PROPOSED RULE MAKING

CR-102 (June 2024)
(Implements RCW 34.05.320)

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DATE: April 22, 2025
TIME: 1:44 PM

WSR 25-09-150

Agency: Department of Health

☒ **Original Notice**

☐ **Supplemental Notice to WSR**

☐ **Continuance of WSR**

☐ **Preproposal Statement of Inquiry was filed as WSR _____ ; 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: Per- and polyfluoroalkyl substances (PFAS) – Adopting the National Primary Drinking Water Regulations (40 CFR Part 141) by reference in chapter 246-290 WAC, Group A Public Water Supplies, and chapter 246-390 WAC, Drinking Water and Laboratory Certification and Data Reporting. The Department of Health (department) is proposing to amend WAC 246-290-002, 246-290-010, 246-290-025, 246-290-300, 246-290-310, 246-290-320, 246-290-71002, 246-290-72004, 246-290-72012, 246-390-010 and 246-390-075, to align these sections with the recent changes to 40 CFR Part 141 regarding PFAS.

Hearing location(s):

Date:	**Time:**	**Location:** (be specific)	**Comment:**
May 28, 2025	2:00 pm	**Virtual Hearing** https://us02web.zoom.us/webinar/register/WN_b0_xQu61QtOtUF_Ii0gLuw	This hearing will virtual only.

Date of intended adoption: June 4, 2025 (Note: This is **NOT** the **effective** date)

Submit written comments to:	**Assistance for persons with disabilities:**
Name Kseniya Efremova	Contact Kseniya Efremova
Address PO Box 47824, Olympia WA 98504-7824	Phone (360) 236-3449
Email drinkingwaterrule@doh.wa.gov	Fax N/A
Fax N/A	TTY 711
Other https://fortress.wa.gov/doh/policyreview/	Email kseniya.efremova@doh.wa.gov
Beginning (date and time) Date and time of filing	Other N/A
By (date and time) May 28, 2025 by 11:59 pm	By (date) May 14, 2025

Purpose of the proposal and its anticipated effects, including any changes in existing rules: The purpose of this proposal is to adopt the recent changes to 40 CFR Part 141 by reference, in chapters 246-290 and 246-390 WAC. The proposed amendments to chapters 246-290 and 246-390 WAC will incorporate by reference the requirements for monitoring, reporting, public notification, treatment, and violations, as well as incorporate the federal PFAS Maximum Contaminant Levels (MCLs) into the appropriate contaminant tables in rule. The proposed amendments also include minor editorial changes and definition updates to ensure consistency of terms between federal and state rules.

Reasons supporting proposal: In June 2024, the Environmental Protection Agency (EPA) adopted the first-ever national drinking water standard (federal standard) to protect communities from exposure to PFAS. The federal rules include PFAS requirements for monitoring, reporting, public notification, treatment, and violations, and set federal MCLs. These federal MCLs are stricter than almost all of the State Action Levels (SALs) that are currently in rule. Additionally, the federal standard includes a hazard index for certain chemicals, to account for the additive effects of some combinations of PFAS.

Statutory authority for adoption: RCW 43.20.050 and RCW 70A.125.080

Statute being implemented: RCW 43.20.050 and RCW 70A.125.080

Is rule necessary because of a:

Federal Law?	☐ Yes	☒ No
Federal Court Decision?	☐ Yes	☒ No
State Court Decision?	☐ Yes	☒ No

If yes, CITATION:

Agency comments or recommendations, if any, as to statutory language, implementation, enforcement, and fiscal matters: None

Name of proponent: (person or organization) Washington State Department of Health
Type of proponent: ☐ Private. ☐ Public. ☒ Governmental.

Name of agency personnel responsible for:

	Name	Office Location	Phone
Drafting	Kseniya Efremova	111 Israel Road SE, Tumwater, WA, 98501	(360) 236-3449
Implementation	Mike Means	111 Israel Road SE, Tumwater, WA 98501	(360) 236-3178
Enforcement	Mike Means	111 Israel Road SE, Tumwater, WA 98501	(360) 236-3178

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
Address
Phone
Fax
TTY
Email
Other

Is a cost-benefit analysis required under RCW 34.05.328?

☐ Yes: A preliminary cost-benefit analysis may be obtained by contacting:
Name
Address
Phone
Fax
TTY
Email
Other

☒ No: Please explain: The department did not complete a cost benefit analysis under RCW 34.05.328. RCW 34.05.328(5)(b)(iii) exempts rules that adopt or incorporate by reference without material change federal statutes or regulations, Washington state law, the rules of other Washington state agencies, or national consensus codes that generally establish industry standards.

Regulatory Fairness Act and Small Business Economic Impact Statement
Note: The Governor's Office for Regulatory Innovation and Assistance (ORIA) provides support in completing this part.

(1) Identification of exemptions:
This rule proposal, or portions of the proposal, **may be exempt** from requirements of the Regulatory Fairness Act (see chapter 19.85 RCW). For additional information on exemptions, consult the exemption guide published by ORIA. 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: 40 CFR Part 141 – National Primary Drinking Water Regulations. Failure to adopt these federal regulations will result in the state of Washington falling out of compliance with the National Primary Drinking Water Regulations and may cause the state to lose its primacy under the Public Water System Supervision Program.

☐ 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:

☐	RCW 34.05.310 (4)(b) (Internal government operations)	☐	RCW 34.05.310 (4)(e) (Dictated by statute)
☒	RCW 34.05.310 (4)(c) (Incorporation by reference)	☐	RCW 34.05.310 (4)(f) (Set or adjust fees)
☐	RCW 34.05.310 (4)(d) (Correct or clarify language)	☐	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 19.85.025(4). (Does not affect small businesses).

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

Explanation of how the above exemption(s) applies to the proposed rule:

(2) Scope of exemptions: *Check one.*

☒ The rule proposal: Is fully exempt. *(Skip section 3.)* Exemptions identified above apply to all portions of the rule proposal.

☐ The rule proposal: Is partially exempt. *(Complete section 3.)* The exemptions identified above apply to portions of the rule proposal, but less than the entire rule proposal. Provide details here (consider using this template from ORIA):

☐ The rule proposal: Is not exempt. *(Complete section 3.)* No exemptions were identified above.

(3) Small business economic impact statement: *Complete this section if any portion is not exempt.*

If any portion of 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 minor cost analysis and how the agency determined the proposed rule did not impose more-than-minor costs.

