



STATE OF WASHINGTON

DEPARTMENT OF AGRICULTURE

P.O. Box 42560 • Olympia, Washington 98504-2560 • (360) 902-1800

September 14, 2018

Department of Ecology - Water Quality Program
P.O. BOX 47600
OLYMPIA, WA 98504-7600
Attn: Becca Conklin

RE: Proposed amendments to Chapter 173-201A WAC, Water Quality Standards for Surface Waters of the State of Washington

Dear Ms. Conklin,

The Washington State Department of Agriculture Dairy Nutrient Management Program (DNMP) appreciates the opportunity to provide comments on the proposed amendments to the Washington Administrative Code Chapter 173-201A, the Water Quality Standards for Surface Waters of the State of Washington.

For the last fourteen years, DNMP has relied upon WAC 173-201A as a key component to its regulatory program under RCW 90.64 Dairy Nutrient Management. The intent of RCW 90.64 is to provide proper and effective management of dairy nutrients that can adversely impact the quality of surface or ground waters of the State of Washington. DNMP provides this through regular inspections and technical assistance to dairies throughout the state. As part of a program that combines technical assistance, regulation and enforcement, DNMP seeks to identify and document discharge to state waters. When a discharge is identified, DNMP works with the dairy producer to correct the issues that caused the discharge. Documented discharge results in informal or formal compliance action including, as appropriate, penalties along with continued follow-up with the dairy in order to help prevent future discharge.

Under RCW 90.64 a violation includes a discharge of pollutants into the waters of the state (RCW 90.64.010(17)(a)) and a dairy farm that is determined to be a significant contributor of pollution based on actual water quality tests, photographs, or other pertinent information is subject to the enforcement provisions, including civil penalties, of chapters 43.05 and 90.48 RCW (RCW 90.64.030(6)). DNMP has typically taken a number of enforcement actions each year where it has relied upon the Water Contact Recreation Bacteria Criteria in Fresh Water found in Table 200(2)(b) in WAC 173-201A. Specifically, DNMP has relied upon the portion of the criteria stating: “not more than 10 percent of all samples (or any single sample when less than ten sample points exist), obtained for calculating the geometric mean value mean value exceeding xxx colonies/100mL” [emphasis added] to document the discharge of dairy nutrients to state waters.

Several of the proposed amendments add uncertainty to the continued use of the water contact recreation bacteria criteria standard for compliance and enforcement.

1. New proposed definitions for “ambient water quality” and for “effluent.” Neither of the definitions appear to consider nonpoint source (NPS) discharges into water bodies or to acknowledge that NPS pollution can cause exceedances of bacteria criteria:
 - a. The definition of “effluent” refers to discharges from “point sources into surface waters.” The NPS discharges DNMP typically identifies are not considered point sources and thus would not be “effluent.” The “ambient water quality” applies to a “surface water of the state.” Is NPS runoff from a property considered a surface water of the state?
 - b. How will compliance be measured for NPS bacteria pollution? For example, this rule language appears to entirely overlook NPS compliance: “Both bacteria indicators may be used to measure effluent discharge and ambient water quality conditions to determine compliance” (WAC 143-201A-200(2)(b) on page 13). It is unclear what benefit measuring ambient water quality conditions will provide if the sources of bacteria cannot be identified and corrected using the same criteria.
2. WAC 173-201A-200(2) **Recreational uses** is being modified to only apply to primary contact recreation. Conversations with Ecology rule-making staff indicated their understanding that ambient water quality criteria to protect water contact recreation use are not intended to be applied to NPS including dairy-related discharge, other livestock facilities, failing on-site septic systems, or other diffuse sources of pollution. Contrary to this belief, DNMP relies extensively on precisely this criteria to document the discharge of bacteria-laden pollution into waters of the state without regard to the size or condition of the receiving water. A discharge to a ditch is a discharge violation the same as a discharge to the Nooksack River. In particular, DNMP has found it very valuable to link discharges that exceed of fecal coliform criteria in freshwater systems upstream from shellfish production areas in order show how the actions of upstream farmers (and other NPS) can adversely impact downstream shellfish farmers.
 - a. In discussions, it appeared that Ecology rule-making staff indicated that only waterways where people can submerge (swim, scuba, water-ski) would be protected for recreational use under the proposed bacterial criteria, while waterways where wading, fishing, boating (or other recreational activities where people do not typically submerge) would not be protected.
 - i. Will NPS staff need to show that a waterway is used for primary contact purposes that include complete submergence in order for the bacteria criteria to apply?
 - b. Table 602 specifically lists a number of streams where primary contact recreation activities (if limited to complete submergence activities such as swimming, scuba or water-skiing) are very unlikely to occur (e.g., in WRIA 1, Bertrand Creek, Breckenridge Creek, Deer Creek, Fishtrap Creek, Johnson Creek’s unnamed tributary, Pepin Creek, Squaw Creek), yet these waterways are specifically protected for primary contact recreation use.
 - i. Does the bacteria criteria apply only to the listed rivers and streams and not others, or, where the receiving water is listed (e.g. Nooksack River, Sumas River), the primary contact criteria will apply in order to support the

downstream designated use downstream? If so, can this apparent discrepancy be clarified as field staff will receive questions about why the standard only applies to certain waters?

