



PROPOSED RULE MAKING

CR-102 (December 2017) (Implements RCW 34.05.320)

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DATE: July 17, 2018

TIME: 11:40 AM

WSR 18-15-073

Agency: Department of Ecology AO # 16-07

Original Notice

Supplemental Notice to WSR _____

Continuance of WSR _____

Preproposal Statement of Inquiry was filed as WSR 17-17-077 ; or

Expedited Rule Making--Proposed notice was filed as WSR _____; or

Proposal is exempt under RCW 34.05.310(4) or 34.05.330(1); or

Proposal is exempt under RCW _____.

Title of rule and other identifying information: (describe subject)

We propose to amend Chapter 173-201A WAC, Water Quality Standards for Surface Waters of the State of Washington. This rulemaking will set forth revised fresh and marine water quality standards for the protection of water contact recreational use in state waters.

This rulemaking proposes:

- New bacterial indicators and numeric criteria to protect water contact recreational uses.
- Updated water contact recreational use categories, and modifications to sections 600 and 610 to support the proposed updated uses.
- Improved location information in use designation 602 (use designations for fresh waters), and 612 (use designations for marine waters).

The rulemaking proposed amendments in the following sections of Chapter 173-201A WAC:

- WAC 173-201A-020: Definitions.
- WAC 173-201A-200: Fresh water designated uses and criteria.
- WAC 173-201A-210: Marine water designated uses and criteria.
- WAC 173-201A-320: Tier II – Protection of waters of higher quality than the standards.
- WAC 173-201A-600: Use Designations – Fresh waters.
- WAC 173-201A-602: Table 602 — Use designations for fresh waters by water resource inventory area (WRIA).
- WAC 173-201A-610: Use designations – Marine waters
- WAC 173-201A-612: Table 612 – Use designations for marine waters.

Hearing location(s):

Date:	Time:	Location: (be specific)	Comment:
August 28, 2018	1:30 pm	Webinar Only	<p>We are holding this hearing via webinar. This is an online meeting that you can attend from any computer using internet access. The hearing will begin with a short presentation followed by a question and answer (Q&A) session. Testimony will start after the Q&A session. The hearing will conclude once all interested persons provide formal testimony.</p> <p>Join online and see instructions: https://watech.webex.com/watech/onstage/g.php?MTID=e89508b32b3fbe29e50539ccfb6febb48</p>

			For audio call US Toll number 1-204-454-0887 and enter access code 804 961 541. Or to receive a free call back, provide your phone number when you join the event.
August 28, 2018	6:30 pm	Webinar Only	<p>We are holding this hearing via webinar. This is an online meeting that you can attend from any computer using internet access. The hearing will begin with a short presentation followed by a question and answer (Q&A) session. Testimony will start after the Q&A session. The hearing will conclude once all interested persons provide formal testimony.</p> <p>Join online and see instructions: https://watech.webex.com/watech/onstage/g.php?MTID=e66c438b9a9ab2be29230dd42cae3c933 For audio call US Toll number 1-204-454-0887 and enter access code 801 319 021. Or to receive a free call back, provide your phone number when you join the event.</p>
August 29, 2018	1:30 pm	In-person at: Tukwila Community Center Social Hall 12424 42nd Ave S Tukwila, WA 98168	We are holding this hearing in-person only. The hearing will begin with a short presentation followed by a question and answer (Q&A) session. Testimony will start after the Q&A session. The hearing will conclude once all interested persons provide formal testimony.
August 30, 2018	10:30 am	In-person at: CenterPlace Auditorium 2426 N Discovery Place Spokane Valley, WA 99216	We are holding this hearing in-person only. The hearing will begin with a short presentation followed by a question and answer (Q&A) session. Testimony will start after the Q&A session. The hearing will conclude once all interested persons provide formal testimony.
September 5, 2018	6:30 pm	Webinar Only	<p>We are holding this hearing via webinar. This is an online meeting that you can attend from any computer using internet access. The hearing will begin with a short presentation followed by a question and answer (Q&A) session. Testimony will start after the Q&A session. The hearing will conclude once all interested persons provide formal testimony.</p> <p>Join online and see instructions: https://watech.webex.com/watech/onstage/g.php?MTID=eb07c7e9fb398786a44b57486a41abab7 For audio call US Toll number 1-204-454-0887 and enter access code 802 977 451. Or to receive a free call back, provide your phone number when you join the event.</p>