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

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

Name
Address
Phone
Fax
TTY
Email
Other

Date: 4/22/2025

Name: Kristin Peterson, JD for Jessica Todorovich, MS

Title: Chief of Policy for Acting Secretary of Health

Signature:

AMENDATORY SECTION (Amending WSR 17-01-062, filed 12/14/16, effective 1/14/17)

WAC 246-290-002 Guidance. (1) The department has numerous guidance documents available to help purveyors comply with state and federal rules regarding drinking water. These include documents on the following subjects:

(a) Compliance;
(b) Consumer and public education;
(c) Contaminants;
(d) Cross-connection control and backflow prevention;
(e) Emergency response and drinking water security;
(f) Engineering design and water treatment;
(g) Financial assistance and state revolving fund (SRF);
(h) General information;
(i) Groundwater protection;
(j) Growth management;
(k) Operations and maintenance;
(l) Operator certification;
(m) Planning and financial viability;
(n) Regulations;
(o) Small water systems;
(p) System approval;
(q) Water quality monitoring and source protection;
(r) Water system planning; and
(s) Water use efficiency.

(2) The department's guidance documents are available online at ((~~https://fortress.wa.gov/doh/eh/dw/publications/publications.cfm~~)) https://fortress.wa.gov/doh/odwpubs/publications/ or through U.S. mail at P.O. Box 47822, Olympia, Washington 98504-7822.

(3) Federal guidance documents are available from the Environmental Protection Agency (EPA) for a wide range of topics. These are available from the EPA Office of Ground Water and Drinking Water website at http://water.epa.gov/drink.index.cfm.

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-010 Definitions, abbreviations, and acronyms. The definitions in this section apply throughout this chapter unless the context clearly indicates otherwise.

(1) "Acute" means posing an immediate risk to human health.

(2) "Adverse effect" means a biological change, functional impairment, or pathologic lesion that may affect the performance of the whole organism or reduce an organism's ability to respond to an additional environmental challenge.

(3) "Alternative filtration technology" means a filtration process for substantial removal of particulates (generally > 2-log *Giardia lamblia* cysts and ≥ 2-log removal of *Cryptosporidium* oocysts) by other than conventional, direct, diatomaceous earth, or slow sand filtration processes.

(4) "Analogous treatment system" means an existing water treatment system that has unit processes and source water quality characteristics that are similar to a proposed treatment system.

(5) "ANSI" means the American National Standards Institute.

(6) "Approved air gap (AG)" means a physical separation between the free-flowing end of a potable water supply pipeline and the overflow rim of an open or nonpressurized receiving vessel.

To be an air gap approved by the department, the separation must be at least:

(a) Twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls); and

(b) Three times the diameter of the supply piping, if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe, or if the horizontal distance between the supply pipe and intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe and in no case less than one and one-half inches.

(7) "Approved atmospheric vacuum breaker (AVB)" means an AVB of make, model, and size that is approved by the department. AVBs that appear on the current approved backflow prevention assemblies list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or that are listed or approved by other nationally recognized testing agencies (such as IAPMO, ANSI, or UL) acceptable to the authority having jurisdiction are considered approved by the department.

(8) "Approved backflow preventer" means an approved air gap, an approved backflow prevention assembly, or an approved AVB. The terms "approved backflow preventer," "approved air gap," or "approved backflow prevention assembly" refer only to those approved backflow preventers relied upon by the purveyor for the protection of the public water system. The requirements of WAC 246-290-490 do not apply to backflow preventers installed for other purposes.

(9) "Approved backflow prevention assembly" means an RPBA, RPDA, DCVA, DCDA, PVBA, or SVBA of make, model, and size that is approved by the department. Assemblies that appear on the current approved backflow prevention assemblies list developed by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or other entity acceptable to the department are considered approved by the department.

(10) "As-built drawing" means the drawing created by an engineer from the collection of the original design plans, including changes made to the design or to the system, that reflects the actual constructed condition of the water system.

(11) "Assessment source water monitoring" means an evaluation of groundwater sources that may be at risk for fecal contamination. Assessment source water monitoring involves the collection of source water samples at regular intervals and analysis of those samples for fecal indicators as directed by the department.

(12) "Authority having jurisdiction" (formerly known as local administrative authority) means the local official, board, department, or agency authorized to administer and enforce the provisions of the Uniform Plumbing Code as adopted under chapter 19.27 RCW.

(13) "Authorized agent" means any person who:

(a) Makes decisions regarding the operation and management of a public water system whether or not he or she is engaged in the physical operation of the system;

(b) Makes decisions whether to improve, expand, purchase, or sell the system; or

(c) Has discretion over the finances of the system.

(14) "Authorized consumption" means the volume of metered and unmetered water used for municipal water supply purposes by consumers, the purveyor, and others authorized to do so by the purveyor including, but not limited to, firefighting and training, flushing of mains and sewers, street cleaning, and watering of parks and landscapes. These volumes may be billed or unbilled.

(15) "Average day demand (ADD)" means the total quantity of water use from all sources of supply as measured or estimated over a calendar year divided by ((~~three hundred sixty-five~~)) 365. ADD is typically expressed as gallons per day (gpd) per equivalent residential unit (ERU).

(16) "AWWA" means the American Water Works Association.

(17) "Backflow" means the undesirable reversal of flow of water or other substances through a cross-connection into the public water system or consumer's potable water system.

(18) "Backflow assembly tester (BAT)" means a person holding a valid BAT certificate issued under chapter 246-292 WAC.

(19) "Backpressure" means a pressure (caused by a pump, elevated tank or piping, boiler, or other means) on the consumer's side of the service connection that is greater than the pressure provided by the public water system and which may cause backflow.

(20) "Backsiphonage" means backflow due to a reduction in system pressure in the purveyor's distribution system and/or consumer's water system.

(21) "Bag filter" means a pressure-driven separation device that removes particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a nonrigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside.

(22) "Bank filtration" means a water treatment process that uses a well to recover surface water that has naturally infiltrated into groundwater through a riverbed or bank(s). Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well(s).

(23) "Best available technology" means the best technology, treatment techniques, or other means that EPA finds, after examination for efficacy under field conditions, are available, taking cost into consideration.

(24) "Bioaccumulative" means a chemical that can accumulate in the body when regular exposure occurs through drinking water.

