

## WSR 24-22-133

## PROPOSED RULES

## DEPARTMENT OF HEALTH

[Filed November 6, 2024, 8:14 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 24-11-058.

Title of Rule and Other Identifying Information: Testing requirements for proprietary treatment products in WAC 246-272A-0110. The department of health (department) is proposing to add NSF/ANSI 40 testing to WAC 246-272A-0110, Table I for Category 2 products.

Hearing Location(s): On December 18, 2024, at 3:00 p.m., at the Department of Health, Town Center 2, Rooms 166 and 167, 111 Israel Road S.E., Tumwater, WA 98501; or virtual. Register in advance for this webinar [https://us02web.zoom.us/webinar/register/WN\\_5IpueQKRQ-kOpH4hNHTED5g](https://us02web.zoom.us/webinar/register/WN_5IpueQKRQ-kOpH4hNHTED5g). After registering, you will receive a confirmation email containing information about joining the webinar.

Date of Intended Adoption: December 27, 2024.

Submit Written Comments to: Peter Beaton, P.O. Box 47820, Olympia, WA 98504-7820, email [peter.beaton@doh.wa.gov](mailto:peter.beaton@doh.wa.gov), <https://fortress.wa.gov/doh/policyreview>, beginning date and time of filing, by December 18, 2024, by 11:59 p.m.

Assistance for Persons with Disabilities: Contact Andrea Hall, phone 360-236-3351, TTY 771 [711], email [andrea.hall@doh.wa.gov](mailto:andrea.hall@doh.wa.gov), by December 4, 2024.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: Category 2 products treat high-strength sewage from restaurants and other facilities that generate high levels of oil and grease. WAC 246-272A-0110 states manufacturers of proprietary treatment products used in on-site sewage systems must test their products with an Environmental Protection Agency (EPA) testing method. In the current rule Table I, Category 2 products must test for EPA Method 1664, Revision B (February 2010) to treat oil and grease. However, this test does not treat for CBOD<sub>5</sub> (organic sewage strength) and suspended solids (TSS). The department is proposing to amend the rule to add a requirement for NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021) testing for Category 2 products to determine their efficacy to treat CBOD<sub>5</sub> and TSS. Prior to the recent rule revision, the rule required testing for Category 2 products under the EPA/NSF Protocol for the Verification of Wastewater Treatment Technologies/EPA Environmental Technology Verification (April 2001). This protocol tested for CBOD<sub>5</sub>, TSS, and oil and grease. EPA archived this testing protocol in 2013. During the recent rule revision, the EPA Method 1664, Revision B (February 2010) testing was adopted for Category 2 systems to treat oil and grease. This recommendation, however, neglected to assure that Category 2 products are also tested for CBOD<sub>5</sub> and TSS. A manufacturer provided formal comment highlighting this oversight and recommended Category 2 products instead be tested with NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021). To ensure Category 2 products are tested for CBOD<sub>5</sub>, TSS, and oil and grease, the department determined that Category 2 products should be tested by both EPA Method 1664, Revision B (February 2010) and NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021).

Reasons Supporting Proposal: The state board of health (board) has rule-making authority for on-site sewage systems with design flows less than 3,500 gallons per day. Chapter 246-272A WAC, On-site sewage systems, sets standards for the siting, design, installation, use, care, and management of these small on-site sewage systems. At the March 2024 board meeting, the board delegated rule making to the department under RCW 43.20.050(4). The proposed rule protects public health by minimizing both the potential for exposure to sewage and the adverse effects of discharges on ground and surface waters. The proposed rule meets the intent of RCW 43.20.50 by revising the current on-site sewage system rule to maintain enforceable standards for the design, construction, installation, operation, maintenance, and monitoring to ensure properly functioning Category 2 on-site sewage systems. Without NSF/ANSI 40 testing, there would be a higher risk of on-site sewage systems failing to properly treat wastewater, potentially leading to the release of untreated wastewater into the environment

Statutory Authority for Adoption: RCW 43.20.50 [43.20.050].

Statute Being Implemented: RCW 43.20.50 [43.20.050].

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of health, governmental.

Name of Agency Personnel Responsible for Drafting: Peter Beaton, 111 Israel Road S.E. Tumwater, WA 98501, 360-236-4031; Implementation and Enforcement: Jeremy Simmons, 111 Israel Road S.E. Tumwater, WA 98501, 360-236-3346.

A school district fiscal impact statement is not required under RCW 28A.305.135.

A cost-benefit analysis is required under RCW 34.05.328. A preliminary cost-benefit analysis may be obtained by contacting Peter Beaton, P.O. Box 47820, Olympia, WA 98504-7820, phone 360-236-4031, TTY 771 [711], email peter.beaton@doh.wa.gov.