Date of intended adoption: November 28, 2018 (Note: This is **NOT** the **effective** date)

Submit written comments to:

Name: Becca Conklin
Address: Department of Ecology
Water Quality Program
300 Desmond Drive SE
Lacey, WA 98503
Email: Submit comments by mail, online, or at the hearing(s).
Fax: N/A
Other: Online: <http://ws.ecology.commentinput.com/?id=sx2WK>:
By (date) September 14, 2018

Assistance for persons with disabilities:

Contact Hanna Waterstratt
Phone: 360-407-7668

Fax: N/A

TTY: People with speech disability may call TTY at 877-833-6341. People with impaired hearing may call Washington Relay Service at 711. To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at 360-407-7668 or visit <https://ecology.wa.gov/accessibility>.

Email: hanna.waterstrat@ecy.wa.gov

Other: N/A

By (date) August 23, 2018

Purpose of the proposal and its anticipated effects, including any changes in existing rules:

In 2012, the Environmental Protection Agency (EPA) completed revisions to the national recommended recreational water quality criteria. The recommendations include the latest science, which quantifies the link between illness and fecal contamination in recreational waters. The recommended criteria are based on two bacterial indicators of fecal contamination, *E. coli* and enterococci.

Washington's current bacterial indicator for contact recreation, fecal coliform, was removed from the EPA's recommendations in 1986. This method of determining compliance with water quality standards is outdated. The EPA has instructed states that still rely on fecal coliform as an indicator to revise their recreational use criteria and align them with the current national recommendations.

Washington is one of 12 states that have not revised fresh water criteria, and one of 8 coastal states that have not revised marine water criteria to meet the EPA recommendations.

We intend to improve the water quality standards by:

- Including new science to protect recreational uses of state waters.
- Establishing indicators that are better correlated with illness and can more accurately determine the presence of human-caused fecal pollution.
- Aligning Washington's recreational use categories with the EPA's recommendations.
- Providing improved location information to allow the public to better understand which water quality criteria apply in their local waters.

Reasons supporting proposal: In 2012, the EPA completed revisions to the national recommended recreational water quality criteria. The recommendations include the latest science, which quantifies the link between illness and fecal contamination in recreational waters. The recommended criteria are based on two bacterial indicators of fecal contamination, *E. coli* and enterococci.

Washington's current bacterial indicator for contact recreation, fecal coliform, was removed from the EPA's recommendations in 1986. This method of determining compliance with water quality standards is outdated. The EPA has instructed states that still rely on fecal coliform as an indicator to revise their recreational use criteria and align them with the current national recommendations.

Washington is one of 12 states that have not revised fresh water criteria, and one of 8 coastal states that have not revised marine water criteria to meet the EPA recommendations.

We are proposing revisions to Washington's water quality standards to:

- Include new bacterial indicators and numeric criteria to protect water contact recreational uses.
- Update current water contact recreational use categories in sections 600 and 610.
- Include improved location information in use designation tables Table 602 (use designations for fresh waters) and Table 612 (use designations for marine waters).

We are updating Washington's recreational use water quality standards to include new indicators and numeric criteria which protect the public from waterborne disease while boating, swimming, and enjoying other water contact recreational activities in the state waters.

We reviewed our current recreational use categories to ensure that they align with federal water quality recommendations issued by the EPA. The current recreational use categories in sections 600 and 610 include extraordinary primary contact, primary contact, and secondary contact.

We are also proposing improved fresh and marine use designation tables in sections 602 and 612 by:

- Adding more accurate location information (latitude and longitude) to better define where designated uses apply in state waters.

- Incorporating the spawning and incubation use designation references to section 200(1)(c)(iv).

Statutory authority for adoption: RCW 90.48.035 Rule-making authority provides clear and direct authority to Ecology to revise the water quality standards. Additionally, 40 CFR 131.20 requires states and tribes (with primacy for clean water actions) to periodically review and update the Water Quality Standards.