(25) "Blended sample" means a sample collected from two or more individual sources at a point downstream of the confluence of the individual sources and prior to the first connection.

(26) "C" means the residual disinfectant concentration in mg/L at a point before or at the first consumer.

(27) "Cartridge filter" means a pressure-driven separation device that removes particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.

(28) "Category red operating permit" means an operating permit identified under chapter 246-294 WAC. Placement in this category results in permit issuance with conditions and a determination that the system is inadequate.

(29) "C.F.R." means the Code of Federal Regulations.

(30) "Chemical contaminant treatment facility" means a treatment facility specifically used for the purpose of removing chemical contaminants.

(31) "Clarification" means a treatment process that uses gravity (sedimentation) or dissolved air (flotation) to remove flocculated particles.

(32) "Clean compliance history" means a record of:

(a) No *E. coli* MCL violations;

(b) No monitoring violations under WAC 246-290-300(3); and

(c) No coliform treatment technique trigger exceedances or treatment technique violations under WAC 246-290-320(2) or 246-290-415.

(33) "Closed system" means any water system or portion of a water system in which water is transferred to a higher-pressure zone closed to the atmosphere, such as when no gravity storage is present.

(34) "Coagulant" means a chemical used in water treatment to destabilize particulates and accelerate the rate at which they aggregate into larger particles.

(35) "Coagulation" means a process using coagulant chemicals and rapid mixing to destabilize colloidal and suspended particles and agglomerate them into flocs.

(36) "Combination fire protection system" means a fire sprinkler system that:

(a) Is supplied only by the purveyor's water;

(b) Does not have a fire department pumper connection; and

(c) Is constructed of approved potable water piping and materials that serve both the fire sprinkler system and the consumer's potable water system.

(37) "Combined distribution system" means the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water.

(38) "Completely treated water" means water from a surface water source, or a groundwater source under the direct influence of surface water (GWI) source that receives filtration or disinfection treatment that fully complies with the treatment technique requirements of Part 6 of this chapter as determined by the department.

(39) "Composite correction program (CCP)" means a program that consists of two elements - a comprehensive performance evaluation (CPE) and comprehensive technical assistance (CTA).

(40) "Composite sample" means a sample in which more than one source is sampled individually by the water system and then composited by a certified laboratory by mixing equal parts of water from each source (up to five different sources) and then analyzed as a single sample.

(41) "Comprehensive monitoring plan" means a schedule that describes both the frequency and appropriate locations for sampling of drinking water contaminants as required by state and federal rules.

(42) "Comprehensive performance evaluation (CPE)" means a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes

approaches that can be implemented without significant capital improvements.

The comprehensive performance evaluation must consist of at least the following components:

(a) Assessment of plant performance;

(b) Evaluation of major unit processes;

(c) Identification and prioritization of performance limiting factors;

(d) Assessment of the applicability of comprehensive technical assistance; and

(e) Preparation of a CPE report.

(43) "Comprehensive technical assistance (CTA)" means the performance improvement phase that is implemented if the CPE results indicate improved performance potential. The system must identify and systematically address plant-specific factors. The CTA is a combination of using CPE results as a basis for follow-up, implementing process control priority-setting techniques, and maintaining long-term involvement to systematically train staff and administrators.

(44) "Confirmation" means to demonstrate that the result of a sample accurately represents the original sample result by analyzing another sample from the same location within a reasonable given period of time.

(45) "Confluent growth" means a continuous bacterial growth covering a portion or the entire filtration area of a membrane filter in which bacterial colonies are not discrete.

(46) "Consecutive system" means a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

(47) "Construction completion report" means a form provided by the department and completed for each specific construction project to document:

(a) Project construction in accordance with this chapter and general standards of engineering practice;

(b) Physical capacity changes; and

(c) Satisfactory test results.

The completed form must be stamped with an engineer's seal and signed and dated by a professional engineer.

(48) "Consumer" means any person receiving water from a public water system from either the meter, or the point where the service line connects with the distribution system if no meter is present. For purposes of cross-connection control, "consumer" means the owner or operator of a water system connected to a public water system through a service connection.

(49) "Consumer's water system," as used in WAC 246-290-490, means any potable or industrial water system that begins at the point of delivery from the public water system and is located on the consumer's premises. The consumer's water system includes all auxiliary sources of supply, storage, treatment, and distribution facilities, piping, plumbing, and fixtures under the control of the consumer.

(50) "Contaminant" means a substance present in drinking water that may adversely affect the health of the consumer or the aesthetic qualities of the water.

(51) "Contingency plan" means that portion of the wellhead protection program section of the water system plan or small water system management program that addresses the replacement of the major well(s) or wellfield in the event of loss due to groundwater contamination.

(52) "Continuous monitoring" means determining water quality with automatic recording analyzers that operate without interruption ((~~twenty-four~~)) 24 hours per day.

(53) "Conventional filtration treatment" means a series of processes including coagulation, flocculation, clarification, and filtration that together result in substantial particulate removal in compliance with Part 6 of this chapter.

(54) "Corrective action plan" means specific written actions and deadlines developed by the water system or the department that the system must follow as a result of either the identification of significant deficiencies during a sanitary survey or the determination of a fecal indicator-positive sample in source water monitoring.

(55) "Cost-effective" means the benefits exceed the costs.

(56) "Council" means the Washington state building code council under WAC 51-04-015(2).

(57) "Critical water supply service area (CWSSA)" means a geographical area which is characterized by a proliferation of small, inadequate water systems, or by water supply problems which threaten the present or future water quality or reliability of service in a manner that efficient and orderly development may best be achieved through coordinated planning by the water utilities in the area as set forth by the Public Water System Coordination Act, chapter 70A.100 RCW and chapter 246-293 WAC.

(58) "Cross-connection" means any actual or potential physical connection between a public water system or the consumer's water system and any source of nonpotable liquid, solid, or gas that could contaminate the potable water supply by backflow.

(59) "Cross-connection control program" means the administrative and technical procedures the purveyor implements to protect the public water system from contamination via cross-connections as required in WAC 246-290-490.

(60) "Cross-connection control specialist (CCS)" means a person holding a valid CCS certificate issued under chapter 246-292 WAC.

(61) "Cross-connection control summary report" means the annual report that describes the status of the purveyor's cross-connection control program.

(62) "CT" or "CTcalc" means the product of "residual disinfectant concentration" (C) and the corresponding "disinfectant contact time" (T) i.e., "C" x "T."

