From:	Thornburgh, Kathleen	Sent:	Fri 12/17/2010 11:57 AM
To:	ECY RE SWQS		
Cc:			
Subject:	Triennial Water Quality Standards Review - comments from Snohomish County		

Water Quality Standards Team
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

December 17, 2010

Dear Ms. Conklin:

Snohomish County appreciates the considerable work that the Department of Ecology has done to improve surface water standards (WAC 173-201A) over the years. The triennial review of surface water standards is an important process for identifying areas of needed change, emerging science, and assessing the priority of issues brought forward.

Snohomish County Surface Water Management has several decades of experience in implementing water quality monitoring programs and applying fresh water quality standards. We appreciate the opportunity to comment based on our experience. The following sections highlight key issues of particular concern to Snohomish County.

1. Recreational based use criteria for fecal coliform bacteria are stricter than the most current EPA criteria for the protection of primary contact recreation. Ecology should consider relaxing the standards for fecal coliform bacteria based on EPA recommendations.

2. The use of fecal coliform bacteria as an indicator for the presence of bacteria causing illness due to contact with fresh water has well understood flaws. After weighing benefits and costs, an Ecology technical workgroup recommended adopting the use of E. coli in 2006, but instead choose to continue the use of fecal coliform. Ecology should move towards adoption of E. coli as the parameter for protection of recreational uses in fresh water.

   Ecology accredited laboratories in the region are familiar with the E. coli test. While the cost of analysis for E. coli is typically higher than fecal coliform bacteria, the methods for analysis and reporting are similar. A higher volume of E. coli tests in the region may result in lower laboratory costs. Field methods for collection of surface water for analysis of E. coli are similar to those for fecal coliform bacteria, thus a change would require no additional training. Greater confidence in test results is gained using E. coli, thereby providing public agencies better data upon which to make management decisions. The Oregon Department of Environmental Quality conducted a water quality standards review from 1992-1994, resulting in adoption of E. coli as the indicator consistent with EPA criteria.

3. Temperature criteria do not allow exemptions for natural conditions where waterbodies could not be expected to achieve standards. Standards development should recognize that not all

locations would naturally or would have historically provided optimal thermal conditions for salmonid fishes at all times. Standards should have flexibility to make site based changes in applicable standards based on documented and naturally occurring differences among sites. Ecology should provide an exemption for waterbodies where data suggest naturally occurring excursions beyond standards.

The requirement that temperatures not exceed established criteria at a probability frequency of more than one every ten years is unreasonable and potentially ignores waters which deserve greater protection. Snohomish County is finding that naturally occurring excursions, due to two or three hot days, are enough to produce a 7DADmax which violate this provision. Further, this provision treats waterbodies which may exceed the criteria for 75% of the monitoring period as equal to one which exceeds the criteria once every ten years. From the WAC, it is apparent Ecology expects that exceedances may occur once every ten years (presumably without triggering 303d listing), but they don't state why this frequency would be allowed. If related to air temperature, it would be more appropriate to link observed exceedances with observed temperature anomalies, which could occur on a timeline other than once every ten years.

A metric which establishes a percent of time that criteria are exceeded over a monitoring period would produce greater site discrimination, resulting in more cost effective and targeted protection or restoration activity.

4. Local entities working to manage fish and wildlife functions and values and water quality need to base decision-making on the likelihood of delivering benefits at a reasonable cost. The absence of consideration of both fish use criteria and site potential in the designation of temperature standards promotes confusion. It would be useful for the WAC to be updated to state how (process) and why (what info) the Department would make or change a criterion based on site information. Requiring no more than a 0.3 degree change is not useful if the baseline is not known or established.

5. Standards for dissolved oxygen found in table 200(1)(d) indicate that when dissolved oxygen for a waterbody is lower than the criteria and that condition is due to natural conditions, then human actions considered cumulatively may not cause the dissolved oxygen of that waterbody to decrease by more than 0.2 mg/l. It is unclear how cumulative impacts due to human actions are to be determined. Further, many field instrument and lab analytical methods used for analysis of dissolved oxygen have accuracies of up to 0.2 mg/l, depending upon the measurement obtained. More clarification is needed for an evaluation of cumulative human impacts and an acknowledgement of limitations due to analytical capabilities should be considered.

Thank you for the opportunity to comment. Please contact me if you have questions.

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