Statute being implemented: Chapter 90.48 RCW - Water Pollution Control

Is rule necessary because of a:

- Federal Law? Yes No
 Federal Court Decision? Yes No
 State Court Decision? Yes No

If yes, CITATION: FEDERAL WATER POLLUTION CONTROL ACT - 33 U.S.C. 1251 et seq and 40 CFR Part 131 - WATER QUALITY STANDARDS

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: N/A

Name of proponent: (person or organization) Department of Ecology Private Public Governmental

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting:	Bryson Finch	Headquarters - Lacey	(360) 407-7158
Implementation:	Ben Rau	Headquarters - Lacey	(360) 407-6551
Enforcement:	Heather Bartlett	Headquarters - Lacey	(360) 407-6405

Is a school district fiscal impact statement required under RCW 28A.305.135? Yes No

If yes, insert statement here:

The public may obtain a copy of the school district fiscal impact statement by contacting:

- Name: N/A
 Address: N/A
 Phone: N/A
 Fax: N/A
 TTY: N/A
 Email: N/A
 Other: N/A

Is a cost-benefit analysis required under RCW 34.05.328?

Yes: A preliminary cost-benefit analysis may be obtained by contacting:

- Name: Becca Conklin
 Address: Department of Ecology
 Water Quality Program
 300 Desmond Drive SE
 Lacey, WA 98503
 Phone: 360-407-6413
 Fax: N/A

TTY: People with speech disability may call TTY at 877-833-6341. People with impaired hearing may call Washington Relay Service at 711. To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at 360-407-7668 or visit <https://ecology.wa.gov/accessibility>.

No: Please explain:

Regulatory Fairness Act Cost Considerations for a Small Business Economic Impact Statement:

This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). Please check the box for any applicable exemption(s):

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.061 because this rule making is being adopted solely to conform and/or comply with federal statute or regulations. Please cite the specific federal statute or regulation this rule is being adopted to conform or comply with, and describe the consequences to the state if the rule is not adopted.

Citation and description:

This rule proposal, or portions of the proposal, is exempt because the agency has completed the pilot rule process defined by RCW 34.05.313 before filing the notice of this proposed rule.

This rule proposal, or portions of the proposal, is exempt under the provisions of RCW 15.65.570(2) because it was adopted by a referendum.

This rule proposal, or portions of the proposal, is exempt under RCW 19.85.025(3). Check all that apply:

- | | |
|---|--|
| <input type="checkbox"/> RCW 34.05.310 (4)(b)
(Internal government operations) | <input type="checkbox"/> RCW 34.05.310 (4)(e)
(Dictated by statute) |
| <input type="checkbox"/> RCW 34.05.310 (4)(c)
(Incorporation by reference) | <input type="checkbox"/> RCW 34.05.310 (4)(f)
(Set or adjust fees) |
| <input type="checkbox"/> RCW 34.05.310 (4)(d)
(Correct or clarify language) | <input type="checkbox"/> RCW 34.05.310 (4)(g)
((i) Relating to agency hearings; or (ii) process requirements for applying to an agency for a license or permit) |

This rule proposal, or portions of the proposal, is exempt under RCW _____.

Explanation of exemptions, if necessary:

COMPLETE THIS SECTION ONLY IF NO EXEMPTION APPLIES

If the proposed rule is **not exempt**, does it impose more-than-minor costs (as defined by RCW 19.85.020(2)) on businesses?

No Briefly summarize the agency's analysis showing how costs were calculated. _____

Yes Calculations show the rule proposal likely imposes more-than-minor cost to businesses, and a small business economic impact statement is required. Insert statement here:

WA Department of Ecology
Small Business Economic Impact Statement:
Relevant Information for State Register Publication

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

This Small Business Economic Impact Statement (SBEIS) presents the:

- Compliance requirements of the proposed rule.
- Results of the analysis of relative compliance cost burden.
- Consideration of lost sales or revenue.
- Cost-mitigating action taken by Ecology, if required.
- Small business and local government consultation.
- Industries likely impacted by the proposed rule.
- Expected net impact on jobs statewide.

A small business is defined by the Regulatory Fairness Act (chapter 19.85 RCW) as having 50 or fewer employees. Estimated costs are determined as compared to the existing regulatory environment—the regulations in the absence of the rule. The SBEIS only considers costs to “businesses in an industry” in Washington State. This means that impacts, for this document, are not evaluated for non-profit or government agencies.

The existing regulatory environment is called the “baseline” in this document. It includes only existing laws and rules at federal and state levels.