(63) "$CT_{99.9}$" means the CT value required for 99.9 percent (3-log) inactivation of *Giardia lamblia* cysts.

(64) "CTreq" means the CT value a system shall provide to achieve a specific percent inactivation of *Giardia lamblia* cysts or other pathogenic organisms of health concern as directed by the department.

(65) "Curtailment" means short-term, infrequent actions by a purveyor and its consumers to reduce their water use during or in anticipation of a water shortage.

(66) "DBPs" means disinfection byproducts.

(67) "DCDA" means a double check detector assembly.

(68) "DCVA" means a double check valve assembly.

(69) "Dead storage" means the volume of stored water not available to all consumers at the minimum design pressure under WAC 246-290-230 (5) and (6).

(70) "Demand forecast" means an estimate of future water system water supply needs assuming historically normal weather conditions and calculated using numerous parameters, including population, historic

water use, local land use plans, water rates and their impacts on consumption, employment, projected water use efficiency savings from implementation of a water use efficiency program, and other appropriate factors.

(71) "Department" means the Washington state department of health or health officer as identified in a joint plan of responsibility under WAC 246-290-030(1).

(72) "Design and construction standards" means department design guidance and other peer reviewed documents generally accepted by the engineering profession as containing fundamental criteria for design and construction of water facility projects. Design and construction standards are comprised of performance and sizing criteria and reference general construction materials and methods.

(73) "Detectable residual disinfectant concentration" means 0.2 mg/L free chlorine, total chlorine, combined chlorine, or chlorine dioxide.

(74) "Diatomaceous earth filtration" means a filtration process for substantial removal of particulates (> 2-log *Giardia lamblia* cysts) in which:

(a) A precoat cake of graded diatomaceous earth filter media is deposited on a support membrane (septum); and

(b) Water is passed through the cake on the septum while additional filter media, known as body feed, is continuously added to the feed water to maintain the permeability of the filter cake.

(75) "Direct filtration" means a series of processes including coagulation, flocculation, and filtration (but excluding sedimentation) that together result in substantial particulate removal in compliance with Part 6 of this chapter.

(76) "Direct service connection" means a service hookup to a property that is contiguous to a water distribution main and where additional distribution mains or extensions are not needed to provide service.

(77) "Disinfectant contact time (T in CT)" means:

(a) When measuring the first or only C, the time in minutes it takes water to move from the point of disinfectant application to a point where the C is measured; and

(b) For subsequent measurements of C, the time in minutes it takes water to move from one C measurement point to the C measurement point for which the particular T is being calculated.

(78) "Disinfection" means the use of chlorine or other agent or process the department approves for killing or inactivating microbiological organisms, including pathogenic and indicator organisms.

(79) "Disinfection profile" means a summary of *Giardia lamblia* inactivation through a surface water treatment plant.

(80) "Distribution coliform sample" means a sample of water collected from a representative location in the distribution system at or after the first service and analyzed for coliform presence in compliance with this chapter.

(81) "Distribution-related projects" means distribution projects such as storage tanks, booster pump facilities, transmission mains, pipe linings, and tank coating. It does not mean source of supply (including interties) or water quality treatment projects.

(82) "Distribution system" means all piping components of a public water system that serve to convey water from transmission mains linked to source, storage and treatment facilities to the consumer excluding individual services.

(83) "Domestic or other nondistribution system plumbing problem" means contamination of a system having more than one service connection with the contamination limited to the specific service connection from which the sample was taken.

(84) "Dual sample set" means a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected for the purposes of conducting an IDSE under WAC 246-290-300 (6)(b)(i)(F) and determining compliance with the TTHM and HAA5 MCLs under WAC 246-290-310(4).

(85) "Duplicate (verification) sample" means a second sample collected at the same time and location as the first sample and used for verification.

(86) "DVGW" means Deutsche Vereinigung des Gas und Wasserfaches.

(87) "Elected governing board" means the elected officers with ultimate legal responsibility for operational, technical, managerial, and financial decisions for a public water system.

(88) "Emergency" means an unforeseen event that causes damage or disrupts normal operations and requires immediate action to protect public health and safety.

(89) "Emergency source" means any source that a purveyor intends to use for emergency purposes only and not used for routine or seasonal water demands.

(90) "Engineering design review report" means a form provided by the department and completed for a specific distribution-related project to document:

(a) Engineering review of a project report and/or construction documents under the submittal exception process in WAC 246-290-125(3); and

(b) Design in accordance with this chapter and general standards of engineering practice.

(c) The completed form must be stamped with engineer's seal, and signed and dated by a professional engineer.

(91) "EPA" means the U.S. Environmental Protection Agency.

(92) "Equalizing storage" means the volume of storage needed to supplement supply to consumers when the peak hourly demand exceeds the total source pumping capacity.

(93) "Equivalent residential unit (ERU)" means a system-specific unit of measure used to express the amount of water consumed by a typical full-time single family residence.

(94) "Expanding public water system" means a public water system that increases the geographical area where direct service connections are available or increases the approved number of service connections.

(95) "Filter profile" means a graphical representation of individual filter performance in a direct or conventional surface water filtration plant, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

(96) "Filtration" means a process for removal of particulate matter from water by passage through porous media.

(97) "Financial viability" means the capability of a water system to obtain sufficient funds to construct, operate, maintain, and manage a public water system, on a continuing basis, in full compliance with federal, state, and local requirements.

(98) "Finished water" means water introduced into a public water system's distribution system and is intended for distribution and con-

sumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals).

(99) "Finished water storage facility" means a water storage structure that is integrated with a water system's distribution network to provide for variable system demands including, but not limited to, daily equalizing storage, standby storage, or fire reserves, or to provide for disinfectant contact time.

(100) "Fire flow" means the maximum rate and duration of water flow needed to suppress a fire under WAC 246-293-640 or as required under local fire protection authority standards.

(101) "Fire suppression storage" means the volume of stored water available during fire suppression activities to satisfy minimum pressure requirements per WAC 246-290-230.

(102) "First consumer" means the first service connection associated with any source (i.e., the point where water is first withdrawn for human consumption, excluding connections where water is delivered to another water system covered by these regulations).

(103) "Flocculation" means a process enhancing agglomeration and collection of colloidal and suspended particles into larger, more easily settleable or filterable particles by gentle stirring.

(104) "Flowing stream" means a course of running water flowing in a definite channel.