Scope of exemption for rule proposal:

Is not exempt.

The proposed rule does impose more-than-minor costs on businesses.

#### Small Business Economic Impact Statement (SBEIS)

**A brief description of the proposed rule including the current situation/rule, followed by the history of the issue and why the proposed rule is needed. A description of the probable compliance requirements and the kinds of professional services that a small business is likely to need in order to comply with the proposed rule:** The department is proposing amending WAC 246-272A-0110, Table 1, Category 2, to add NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021) testing for Category 2 products.

WAC 246-272A-0110 states manufacturers of proprietary treatment products used in on-site sewage systems must test their products with an EPA testing method. Manufacturers must register their products with the department based on test results before the product is allowed to be permitted or installed in Washington. This allows the department to ensure that products used in on-site sewage systems can provide the appropriate level of treatment needed to protect public health and the environment such as drinking water sources and shellfish sites. Proprietary treatment products are required to be installed and operated as they were tested and registered to ensure they continue to perform as needed.

Category 2 products treat high-strength sewage from restaurants and other facilities that generate high levels of oil and grease. Prior to the recent rule revision, the rule required testing for Category 2 products under the EPA/NSF Protocol for the Verification of Wastewater Treatment Technologies/EPA Environmental Technology Verification (April 2001). This protocol tested for CBOD<sub>5</sub>, TSS, and oil and grease. EPA archived this testing protocol in 2013. During the recent rule revision, the EPA Method 1664, Revision B (February 2010) testing was adopted for Category 2 systems to treat oil and grease. This recommendation, however, neglected to assure that Category 2 products are also tested for CBOD<sub>5</sub> and TSS. A manufacturer provided formal comment highlighting this oversight and recommended Category 2 products instead be tested with NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021). The department determined Category 2 products should be tested by both EPA Method 1664, Revision B (February 2010) and NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021).

The state board of health (board) has rule-making authority for on-site sewage systems with design flows less than 3,500 gallons per day. Chapter 246-272A WAC, On-site sewage systems, sets standards for the siting, design, installation, use, care, and management of on-site sewage systems of this size. At the March 2024 board meeting, the board delegated rule making to the department under RCW 43.20.050(4).

As a result of the rule, only manufacturers of Category 2 products will face the compliance cost (\$130,000) for the NSF/ANSI 40 test when developing new products. Businesses who purchase and install a Category 2 product from the manufacturers do not pay for the NSF/ANSI 40 test. The department does not expect businesses to need any professional services to comply with the rule.

**Identification and summary of which businesses are required to comply with the proposed rule using the North American Industry Classification System (NAICS):**

**Table 1. Summary of Businesses Required to comply to the Proposed Rule**

NAICS Code (4, 5, or 6 Digit)	NAICS Business Description	Number of Businesses in Washington State	Minor Cost Threshold
562991	Septic Tank and Related Services	237	\$2,951
238910	Site Preparation Contractors	2,498	\$4,226
423390	Other Construction Material Merchant Wholesalers	954	\$5,616
326199	All Other Plastics product Manufacturing	120	\$18,869
333318	Other Commercial and Service Industry Machinery Manufacturing	42	\$9,214

**Analysis of probable costs of businesses in the industry to comply to the proposed rule and includes the cost of equipment, supplies, labor, professional services, and administrative costs. The analysis considers if compliance with the proposed rule will cause businesses in the industry to lose sales or revenue:**

**WAC 246-272A-0110 Proprietary treatment products—Eligibility for registration.**

**Description:** WAC 246-272A-0110 states manufacturers of proprietary treatment products used in on-site sewage systems must test their

products with an EPA testing method. Table I, Category 2 products must test for EPA Method 1664, Revision B (February 2010) to treat oil and grease. However, this test does not treat for CBOD<sub>5</sub> and TSS. The department is proposing to add NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021) testing for Category 2 products to treat for CBOD<sub>5</sub> and TSS.

**Cost(s): Unit cost for NSF/ANSI 40 testing estimated cost: \$130,000<sup>1</sup>:**

- The performance classification is based on the evaluation of system influent and effluent samples collected over a six-month period. Evaluation of influent and effluent samples over time allows the system's treatment efficacy to be characterized.
- Influent Samples: TSS and biochemical oxygen demand (BOD<sub>5</sub>), collected five times per week; alkalinity, collected once per week.
- Effluent Samples: TSS and CBOD<sub>5</sub>, collected five times per week.