This information is excerpted from Ecology’s complete set of regulatory analyses of the proposed rule. For complete discussion of the likely costs, benefits, minimum compliance burden, and relative burden on small businesses, see the Regulatory Analyses (Ecology publication no. 18-10-027, July 2018)

COMPLIANCE REQUIREMENTS OF THE PROPOSED RULE, INCLUDING PROFESSIONAL SERVICES

The baseline for our analyses generally consists of existing rules and laws, and their requirements. This is what allows us to make a consistent comparison between the state of the world with and without the proposed rule amendments.

For this proposed rulemaking, the baseline includes:

- The existing rule, WAC 173-201A.
- RCW 90.48 Water Pollution Control.

The proposed rule amendments make the following changes:

- Changing definitions:
 - Ambient Water Quality (added).
 - Effluent (added).
 - Extraordinary primary contact (removed).
 - Secondary contact recreation (removed).
- Revising standards for fresh waters:
 - Removing Extraordinary Primary Contact and Secondary Contact recreation uses.
 - Replacing fecal coliform as the fresh water contact recreation bacterial indicator with *Escherichia coli* (E. coli) after 12/31/2020.
 - Requiring a minimum of 3 samples to calculate the geometric mean; samples must be within 30 day period for permit compliance or 90 days for all other monitoring data.
 - Removing the option to set alternative indicator criteria based on site-specific information.
- Revising standards for marine waters:
 - Removing Secondary Contact recreation use.
 - Replacing fecal coliform as the marine water recreation contact bacterial indicator with enterococcus after 12/31/2020.
 - Requiring a minimum of three samples to calculate the geometric mean; samples must be within a 30 day period for permit compliance or 90 days for all other monitoring data.
 - Removing alternative indicator criteria for certain samples.
- Other changes without material impact to requirements:
 - Table changes reflecting proposed changes above, including use designations.
 - Clarifying that MPN is a unit of measure for bacterial indicators in the recreational criteria in addition to CFU.
 - Clarifying units for measurable change for protection higher than the standards.
 - Housekeeping including updated web address

Changing definitions

Baseline

Defines extraordinary primary contact and secondary contact recreation:

- “Extraordinary primary contact” means waters providing extraordinary protection against waterborne disease or that serve as tributaries to extraordinary quality shellfish harvesting areas.
- “Secondary contact recreation” means activities where a person’s water contact would be limited (e.g., wading or fishing) to the extent that bacterial infections of eyes, ears, respiratory or digestive systems, or urogenital areas would normally be avoided.

Proposed

Removes extraordinary primary contact and secondary contact recreation. Adds definitions of ambient water quality and effluent:

- "Ambient water quality" refers to the conditions and properties of a surface water of the state as determined by the results of water samples, measurements, or observations.
- "Effluent" refers to the discharge of chemical, physical, biological, or other constituents from point sources into surface waters.

Expected impact

Proposed amendments to definitions are not expected to have an impact on their own, beyond improved clarity. Where they are used in other rule amendments, below, they contribute to the impact of those amendments.

Revising standards for fresh waters

Baseline

- Fecal coliform is the recreational bacterial indicator.
- Extraordinary primary contact (50 CFU; 100 STV), primary contact (100 CFU; 200 STV), and secondary contact (200 CFU; 400 STV) recreational uses are designated.
- Averaging periods should not exceed 12 months. Language includes: "It is preferable to average by season and include five or more data collection events within each period. The period of averaging should not exceed 12 months. [Averaging periods longer than 30 days are] not permitted when such averaging would skew the data set so as to mask noncompliance periods."
- Alternative bacterial indicator criteria may be established for locations with bacterial sources potentially confounded by the presence of other organic matter.

Proposed

- Primary contact is the only designated use for recreation.
- After 12/31/2020, fecal coliform is replaced with E. coli as the fresh water contact bacterial indicator, with an allowable equivalent illness rate of 32 illnesses per one thousand recreational users, reflected in a geometric mean of 100 CFU (320 STV).
- A minimum of 3 samples is required to calculate the geometric mean; samples must be within 30 day period for permit compliance or 90 days for all other monitoring data.
- Alternative indicator criteria are not allowed.

Expected impact

The combined rule amendments are likely to result in impacts to the cost of sample analysis for a different parameter being phased in at rule adoption and then required beginning in 2021. Dischargers that must meet water quality limits for downstream uses may have to analyze samples for two parameters. Downstream shellfish harvesting-based effluent limits would continue to be based on fecal coliform and recreational uses in fresh water would be based on E. coli. However, because of the similar treatment technologies for fecal coliform and E. coli, we do not expect impacts to treatment costs beyond potential minor adjustments to existing practices.