(105) "Flow-through fire protection system" means a fire sprinkler system that:

(a) Is supplied only by the purveyor's water;

(b) Does not have a fire department pumper connection;

(c) Is constructed of approved potable water piping and materials to which sprinkler heads are attached; and

(d) Terminates at a connection to a toilet or other plumbing fixture to prevent stagnant water.

(106) "Forecasted demand characteristics" means the factors that may affect a public water system's projected water needs.

(107) "Future service area" means a specific area a water system in a CWSSA plans to provide water service as determined by a written agreement between purveyors under chapter 70A.100 RCW and chapter 246-293 WAC.

(108) "GAC" means granular activated carbon.

(109) "GAC10" means granular activated carbon filter beds with an empty-bed contact time of ((~~ten~~)) 10 minutes based on average daily flow and a carbon reactivation frequency of every ((~~one hundred eighty~~)) 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with MCLs under WAC 246-290-310(4) shall be ((~~one hundred twenty~~)) 120 days.

(110) "GAC20" means granular activated carbon filter beds with an empty-bed contact time of ((~~twenty~~)) 20 minutes based on average daily flow and a carbon reactivation frequency of every ((~~two hundred forty~~)) 240 days.

(111) "Governing body" means the individual or group of individuals with ultimate legal responsibility for operational, technical, managerial, and financial decisions for a public water system.

(112) "gph" means gallons per hour.

(113) "gpm" means gallons per minute.

(114) "Grab sample" means a water quality sample collected at a specific instant in time and analyzed as an individual sample.

(115) "Groundwater system" means all public water systems that use groundwater including:

(a) Consecutive systems receiving finished groundwater; or

(b) Surface water systems with groundwater sources except those systems that combine all sources prior to treatment.

(116) "Groundwater under the direct influence of surface water (GWI)" means any water beneath the surface of the ground that the department determines has the following characteristics:

(a) Significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or, *Cryptosporidium*; or

(b) Significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH closely correlating to climatological or surface water conditions where natural conditions cannot prevent the introduction of surface water pathogens into the source at the system's point of withdrawal.

(117) "Guideline" means a department document assisting the purveyor in meeting a rule requirement.

(118) "GWR" means groundwater rule.

(119) "HAA5" means haloacetic acids (five).

(120) "Hazard index (HI)" is the sum of component hazard quotients (HQs), which are calculated by dividing the measured regulated PFAS component concentration in water (e.g., expressed as parts per trillion (ppt) or nanograms per liter (ng/l)) by the associated health-based water concentration (HBWC) expressed in the same units as the measured concentration (e.g., ppt or ng/l). For PFAS, a mixture hazard index greater than 1 (unitless) is an exceedance of the MCL.

(121) "Hazard quotient (HQ)" means the ratio of the measured concentration in drinking water to the health-based water concentration (HBWC).

(122) "Health-based water concentration (HBWC)" means level below which there are no known or anticipated adverse health effects over a lifetime of exposure, including sensitive populations and life stages, and allows for an adequate margin of safety.

(123) "Health officer" means the health officer of the city, county, city-county health department or district, or an authorized representative.

((~~(121)~~)) (124) "Heterotrophic plate count (HPC)" means a procedure to measure a class of bacteria that use organic nutrients for growth. The density of these bacteria in drinking water is measured as colony forming units per milliliter and is referred to as the HPC.

((~~(122)~~)) (125) "HFPO-DA or GenX chemicals" means Chemical Abstract Service registration number 122499-17-6, chemical formula C6F11O3-, International Union of Pure and Applied Chemistry preferred name 2,3,3,3-tetrafluoro-2- (heptafluoropropoxy)propanoate, along with its conjugate acid and any salts, derivatives, isomers, or combinations thereof.

(126) "High health cross-connection hazard" means a cross-connection involving any substance that could impair the quality of potable water and create an actual public health hazard through injury, poisoning, or spread of disease.

((~~(123)~~)) (127) "Human consumption" means the use of water for drinking, bathing or showering, hand washing, food preparation, cooking, or oral hygiene.

((~~(124)~~)) (128) "Hydraulic analysis" means the study of a water system's distribution main and storage network to determine present or future adequacy for provision of service to consumers within the established design parameters for the system under peak flow conditions, including fire flow. The analysis is used to establish any need for

improvements to existing systems or to substantiate adequacy of design for distribution system components such as piping, elevated storage, booster stations or similar facilities used to pump and convey water to consumers.

((~~(125)~~)) (129) "IAPMO" means the International Association of Plumbing and Mechanical Officials.

((~~(126)~~)) (130) "IDSE" means an initial distribution system evaluation.

((~~(127)~~)) (131) "Inactivation" means a process which renders pathogenic microorganisms incapable of producing disease.

((~~(128)~~)) (132) "Inactivation ratio" means the ratio obtained by dividing CTcalc by CTreq.

((~~(129)~~)) (133) "Incompletely treated water" means water from a surface or GWI source that receives filtration and/or disinfection treatment that does not fully comply with the treatment technique requirements of Part 6 of this chapter as determined by the department.

((~~(130)~~)) (134) "In-line filtration" means a series of processes, including coagulation and filtration (but excluding flocculation and sedimentation) that together result in particulate removal.

((~~(131)~~)) (135) "In-premises protection" means a method of protecting the health of consumers served by the consumer's potable water system, located within the property lines of the consumer's premises by the installation of an approved air gap or backflow prevention assembly at the point of hazard, which is generally a plumbing fixture.

((~~(132)~~)) (136) "Intertie" means an interconnection between public water systems permitting the exchange or delivery of water between those systems.

((~~(133)~~)) (137) "kPa" means kilo pascal (SI units of pressure).

((~~(134)~~)) (138) "Lake or reservoir" means a natural or man-made basin or hollow on the earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

((~~(135)~~)) (139) "Legionella" means a genus of bacteria containing species which cause a type of pneumonia called Legionnaires' disease.

((~~(136)~~)) (140) "Level 1 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and when possible, the likely reason that the system triggered the assessment. The assessment is conducted by the system operator or the purveyor.

((~~(137)~~)) (141) "Level 2 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and when possible, the likely reason that the system triggered the assessment. A level 2 assessment is a more detailed examination of the system (including the system's monitoring and operational practices) than is a level 1 assessment through the use of a more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. The level 2 assessment is conducted by a party approved by the department.