<sup>1</sup> Email correspondence from NSF, a firm recognized internationally for developing robust standards and tests, audits and certifying products for food, water, and dietary supplements.

**Summary of all Cost(s):**

**Table 2. Summary of Section 3 probable cost(s)**

WAC Section and Title	Probable Cost(s)
246-272A-0110 Proprietary treatment products—Eligibility for registration.	\$130,000 for each device tested

**Analysis on if the proposed rule may impose more-than-minor costs for businesses in the industry. Includes a summary of how the costs were calculated:** Yes, the costs of the proposed rule (unit cost for NSF/ANSI 40 - Residential Wastewater Treatment Systems, versions dated between January 2009 and May 31, 2021) = \$130,000 **are greater than** the minor cost thresholds.

NAICS Code (4, 5, or 6 Digit)	NAICS Business Description	Number of Businesses in Washington State	Minor Cost Threshold
562991	Septic Tank and Related Services	237	\$2,951
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**Summary of how the costs were calculated:** The department contacted the NSF laboratory and asked for the price NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021) testing and the laboratory responded with the quote of \$130,000.

**Determination on if the proposed rule may have a disproportionate impact on small businesses as compared to the 10 percent of businesses that are the largest businesses required to comply with the proposed rule:** Yes, the proposed rule may have a disproportionate impact on small businesses as compared to the 10 percent of businesses that are the largest businesses required to comply with the proposed rule.

**Explanation of the determination:** The proposed rule may have a disproportionate impact on small businesses because all businesses will face the same cost of \$130,000 for the NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and

May 31, 2021) test, so by any standard used the costs will be disproportionate.

**If the proposed rule has a disproportionate impact on small businesses, the following steps have been identified and taken to reduce the costs of the rule on small businesses:**

1. Reducing, modifying, or eliminating substantive regulatory requirements;
2. Simplifying, reducing, or eliminating recordkeeping and reporting requirements;
3. Reducing the frequency of inspections;
4. Delaying compliance timetables;
5. Reducing or modifying fine schedules for noncompliance; or
6. Any other mitigation techniques including those suggested by small businesses or small business advocates.

**If costs cannot be reduced an explanation has been provided below about why the costs cannot be reduced:** The cost of the proposed rule cannot be reduced because it is a unit cost the laboratory charges for performing the test, which is governed by the laboratory. There was no option to reduce or eliminate this test. Delaying compliance time lines would endanger public health. All recordkeeping components and inspections are intrinsic in the laboratory test and are controlled by the laboratory and manufacturer. Category 2 products that have not been tested with NSF/ANSI 40 would not be permitted to be sold in Washington. Noncompliance with this proposed rule, similar to noncompliance to the rest of chapter 246-272A WAC, is subject to the enforcement and penalties outlined in chapter 246-272A WAC.

**Description of how small businesses were involved in the development of the proposed rule:** The department surveyed all known on-site sewage system component manufacturers about the proposed rule. Several small businesses responded. The manufacturers were generally neutral on the proposal. None proposed an alternative to requiring NSF/ANSI 40 - Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021).

**The estimated number of jobs that will be created or lost in result of the compliance with the proposed rule:** The department does not believe the proposed rule will result in having businesses create or lose jobs as the result of the purposed rule.

A copy of the statement may be obtained by contacting Peter Beaton, P.O. Box 47820, Olympia, WA 98504-7820, phone 360-236-4031, TTY 771 [711], email peter.beaton@doh.wa.gov.

November 6, 2024  
Kristin Petersen, JD  
Chief of Policy  
For Umair A. Shah, MD, MPH  
Secretary of Health

OTS-5909.1

AMENDATORY SECTION (Amending WSR 24-06-046, filed 3/1/24, effective 4/1/24)

**WAC 246-272A-0110 Proprietary treatment products—Eligibility for registration.**

(1) Manufacturers shall register a proprietary treatment product with the department using the process described in WAC 246-272A-0120 before a local health officer may permit use of the product.

(2) To be eligible for product registration, manufacturers desiring to sell or distribute proprietary treatment products in Washington state shall:

(a) Verify product performance through testing using the testing protocol established in Table I of this section;

(b) Report product test results of influent and effluent sampling obtained throughout the testing period (including normal and stress loading phases) for evaluation of constituent reduction according to the requirements in Table II of this section;

(c) Demonstrate product performance according to the requirements in Table III of this section. All 30-day averages and geometric means obtained throughout the test period must meet the identified threshold values to qualify for registration at that threshold level; and

(d) Verify bacteriological reduction according to WAC 246-272A-0130 for product registration utilizing bacterial levels BL1, BL2, and BL3.