Dischargers to waterbodies with established Total Maximum Daily Loads (TMDLs) are not expected to have their wasteload allocations change under the proposed amendments, as implementation will not change established TMDLs.

Dischargers with fecal coliform technology-based limits are not expected to have their limits affected by the proposed amendments. Revisions to these limits may be addressed in a future rulemaking.

In Washington, six fresh water dischargers currently reporting bacteria levels are located on waterbodies that would change use designation from secondary to primary contact use recreation. These dischargers currently:

- Have technology-based limits that would not change under the proposed rule amendments, or
- Do not have a water quality-based effluent limit for bacteria, but would continue to sample (they are included in the impact above regarding sampling) and use best management practices (BMPs).

We, therefore, do not expect impacts to these dischargers. Moreover, the EPA does not recognize the secondary use designation, and would not approve a rule that included it. While potential future EPA approval is not technically part of the baseline, it is a motivating factor in the proposed amendments.

While initially it may appear that health costs could be associated with elimination of the extraordinary primary use designation, we do not expect costs to arise from this proposed amendment. There is a high degree of uncertainty associated with the level of protection of fecal coliform, whereas the uncertainty associated with E. coli would be significantly reduced under the proposed amendments, given that E. coli has a high correlation with illness.

We expect the proposed rule to result in better accuracy of bacterial indicators as related to illness risk. Using a more accurate indicator of illness risk reduces potential costs for both dischargers and the public. This is because a more accurate bacterial indicator is less likely to result in effluent limits and additional application of treatment technologies, or restrict public access to water for recreational purposes.

While we do not expect impacts to existing dischargers on waterbodies changing from secondary use to primary use under the proposed amendments, there is a benefit to setting protections for those and other waters at the same preventative level as other waters of the state. Moreover, the EPA does not recognize the secondary use designation, and would not approve a rule that included it. While potential future EPA approval is not technically part of the baseline, it is a motivating factor in the proposed amendments.

Dischargers on waterbodies shared with neighboring states or across international borders, as well as dischargers with multiple locations under the same company, would benefit from consistent methods and requirements across the northwest. States surrounding Washington and the majority of western states have adopted E. coli as the bacterial indicator for fresh water. This continuity provides a potential benefit of clarity and reduced compliance effort.

Establishing a 30-day averaging period for permit compliance, as well as a 90-day averaging period for all other monitoring data, is likely to create a benefit of clarity and consistency, as compared to the baseline. The baseline language is vague, and may result in additional time determining appropriate compliance behavior, as well as potential unnecessary expenditure testing or treating water while working with Ecology staff to determine the best method or structure under which to comply. Environmental labs are not directly covered by this rule, and our regulatory analyses do not include indirect costs such as the results of increased demand for E. coli analysis in place of fecal coliform analysis. We acknowledge, however, this shift in demand could cause short-term increases in the price of E. coli analysis and a future need for more labs to become accredited for more types of analyses. Since E. coli is a subset of fecal coliform bacteria, and some labs are already accredited for this analysis, we do not expect a short-term shortage of available accredited labs or displaced demand to labs farther away than those dischargers already use. The two-year transition period allowed under the proposed amendments allows more time for labs to become accredited for new bacterial indicators before compliance requirements for the updated recreational criteria are active.

Revising standards for marine waters

Baseline

- Fecal coliform is the recreation bacterial indicator for primary contact. Enterococcus is the recreation bacterial indicator for secondary contact.
- Primary contact (14 CFU; 43 STV) and secondary contact (70 CFU; 208 STV) recreational uses are designated.
- Averaging periods should not exceed 12 months. Language includes: “It is preferable to average by season and include five or more data collection events within each period. The period of averaging should not exceed 12 months. [Averaging periods longer than 30 days are] not permitted when such averaging would skew the data set so as to mask noncompliance periods.”
- Alternative indicator criteria are allowed for samples with bacterial counts potentially confounded by the presence of other organic matter.

Proposed

- Primary contact is the only designated use for recreation.
- After 12/31/2020, fecal coliform is replaced with enterococcus as the marine water contact bacterial indicator, with an allowable equivalent illness rate of 32 illnesses per one thousand recreational users, reflected in a geometric mean of 30 CFU (110 STV).
- A minimum of three samples is required to calculate the geometric mean; samples must be within 30 day period for permit compliance or 90 days for all other monitoring data.
- Alternative indicator criteria are not allowed.