((~~(138)~~)) (142) "Limited alternative to filtration" means a process that ensures greater removal and/or inactivation efficiencies of pathogenic organisms than would be achieved by the combination of filtration and chlorine disinfection.

((~~(139)~~)) (143) "Local plans and regulations" means any comprehensive plan or development regulation adopted under chapter 36.70A RCW or any other applicable comprehensive plan, land use plan, or development regulation adopted by a city, town, or county for the applicable service area.

((~~(140)~~)) (144) "Locational running annual average (LRAA)" means the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

((~~(141)~~)) (145) "Low cross-connection hazard" means a cross-connection that could impair the quality of potable water to a degree that does not create a hazard to the public health, but does adversely and unreasonably affect the aesthetic qualities of potable waters for domestic use.

((~~(142)~~)) (146) "Major project" means all construction projects subject to the State Environmental Policy Act (SEPA) under chapter 43.21C RCW, and meeting the requirements of WAC 246-03-030 (3)(a).

((~~(143)~~)) (147) "Mandatory curtailment" means curtailment required by a public water system of specified water uses and consumer classes for a specified period of time.

((~~(144)~~)) (148) "Marginal costs" means the costs incurred by producing the next increment of supply.

((~~(145)~~)) (149) "Maximum contaminant level (MCL)" means the maximum permissible level of a contaminant in water the purveyor delivers to any public water system user, measured at the locations identified under WAC 246-290-310, Table 5.

((~~(146)~~)) (150) "Maximum contaminant level violation" means a confirmed measurement above the MCL and for a duration of time, where applicable, as outlined under WAC 246-290-310.

((~~(147)~~)) (151) "Maximum day demand (MDD)" means the highest actual or estimated quantity of water that is, or is expected to be, used over a ((~~twenty-four~~)) 24 hour period, excluding unusual events or emergencies. MDD is typically expressed as gallons per day per ERU (gpd/ERU).

((~~(148)~~)) (152) "Membrane filtration" means a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.

((~~(149)~~)) (153) "Metabolite" means a byproduct of a contaminant in drinking water formed during a natural biological process in the body.

((~~(150)~~)) (154) "mg/L" means milligrams per liter (1 mg/L = 1 ppm).

((~~(151)~~)) (155) "mL" means a milliliter.

((~~(152)~~)) (156) "mm" means a millimeter.

((~~(153)~~)) (157) "Monitoring waiver" means an action taken by the department under WAC 246-290-300 (4)(g), (7)(f), or (10)(h) to allow a water system to reduce specific monitoring requirements based on a determination of low source vulnerability to contamination.

((~~(154)~~)) (158) "MRDL" means the maximum residual disinfectant level.

((~~(155)~~)) (159) "MRDLG" means the maximum residual disinfectant level goal.

((~~(156)~~)) (160) "MTTP" means maximum total trihalomethane potential.

((~~(157)~~)) (161) "Municipal water supplier" means an entity that supplies water for municipal water supply purposes.

((~~(158)~~)) (162) "Municipal water supply purposes" means a beneficial use of water:

(a) For residential purposes through ((~~fifteen~~)) 15 or more residential service connections or for providing residential use of water for a nonresidential population that is, on average, at least ((~~twenty-five~~)) 25 people for at least ((~~sixty~~)) 60 days a year;

(b) For governmental or governmental proprietary purposes by a city, town, public utility district, county, sewer district, or water district; or

(c) Indirectly for the purposes in (a) or (b) of this definition through the delivery of treated or raw water to a public water system for such use.

(i) If water is beneficially used under a water right for the purposes listed in (a), (b), or (c) of this definition, any other beneficial use of water under the right generally associated with the use of water within a municipality is also for "municipal water supply purposes," including, but not limited to, beneficial use for commercial, industrial, irrigation of parks and open spaces, institutional, landscaping, fire flow, water system maintenance and repair, or related purposes.

(ii) If a governmental entity holds a water right that is for the purposes listed in (a), (b), or (c) of this definition, its use of water or its delivery of water for any other beneficial use generally associated with the use of water within a municipality is also for "municipal water supply purposes," including, but not limited to, beneficial use for commercial, industrial, irrigation of parks and open spaces, institutional, landscaping, fire flow, water system maintenance and repair, or related purposes.

((~~(159)~~)) (163) "Nested storage" means one component of storage is contained within the component of another.

((~~(160)~~)) (164) "ng/L" means nanograms per liter.

((~~(161)~~)) (165) "Nonacute" means posing a possible or less than immediate risk to human health.

((~~(162)~~)) (166) "Nonresident" means a person having access to drinking water from a public water system who lives elsewhere. Examples include travelers, transients, employees, students, etc.

((~~(163)~~)) (167) "Normal operating conditions" means those conditions associated with the designed, day-to-day provision of potable drinking water that meets regulatory water quality standards and the routine service expectations of the system's consumers at all times, including meeting fire flow demands. Operation under conditions such as power outages, floods, or unscheduled transmission or distribution disruptions, even if considered in the system design, are considered abnormal.

((~~(164)~~)) (168) "NSF" means NSF International (formerly known as the National Sanitation Foundation (NSF)).

((~~(165)~~)) (169) "NTNC" means nontransient noncommunity.

((~~(166)~~)) (170) "NTU" means a nephelometric turbidity unit.

((~~(167)~~)) (171) "ONORM" means Osterreichisches Normungsinstitut.

((~~(168)~~)) (172) "Operational storage" means the volume of distribution storage associated with source or booster pump normal cycling times under normal operating conditions and is additive to the equalizing and standby storage components, and to fire flow storage if this storage component exists for any given tank.

((~~(169)~~)) (173) "pCi/L" means picocuries per liter.

((~~(170)~~)) (174) "PFAS" means per- and polyfluoroalkyl substances, a group of man-made chemicals found in products such as aqueous film-

forming foam used to suppress petroleum-based fires, nonstick cookware, stain-resistant fabrics and many other products, and as defined in RCW 70A.350.010(8).

((~~(171)~~)) (175) "PFBS" means ((~~perfluorobutane sulfonic acid~~)) Chemical Abstract Service registration number 45187-15-3, chemical formula C4F9SO3-, perfluorobutane sulfonate, along with its conjugate acid and any salts, derivatives, isomers, or combinations thereof.

((~~(172)~~)) (176) "PFHxS" means ((~~perfluorohexane sulfonic acid~~)) Chemical Abstract Service registration number 108427-53-8, chemical formula C6F13SO3-, perfluorohexane sulfonate, along with its conjugate acid and any salts, derivatives, isomers, or combinations thereof.