- c. Ecology rule-making staff noted that unpermitted discharges do not get consideration of a mixing zone; therefore, the proposed new water contact recreation bacteria criteria would apply to NPS discharges into any waters where the recreation criteria apply (discussed during an August 16, 2018 conference call). If this is the case, DNMP encourage consideration of language that better acknowledges the applicability of the primary contact recreation criteria to NPSs for determining compliance.
 - i. If the recreational use does not apply at the point where field runoff enters state waters such as field ditches and ephemeral waterways, please clarify where a NPS discharge will need to be documented in order to apply the primary contact recreational bacteria criterion.
 - ii. Specifically, will samples from discharges have to be taken at the confluence of a WAC 173-201A Table 602 listed waterway to demonstrate a violation has occurred?
 - iii. How does Ecology propose nonpoint staff including DNMP protect surface waters that ultimately flow into shellfish production areas?

Downstream beneficial use protection - shellfish criteria and protection of shellfish production

DNMP has been receiving National Estuary Program (NEP) funding for a number of years to work with various partners in northwest Washington counties on Pollution Identification and Correction (PIC) programs to protect and restore commercial, recreational, and sustenance harvest of shellfish in marine receiving waters. In areas where DNMP is working, dairies are one of a number of sources of bacterial pollution that have the potential to impact shellfish harvest. DNMP works with Health Departments, Public Works and Planning Departments, Ecology, Conservation Districts, Tribes, farmers, drainage districts, and the public to identify and reduce preventable bacteria sources. The vast majority of potential sources PIC programs work with do not have NPDES permits and are not considered point sources. Aside from the Wastewater Treatment Plants, there are generally not designated point sources of bacteria in these watersheds. The few dairies with NPDES CAFO general permits are not considered point sources as their permits do not allow the discharge of pollutants to waters of the state. Rather, these areas have a multitude of nonpoint sources where adequate control is necessary to ensure the protection of downstream shellfish beds.

DNMP and its partners have relied on Ecology documents such as the Nooksack River Watershed Bacteria TMDL (Publication No. 00-10-036). This document, among many, assumed the water contact recreation bacteria criteria listed in Table 200(2)(b) of WAC 173-201A are applicable for protecting all characteristic uses in the basin and receiving waters, not just primary contact recreation uses involving full submergence as defined in the proposed criteria. The assumption in such documents was that a combination of point and non-point source reduction efforts were critical to meeting this criteria in order to protect the downstream shellfish harvest use by meeting the stringent National Shellfish Sanitation Program fecal coliform criteria.

EPA documents such as Section 319 Nonpoint Source Program Success Story: Washington, Watershed-scale Efforts Reduce Bacteria Levels, (EPA 841-F-09-00JJ published November 2009) also recognized the use of the state's water quality criteria for fecal coliform bacteria in freshwater (the current recreational use criteria) as the mechanism by which the state and local stakeholders successfully reduced fecal coliform levels to protect downstream shellfish beds.

For example, the Nooksack River TMDL was intended to protect downstream shellfish beds as the support of shellfish harvest was recognized to be the most restrictive bacteria criterion. The 90th percentile criterion (not more than 10% exceeding 200 colonies/100mL) was considered more restrictive than the geometric mean (100 colonies/100mL) for the purpose of meeting water quality standards, leading to an estimated percent reduction in fecal coliform for twelve impaired waterways in the Nooksack River basin along with their upstream tributaries. TMDL geometric targets were all set under 100 fecal coliform colonies/100mL.

The proposed recreational use water contact recreation bacteria criteria changes the criterion from fecal coliform to *E.coli*. The proposal also increases the 90th percentile criterion from 200 colony forming units (CFU) fecal coliform per 100 mL to 320 CFU *E.coli* per 100mL. This change represents, at a minimum, a 60% increase in allowable pollution since in nearly all instances the proportion of *E.coli* is a subset of the fecal coliform count. It is unclear how this increase in allowable pollution in freshwater will protect the downstream shellfish production. It does not appear to align with existing state goals to restore currently closed shellfish production growing areas.

In PIC program areas with fecal coliform TMDLs, ambient water sampling programs are generally closely coupled with source identification sampling, discharge identification, and source correction. It is unclear how this will occur if some source identification and discharge documentation sampling starts to use the *E.coli* while ambient sampling is based upon continued use of fecal coliform as appears anticipated in Ecology's implementation plans, which states:

TMDL cleanup goals for marine waters are set to meet fecal coliform criteria that are protective of the shellfish harvesting use. The shellfish harvesting criteria will not change in the proposed rule. Therefore, TMDL implementation and effectiveness monitoring will continue with the fecal coliform indicator. Fecal coliform-based TMDLs with pollutant load allocations based on shellfish harvesting uses will continue to monitor for fecal coliform.

At this time, the proposed criteria allows Ecology to establish more stringent bacterial criteria (WAC 173-201A-200(2)(b)(iii)) but the process to do so is not clear and could take years. In order to ensure the protection of downstream uses including shellfish production and to avoid conflict with the state's antidegradation policy of "restor[ing] and maintain[ing] the highest possible quality of the surface waters of Washington," maintaining the current more restrictive 90th percentile criteria of 200 may be appropriate until such a time as Ecology establishes a *E.coli* TMDL to protect downstream shellfish production.

Definition of *E. coli* appears to eliminate approved method

In Washington State, over 100 laboratories are accredited for SM 9223B, the enzyme substrate test for total coliform and *E.coli*. SM 9223 B includes the Colisure and Colilert methods. SM 9223 B method incubates the sample at 35 degrees and separates total coliform from *E. coli* using florescence. The proposed rule change defines *E.coli* in part by temperature, stating that it can grow at 44.5 degrees Celsius.

- a. Will SM 9223 B methods be prohibited due to the incubation temperature 35 degrees Celsius?

Again, thank you for the opportunity to provide input into the proposed rules changes. Please do not hesitate to contact me if you have questions or would like to meet with me or staff who are more directly involved in working with various nonpoint partner programs, 360-902-1928.

Regards,



Chery Sullivan
Program Manager
Dairy Nutrient Management Program