Expected impact

The combined rule amendments are likely to result in higher costs for dischargers who may have to do sample analysis for a different parameter beginning in 2021.

Dischargers to waterbodies with established Total Maximum Daily Loads (TMDLs) are not expected to have their wasteload allocations change under the proposed amendments, as implementation will not change established TMDLs.

Dischargers with technology-based limits are not expected to have their limits affected by the proposed amendments. Revisions to technology-based limits are not part of this rulemaking.

Six marine water dischargers currently reporting bacteria levels are located on waterbodies that would change use designation from secondary to primary use recreation. These dischargers currently:

- Have technology-based limits that would not change under the proposed rule amendments, or
- Do not have a limit for bacteria, but would continue to sample (they are included in the impact above regarding sampling) and use best management practices (BMPs).

We, therefore, do not expect impacts to these dischargers. Moreover, the EPA does not recognize the secondary use designation, and would not approve a rule that included it. While potential future EPA approval is not technically part of the baseline, it is a motivating factor in the proposed amendments.

We expect the proposed rule to result in better accuracy of bacterial indicators as related to illness risk. Using a more accurate indicator of illness risk reduces potential costs for both dischargers and the public. This is because a more accurate bacterial indicator is less likely to result in limits and unnecessary application of treatment technologies, or restrict public access. While we do not expect impacts to existing dischargers on waterbodies changing from secondary use to primary use under the proposed amendments, there is a benefit to setting protections for those and other waters at the same preventative level as other waters of the state. Moreover, the EPA does not recognize the secondary use designation, and would not approve a rule that included it. While potential future EPA approval is not technically part of the baseline, it is a motivating factor in the proposed amendments.

Dischargers with multiple locations under the same company would benefit from consistent methods and requirements across the northwest. States surrounding Washington and the majority of western states have adopted enterococcus as the bacterial indicator for marine water. This continuity provides a potential benefit of clarity and reduced compliance effort. Establishing a 30-day averaging period for permit compliance, as well as a 90-day averaging period for all other monitoring data, is likely to create a benefit of clarity and consistency, as compared to the baseline. The baseline language is vague, and may result in additional time determining appropriate compliance behavior, as well as potential unnecessary expenditure testing or treating water while working with Ecology staff to determine the best method or structure under which to comply. Environmental labs are not directly covered by this rule, and our regulatory analyses do not include indirect costs such as the results of increased demand for E. coli analysis in place of fecal coliform analysis. We acknowledge, however, this shift in demand could cause short-term increases in the price of E. coli analysis and a future need for more labs to become accredited for more types of analyses. Since E. coli is a subset of fecal coliform bacteria, and many labs are already accredited in this analysis, however, we do not expect a short-term shortage of available accredited labs or displaced demand to labs farther away than those dischargers already use. The two-year transition period allowed under the proposed amendments for labs to perform analyses before they are required to be accredited is intended to mitigate these potential issues.

Other changes without material impact to requirements

Baseline

The existing rule contains tables indicating the designated recreational uses of areas of waterbodies.

Proposed

- Table changes reflecting proposed changes above, including use designations.
- Clarifying units for measurable change for protection higher than the standards.
- Housekeeping including updated web address

Expected impact

These proposed amendments do not impact rule requirements, and so only have a benefit of clarifying the rule for implementation and ease of compliance. They do not create any costs on their own, though they may reflect changes to other parts of the rule.

COSTS OF COMPLIANCE: EQUIPMENT

Compliance with the proposed rule, compared to the baseline, is not likely to impose additional costs of equipment.

COSTS OF COMPLIANCE: SUPPLIES

Compliance with the proposed rule, compared to the baseline, is not likely to impose additional costs of supplies.

COSTS OF COMPLIANCE: LABOR

Compliance with the proposed rule, compared to the baseline, is not likely to impose additional costs of labor. Note that we assumed testing would be performed externally, and these costs are reflected below under “Costs of compliance: Professional services”. If it is possible and less expensive to perform sample analyses in house, those costs would instead be represented in this section.

COSTS OF COMPLIANCE: PROFESSIONAL SERVICES

Assuming weekly E. coli testing at fresh water dischargers (12,116 samples across all identified dischargers), the proposed amendments would result between an annual cost-savings of approximately \$92 thousand, and annual cost increase of \$79 thousand, compared to baseline testing for fecal coliform.