((~~(173)~~)) (177) "PFNA" means ((~~perfluorononanoic acid~~)) Chemical Abstract Service registration number 72007-68-2, chemical formula C9F17O2-, perfluorononanoate, along with its conjugate acid and any salts, derivatives, isomers, or combinations thereof.

((~~(174)~~)) (178) "PFOA" means ((~~perfluorooctanoic acid, also known as C8~~)) Chemical Abstract Service registration number 45285-51-6, chemical formula C8F15O2-, perfluorooctanoate, along with its conjugate acid and any salts, derivatives, isomers, or combinations thereof.

((~~(175)~~)) (179) "PFOS" means ((~~perfluorooctane sulfonic acid~~)) Chemical Abstract Service registration number 45298-90-6, chemical formula C8F17SO3-, perfluorooctanesulfonate, along with its conjugate acid and any salts, derivatives, isomers, or combinations thereof.

((~~(176)~~)) (180) "Peak hourly demand (PHD)" means the maximum rate of water use, excluding fire flow, that can be expected to occur within a defined service area over a continuous ((~~sixty~~)) 60 minute time period. PHD is typically expressed in gallons per minute (gpm).

((~~(177)~~)) (181) "Peak hourly flow" means, for the purpose of CT calculations, the greatest volume of water passing through the system during any one hour in a day.

((~~(178)~~)) (182) "Performance criteria" means the level at which a system shall operate in order to maintain system reliability compliance, in accordance with WAC 246-290-420, and to meet consumers' reasonable expectations.

((~~(179)~~)) (183) "Permanent residence" means any dwelling that is, or could reasonably be expected to be, occupied on a continuous basis.

((~~(180)~~)) (184) "Permanent source" means a public water system supply source that is used regularly each year, and based on expected operational requirements of the system, will be used more than three consecutive months in any ((~~twelve~~)) 12-month period. For seasonal water systems that are in operation for less than three consecutive months per year, their sources are also considered to be permanent.

((~~(181)~~)) (185) "Plant intake" means the works or structures at the head of a conduit through which water is diverted from a source (e.g., river or lake) into the treatment plant.

((~~(182)~~)) (186) "Point of disinfectant application" means the point where the disinfectant is added, and where water downstream of that point is not subject to contamination by untreated surface water.

((~~(183)~~)) (187) "Population served" means the number of persons, resident and nonresident, having immediate access to drinking water from a public water system, whether or not persons have actually consumed water from that system. The number of nonresidents is the average number of persons having immediate access to drinking water on days access was provided during that month. In the absence of specific population data, the number of residents is computed by multiplying the number of active services by two and one-half.

((~~(184)~~)) (188) "Potable" means water suitable for drinking by the public.

((~~(185)~~)) (189) "Potential GWI" means a source identified by the department as possibly under the influence of surface water, and includes, but is not limited to, all wells with a screened interval ((~~fifty~~)) 50 feet or less from the ground surface at the wellhead and located within ((~~two hundred~~)) 200 feet of a surface water, and all Ranney wells, infiltration galleries, and springs.

((~~(186)~~)) (190) "ppm" means parts per million (1 ppm = 1 mg/L).

((~~(187)~~)) (191) "ppt" means parts per trillion (1 ppt = 1 ng/L).

((~~(188)~~)) (192) "Premises isolation" means a method of protecting a public water system by installation of approved air gaps or approved backflow prevention assemblies at or near the service connection or alternative location acceptable to the purveyor to isolate the consumer's water system from the purveyor's distribution system.

((~~(189)~~)) (193) "Presedimentation" means a preliminary treatment process used to remove gravel, sand, and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.

((~~(190)~~)) (194) "Pressure filter" means an enclosed vessel containing properly sized and graded granular media through which water is forced under greater than atmospheric pressure.

((~~(191)~~)) (195) "Primary disinfection" means a treatment process for achieving inactivation of *Giardia lamblia* cysts, viruses, or other pathogenic organisms of public health concern to comply with the treatment technique requirements of Part 6 of this chapter.

((~~(192)~~)) (196) "Primary standards" means standards based on chronic, nonacute, or acute human health effects.

((~~(193)~~)) (197) "Primary turbidity standard" means an accurately prepared formazin solution or commercially prepared polymer solution of known turbidity (prepared in accordance with "standard methods") that is used to calibrate bench model and continuous turbidimeters (instruments used to measure turbidity).

((~~(194)~~)) (198) "Project approval application (PAA)" means a department form documenting ownership of water system, design engineer for the project, and type of project.

((~~(195)~~)) (199) "Protected groundwater source" means a groundwater source the purveyor shows to the department's satisfaction as protected from potential sources of contamination on the basis of hydrogeologic data and/or satisfactory water quality history.

((~~(196)~~)) (200) "psi" means pounds per square inch.

((~~(197)~~)) (201) "Public forum" means a meeting open to the general public that allows for their participation.

((~~(198)~~)) (202) "Public water system" is defined and referenced under WAC 246-290-020.

((~~(199)~~)) (203) "Purchased source" means water a purveyor purchases from a public water system not under the control of the purveyor for distribution to the purveyor's consumers.

((~~(200)~~)) (204) "Purveyor" means an agency, subdivision of the state, municipal corporation, firm, company, mutual or cooperative association, institution, partnership, or person or other entity owning or operating a public water system. Purveyor also means the authorized agents of these entities.

((~~(201)~~)) (205) "PVBA" means a pressure vacuum breaker assembly.

((~~(202)~~)) (206) "Reclaimed water" means effluent derived in any part from sewage from a wastewater treatment system that has been adequately and reliably treated, so that as a result of that treatment,

it is suitable for beneficial use or a controlled use that would not otherwise occur, and it is no longer considered wastewater.

((~~(203)~~)) (207) "Record drawings" means the drawings bearing the seal and signature of a professional engineer that reflect the modifications made to construction documents, documenting actual constructed conditions of the water system facilities.

((~~(204)~~)) (208) "Recreational tract" means an area that is clearly defined for each occupant, but has no permanent structures with internal plumbing, and the area has been declared in the covenants or on the recorded plat in order to be eligible for reduced design considerations.

((~~(205)~~)) (209) "Regional public water supplier" means a water system that provides drinking water to one, or more, other public water systems.