(3) Manufacturers verifying product performance through testing according to the following standards or protocols shall have product testing conducted by a testing facility accredited by ANSI:

(a) NSF/ANSI 40: Residential Wastewater Treatment Systems;

(b) NSF/ANSI 41: Non-Liquid Saturated Treatment Systems;

(c) NSF Protocol P157 Electrical Incinerating Toilets - Health and Sanitation;

(d) NSF/ANSI 245: Residential Wastewater Treatment Systems - Nitrogen Reduction; or

(e) NSF/ANSI 385: Residential Wastewater Treatment Systems - Disinfection Mechanics for Bacteriological Reduction described in WAC 246-272A-0130.

(4) Manufacturers verifying product performance through testing according to EPA Method 1664, Revision B and using a wastewater laboratory certified by the Washington department of ecology shall provide supporting information, including flow data, and influent and effluent quality sampling results from a minimum of three installations with similar design loading to demonstrate product performance to Category 2 standards.

(5) Treatment levels established in Table III of this section are intended to establish treatment product performance in a product testing setting under established protocols by qualified testing entities. Field compliance standards for proprietary treatment products shall follow the requirements in WAC 246-272A-0120(5).

(6) Manufacturers may submit a written request to substitute components of a registered product's construction in cases of supply chain shortage or similar manufacturing disruptions impacting installations, operation, or maintenance. The substitution request must include a report stamped, signed, and dated by a professional engineer demonstrating the substituted component will not negatively impact performance or diminish the effect of the treatment, operation, and

maintenance of the original registered product. If approved, substitution is authorized until rescinded by the department.

**Table I**

<b>Testing Requirements for Proprietary Treatment Products</b>	
<b>Treatment Component/Sequence Category</b>	<b>Required Testing Protocol</b>
<b>Category 1</b> Designed to treat septic tank effluent anticipated to be equal to or less than treatment level E.	NSF/ANSI 40—Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021)
<b>Category 2</b> Designed to treat effluent or sewage with sewage quality parameters anticipated to be greater than treatment level E.  (Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)	EPA Method 1664, Revision B (February 2010) <u>and</u> <u>NSF/ANSI 40—Residential Wastewater Treatment Systems (versions dated between January 2009 and May 31, 2021)</u>
<b>Category 3</b> Black water component of residential sewage (such as composting* and incinerating** toilets).	NSF/ANSI 41: Non-Liquid Saturated Treatment Systems (Versions dated between February 2011 and May 31, 2021)  **NSF Protocol P157 Electrical Incinerating Toilets - Health and Sanitation (April 2000)
<b>Total Nitrogen Reduction in Categories 1 &amp; 2 (Above)</b>	NSF/ANSI 245: Residential Wastewater Treatment Systems – Nitrogen Reduction (Versions dated between January 2018 and May 31, 2021)

**Table II**

<b>Test Results Reporting Requirements for Proprietary Treatment Products</b>									
<b>Treatment Component/Sequence Category</b>	<b>Testing Results Reported</b>								
<b>Category 1</b> Designed to treat septic tank effluent anticipated to be equal to or less than treatment level E.	<p>Report the following test results of influent and effluent sampling obtained throughout the testing period for evaluation of reduction of CBOD<sub>5</sub><sup>2</sup>, and TSS:</p> <table border="0"> <tr> <td><input type="checkbox"/> Average</td> <td><input type="checkbox"/> Standard Deviation</td> </tr> <tr> <td><input type="checkbox"/> Minimum</td> <td><input type="checkbox"/> Maximum</td> </tr> <tr> <td><input type="checkbox"/> Median</td> <td><input type="checkbox"/> Interquartile Range</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> 30-day Average (for each month)</td> </tr> </table> <p>For evaluation of bacteriological reduction performance. Report complete treatment component sequence testing as described in Table III, Category 1.</p> <p>For evaluation of performance meeting treatment level BL1: (1) Report fecal coliform test results of influent and effluent sampling by geometric mean from samples drawn within 30-day or monthly calendar periods, obtained from a minimum of three samples per week throughout the testing period. See WAC 246-272A-0130. (2) Report complete testing results for supplemental bacteriological reduction technology<sup>1</sup> when the required treatment levels for fecal coliform in Table III, Category 1 are not met by the primary proprietary treatment product.</p> <p>For evaluation of performance meeting treatment level BL2 or BL3: (1) Report fecal coliform test results of influent and effluent sampling by geometric mean from samples drawn within 30-day or monthly calendar periods, obtained from a minimum of three samples per week throughout the testing period as described in WAC 246-272A-0130; or (2) Report complete testing results for supplemental bacteriological reduction technology<sup>1</sup> when the required treatment levels for fecal coliform in Table III, Category 1 are not met by the primary proprietary treatment product.</p> <p>For all options, test report must also include the individual results of all samples drawn throughout the test period.</p>	<input type="checkbox"/> Average	<input type="checkbox"/> Standard Deviation	<input type="checkbox"/> Minimum	<input type="checkbox"/> Maximum	<input type="checkbox"/> Median	<input type="checkbox"/> Interquartile Range	<input type="checkbox"/> 30-day Average (for each month)	
<input type="checkbox"/> Average	<input type="checkbox"/> Standard Deviation								
<input type="checkbox"/> Minimum	<input type="checkbox"/> Maximum								
<input type="checkbox"/> Median	<input type="checkbox"/> Interquartile Range								
<input type="checkbox"/> 30-day Average (for each month)									