Assuming weekly enterococcus testing at marine water dischargers (4,524 samples across all identified dischargers), the proposed amendments would result in annual cost increases of between \$142 thousand and \$240 thousand, compared to baseline testing for fecal coliform.

An annual fresh water cost-savings of \$92 thousand beginning in 2021 translates to a present value cost-savings of \$1.4 million over 20 years. An annual cost increase of \$79 thousand beginning in 2021 translates to a present value cost increase of \$1.2 million over 20 years.

An annual marine water cost increase of between \$142 thousand and \$240 thousand beginning in 2021 translates to a present value cost increase of between \$2.2 million and \$3.6 million over 20 years, as compared to the baseline.

While potential future EPA approval of the rule is not technically part of the baseline, it is arguable that if we assume approval is a necessity, a reasonable baseline for comparison could also be the alternative indicator and criteria recommended by EPA. If the baseline was limited to criteria acceptable to EPA under its guidance, it would mean comparing the proposed amendments to using enterococcus for fresh waters (it would be the only other option that would receive EPA approval) and enterococcus for marine waters (the only option recommended by EPA). Under this scenario and using the same assumptions as in the primary calculation, the proposed amendments would result in:

- An annual cost-savings of between \$302 thousand and \$735 thousand, with equivalent 20-year cost-savings of between \$4.6 million and \$11.2 million for fresh water sampling.
- No difference between the proposed use of enterococcus for marine water, and the baseline. This would result in no cost or benefit of this proposed amendment.

COSTS OF COMPLIANCE: ADMINISTRATIVE COSTS

Where applicable, Ecology estimates administrative costs (“overhead”) as part of the cost of labor and professional services, above.

COSTS OF COMPLIANCE: OTHER

n/a

COMPARISON OF COMPLIANCE COST FOR SMALL VERSUS LARGE BUSINESSES

Ecology calculated the estimated per-entity costs to comply with the proposed rule amendments, based on the costs estimated in Chapter 3. In this section, Ecology summarizes compliance cost per employee at affected businesses of different sizes.

The average affected small business likely to be covered by the proposed rule amendments employ averages of:

- 12 people at facilities discharging to fresh waters.
- 9 people at facilities discharging to marine waters.

The largest ten percent of affected businesses employ averages of:

- 1,375 people at facilities discharging to fresh waters
- 417 people at facilities discharging to marine waters.

Based on cost estimates from Chapter 3, we estimated the following compliance costs per employee. 20-year present value costs per employee

	Low	High
Fresh water small businesses	(\$503)	\$431
Fresh water large businesses	(\$4)	\$4
Marine water small businesses	\$4,759	\$4,392
Marine water large businesses	\$101	\$93

Parentheses indicate a cost-savings.

We conclude that the proposed rule amendments are likely to have disproportionate impacts on small businesses, and therefore Ecology must include elements in the proposed rule amendments to mitigate this disproportion, as far as is legal and feasible.

CONSIDERATION OF LOST SALES OR REVENUE

Businesses that would incur costs could experience reduced sales or revenues if the fee changes would significantly affect the prices of the goods they sell. The degree to which this could happen is strongly related to each business's production and pricing model (whether additional lump-sum costs significantly affect marginal costs), as well as the specific attributes of the markets in which they sell goods, including the degree of influence of each firm on market prices, as well as the relative responsiveness of market demand to price changes.

The additional sampling costs estimated in Chapter 3 could impact sales or revenues at individual firms if they significantly impact the price they must charge, and that in turn disproportionately affects the number of units they sell. As many of the affected businesses are in inelastic markets (markets from which there is limited ability to substitute to other goods), they may raise prices without a disproportionate reduction in sales units resulting in a reduction in revenues. Those businesses are more likely to incur compliance costs without impacting their competitiveness.

MITIGATION OF DISPROPORTIONATE IMPACT

The RFA (19.85.030(2) RCW) states that:

Based upon the extent of disproportionate impact on small business identified in the statement prepared under RCW [19.85.040](#), the agency shall, where legal and feasible in meeting the stated objectives of the statutes upon which the rule is based, reduce the costs imposed by the rule on small businesses. The agency must consider, without limitation, each of the following methods of reducing the impact of the proposed rule on small businesses:

- a) Reducing, modifying, or eliminating substantive regulatory requirements;
- b) Simplifying, reducing, or eliminating recordkeeping and reporting requirements;
- c) Reducing the frequency of inspections;
- d) Delaying compliance timetables;
- e) Reducing or modifying fine schedules for noncompliance; or
- f) Any other mitigation techniques including those suggested by small businesses or small business advocates.

