support development of a technology-based limit for enterococci that is equivalent to the current fecal coliform standard. Dual sampling would be required of a selected group of permittees and the sampling frequency would be reduced to minimize costs. Permit implementation procedures will be updated. Water quality-based effluent limits for enterococci would be developed as fecal coliform limits are now. The water quality-based permit limits for fecal coliform would continue until permit renewal.

Dissolved Oxygen and Temperature: Permit implementation procedures will need to be updated to address appropriate modeling and changes in monitoring requirements.

Ammonia: The presence or absence of salmonid or other fish habitat effects the concentrations allowed. The new criteria will be implemented with current procedures.

Impacts on 303d listing

We anticipate that there will be limited data available that is consistent with all the new data requirements. Existing data for temperature and dissolved oxygen would be reevaluated for compliance with the new criteria. Current listings for fecal coliform would be retained on the 2002 list until enterococci data confirms compliance. However, where current data indicate that a listed waterbody may be in compliance with the fecal coliform standard, the waterbody would be placed low on the priority for doing TMDLs. New listings would be made for fecal coliform under the old standard for the 2002 list as the best available data indicating human health risks.

How do I learn more?

Public workshops were held around the state this January to discuss the proposed changes to the water quality standards. A detailed discussion document and literature review (153 pages in length) is available for review. Several background papers are also available.

Please check our website (www.ecy.wa.gov/programs/wq/swqs/index.html) for additional review materials related to the proposed changes. **Written comments must be submitted by February 16, 2001 to be considered in finalizing the draft proposals.**

To obtain copies of any of the discussion documents, or to find out more, contact:

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Ecology is an equal opportunity agency. If you have special accommodation needs, please call Donna Lynch at (360) 407-7529 (Voice) or (360) 407-6006 (TDD). E-mail may be sent to dlyn461@ecy.wa.gov