Test Results Reporting Requirements for Proprietary Treatment Products	
<p><b>Category 2</b> Designed to treat effluent or sewage with sewage quality parameters anticipated to be greater than treatment level E.  (Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, atypical residences, etc.)</p>	Report all individual test results and full test average values of influent and effluent sampling obtained throughout the testing period for the evaluation of reduction of: CBOD <sub>5</sub> , TSS and O&G. Establish the treatment capacity of the product tested in pounds per day for CBOD <sub>5</sub> .
<p><b>Category 3</b> Black water component of residential sewage (such as composting and incinerating toilets).</p>	Report test results on all required performance criteria according to the format prescribed in the NSF test protocol described in Table I.
<p><b>Total Nitrogen Reduction in Categories 1 &amp; 2 (Above)</b></p>	Report test results on all required performance criteria according to the format prescribed in the test protocol described in Table I.

- <sup>1</sup> Test results for BOD<sub>5</sub> may be submitted in lieu of test results for CBOD<sub>5</sub>. In these cases numerical values for CBOD<sub>5</sub> will be determined using the following formula: (BOD<sub>5</sub> × 0.83 = CBOD<sub>5</sub>).
- <sup>2</sup> Supplemental bacteriological reduction technology must be tested for influent/effluent fecal coliform or *E. coli* per WAC 246-272A-0130 (bacteriological reduction testing protocol). Supplemental fecal coliform or *E. coli* reducing technologies will be rated for log base 10 removal of fecal coliform or *E. coli*. The lowest 30-day geometric mean will be used to rate reduction level. The highest monthly geometric mean for treatment technology fecal coliform or *E. coli* reduction will be used as the baseline value for review.

**Table III**

Product Performance Requirements for Proprietary Treatment Products							
Treatment Component/Sequence Category	Product Performance Requirements						
<p><b>Category 1</b> Designed to treat effluent anticipated to be equal to or less than treatment level E.</p>	<b>Treatment System Performance Testing Levels</b>						
		<b>Parameters</b>					
	<b>Level</b>	<b>CBOD<sub>5</sub> mg/L</b>	<b>TSS mg/L</b>	<b>O&amp;G mg/L</b>	<b>FC cfu/100 mL</b>	<b>TN mg/L</b>	<b><i>E. coli</i> cfu/100 mL</b>
	<b>A</b>	10	10	—	—	—	—
	<b>B</b>	15	15	—	—	—	—
	<b>C</b>	25	30	—	—	—	—
	<b>BL1</b>			—	200	—	126
	<b>BL2</b>	—	—	—	1,000	—	—
	<b>BL3</b>	—	—	—	50,000	—	—
	<b>E</b>	228	80	20	—	—	—
<b>N</b>	—	—	—	—	30 (or 50% reduction based on mass loading as required in WAC 246-272A-0320)	—	
<p>Values for Levels A - C are 30-day values (averages for CBOD<sub>5</sub>, TSS, and geometric mean for FC.) All 30-day averages throughout the test period must meet these values in order to be registered at these levels. Values for Levels E and N are derived from full test averages.</p>							
<p><b>Category 2</b> Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment level E.</p>	<p>All of the following requirements must be met: (1) All full test averages must meet Level E; and (2) Establish the treatment capacity of the product tested in pounds per day for CBOD<sub>5</sub>.</p>						



<b>Product Performance Requirements for Proprietary Treatment Products</b>	
<b>Treatment Component/Sequence Category</b>	<b>Product Performance Requirements</b>
(Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)	
<b>Category 3</b> Black water component of residential sewage (such as composting and incinerating toilets).	Test results must meet the performance requirements established in the NSF test protocol.
<b>Total Nitrogen Reduction in Categories 1 &amp; 2 (Above)</b>	Test results must establish product performance effluent quality meeting Level N, when presented as the full test average.