Ecology considered all of the above options, and included the following legal and feasible elements in the proposed rule amendments that reduce costs. In addition, Ecology considered the alternative rule contents discussed in Chapter 6 of the Preliminary Regulatory Analyses, and excluded those elements that would have imposed excess compliance burden on businesses.

- Adding an option for reporting units.
- Clarifying averaging periods and accounting for programs with less frequent sampling.
- Delaying the change in bacterial indicator for two years.
- Taking lab testing availability into account when choosing a bacterial indicator.

SMALL BUSINESS AND LOCAL GOVERNMENT CONSULTATION

Ecology involved small businesses and local government in its development of the proposed rule amendments, by:

- Water Quality Information Listserv.
- Emails Soliciting for Technical Team Participants.
- Technical Advisory Team Meeting One.
- Technical Advisory Team Meeting Two.
- Technical Advisory Team Meeting Three.
- Kick-off Recreational Use Criteria Webinar.
- Coalition for Clean Water Presentation.
- Annual BEACH Program Meeting Presentation.
- 2018 Salish Sea Conference Presentation.
- Agriculture Committee.
- Recreational Use Criteria Preliminary Decisions Webinar (June 14th).

NAICS CODES OF INDUSTRIES IMPACTED BY THE PROPOSED RULE

The proposed rule is likely to impact North American Industry Classification System (NAICS) codes:

- 2213 – Water, Sewage and Other Systems
- 3114 – Fruit and Vegetable Preserving and Specialty Food Manufacturing
- 3117 – Seafood Product Preparation and Packaging
- 3211 – Sawmills and Wood Preservation
- 3241 – Petroleum and Coal Products Manufacturing
- 3272 – Glass and Glass Product Manufacturing
- 3313 – Alumina and Aluminum Production and Processing
- 3366 – Ship and Boat Building

- 6231 – Nursing Care Facilities (Skilled Nursing Facilities)
- 7211 – Traveler Accommodation

IMPACT ON JOBS

Ecology used the Washington State Office of Financial Management’s 2007 Washington Input-Output Model to estimate the impact of the proposed rule on jobs in the state. The model accounts for inter-industry impacts and spending multipliers of earned income and changes in output.

The proposed rule amendments will result in transfers of money within and between industries; these estimates assume increased sampling compliance costs are transferred to environmental laboratory services.

Under the low-end cost assumptions discussed in Chapter 3, the Washington State economy, beginning in 2021, could experience between a net loss of 1 full time employee (FTE) equivalent, to a net gain of 2.5 FTEs. This range depends on the distribution of costs across relevant NAICS codes transferring costs to environmental labs.

Under the high-end cost assumptions discussed in Chapter 3, the Washington State economy, beginning in 2021, could experience between a net loss of 1.6 FTE equivalent, to a net gain of 3.8 FTEs. This range depends on the distribution of costs across relevant NAICS codes transferring costs to environmental labs.

Some dischargers may not pay external labs, choosing to continue to analyze samples in house, reducing the degree of these estimated impacts, positive or negative.

These prospective changes in overall employment in the state are the sum of multiple small increases and decreases across all industries in the state. Decreases are primarily in industries directly incurring compliance costs under the proposed rule. Increases are primarily in environmental labs and related industries.

The public may obtain a copy of the small business economic impact statement or the detailed cost calculations by contacting:

Name: Becca Conklin

Address: Department of Ecology
 Water Quality Program
 300 Desmond Drive SE
 Lacey, WA 98503


Phone: 360-407-6413

Fax: N/A

TTY: People with speech disability may call TTY at 877-833-6341. People with impaired hearing may call Washington Relay Service at 711. To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at 360-407-7668 or visit <https://ecology.wa.gov/accessibility>.

Email: swqs@ecy.wa.gov

Other: <https://fortress.wa.gov/ecy/publications/SummaryPages/181007.html>

Date: July 17, 2018	Signature:
Name: Polly Zehm	
Title: Deputy Director	