((~~(206)~~)) (210) "Regularly" means four hours or more per day for four days or more per week.

((~~(207)~~)) (211) "Removal credit" means the level (expressed as a percent or log) of *Giardia* and virus removal the department grants a system's filtration process.

((~~(208)~~)) (212) "Repeat sample" means a sample collected to confirm the results of a previous analysis.

((~~(209)~~)) (213) "Resident" means an individual living in a dwelling unit served by a public water system.

((~~(210)~~)) (214) "Residual disinfectant concentration" means the analytical level of a disinfectant, measured in milligrams per liter, that remains in water following the application (dosing) of the disinfectant after some period of contact time.

((~~(211)~~)) (215) "Retail service area" means the specific area defined by the municipal water supplier where the municipal water supplier has a duty to provide service to all new service connections as set forth in RCW 43.20.260.

((~~(212)~~)) (216) "RPBA" means reduced pressure backflow assembly.

((~~(213)~~)) (217) "RPDA" means reduced pressure detector assembly.

((~~(214)~~)) (218) "Running annual average (RAA)" means the average of analytical results from compliance samples collected at the monitoring locations identified in WAC 246-290-300 during any consecutive four calendar quarters. If a system fails to collect the required number of samples, the RAA is based on the total number of samples collected. If a sample result is less than the SDRL, zero is used to calculate the RAA.

((~~(215)~~)) (219) "Same farm" means a parcel of land or series of parcels that are connected by covenants and devoted to the production of livestock or agricultural commodities for commercial purposes and does not qualify as a Group A public water system.

((~~(216)~~)) (220) "Sanitary defect" means a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

((~~(217)~~)) (221) "Sanitary survey" means a review, inspection, and assessment of a public water system, by the department or department designee, to determine the adequacy of the system and its operation for producing and distributing safe and reliable drinking water. Each survey includes, but is not limited to, an evaluation of the following components:

(a) Source;

(b) Treatment;

(c) Distribution system;

(d) Finished water storage;
(e) Pump, pump facilities, and controls;
(f) Monitoring, reporting, and data verification;
(g) System management and operation; and
(h) Operator compliance.

((~~(218)~~)) (222) "Satellite system management agency (SMA)" means a person or entity that is approved by the department to own or operate public water systems on a regional or county-wide basis without the necessity for a physical connection between the systems.

((~~(219)~~)) (223) "SCA" means a sanitary control area.

((~~(220)~~)) (224) "SDWA" means the Safe Drinking Water Act.

((~~(221)~~)) (225) "Seasonal source" means a public water system source used on a regular basis, that is not a permanent or emergency source.

((~~(222)~~)) (226) "Seasonal system" means a noncommunity water system defined in WAC 246-290-020 that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

((~~(223)~~)) (227) "Secondary standards" means standards based on factors other than health effects.

((~~(224)~~)) (228) "SEPA" means the State Environmental Policy Act.

((~~(225)~~)) (229) "Service area" means the specific area a water system currently serves and areas where future water service is planned. A wholesale system may include areas where it provides wholesale water to other public water systems in its service area. A water system in a CWSSA includes its future service area in its service area as "future service area" as defined under chapters 70A.100 RCW and 246-293 WAC.

((~~(226)~~)) (230) "Service connection" means a connection to a public water system designed to provide potable water to a single family residence, or other residential or nonresidential population. When the connection provides water to a residential population without clearly defined single family residences, the following formulas are used in determining the number of services to be included as residential connections on the WFI form:

(a) Divide the average population served each day by two and one-half; or

(b) Using actual water use data, calculate the total ERUs represented by the service connection in accordance with department design guidance.

(c) The calculated number of services is never less than one.

((~~(227)~~)) (231) "Severe health cross-connection hazard" means a cross-connection which could impair the quality of potable water and create an immediate, severe public health hazard through poisoning or spread of disease by contaminants from radioactive material processing plants, nuclear reactors, or wastewater treatment plants.

((~~(228)~~)) (232) "Simple disinfection" means any form of disinfection that requires minimal operational control in order to maintain the disinfection at proper functional levels, and that does not pose safety concerns that would require special care, equipment, or expertise. Examples include hypochlorination, UV-light, contactor chlorination, or any other form of disinfection practice that is safe to use and easy to routinely operate and maintain.

((~~(229)~~)) (233) "Slow sand filtration" means a process involving passage of source water through a bed of sand at low velocity (generally less than 0.10 gpm/ft^2) that results in substantial particulate

removal (> 2-log *Giardia lamblia* cysts) by physical and biological mechanisms.

((~~(230)~~)) (234) "Societal perspective" means:

A point of view that includes a broad spectrum of public benefits including, but not limited to:

(a) Enhanced system reliability;

(b) Savings that result from delaying, deferring, or minimizing capital costs; and

(c) Environmental benefits such as increased water in streams, improvements in aquifer recharge and other environmental factors.

((~~(231)~~)) (235) "Source meter" means a meter that measures total output of a water source over specific time periods.

((~~(232)~~)) (236) "Source water" means untreated water that is not subject to recontamination by surface runoff and:

(a) For unfiltered systems, enters the system immediately before the first point of disinfectant application; and

(b) For filtered systems, enters immediately before the first treatment unit of a water treatment facility.

((~~(233)~~)) (237) "Special purpose investigation (SPI)" means on-site inspection of a public water system by the department or designee to address a potential public health concern, regulatory violation, or consumer complaint.

((~~(234)~~)) (238) "Special purpose sample" means a sample collected for reasons other than the monitoring compliance specified in this chapter.

((~~(235)~~)) (239) "Spring" means a source of water where an aquifer comes in contact with the ground surface.

((~~(236)~~)) (240) "Standard methods" means the book, titled *Standard Methods for the Examination of Water and Waste Water,* jointly published by the American Public Health Association, American Water Works Association (AWWA), and Water Pollution Control Federation. This book is available through public libraries or may be ordered from AWWA, 6666 West Quincy Avenue, Denver, Colorado 80235. The edition to be used is that specified by EPA for the relevant drinking water parameter in 40 C.F.R. Part 141.

((~~(237)~~)) (241) "Standby storage" means the volume of stored water available for use during a loss of source capacity, power, or similar short-term emergency.

((~~(238)~~)) (242) "State action level (SAL)" means the concentration of a contaminant or group of contaminants, without an MCL, established to protect public health in accordance with WAC 246-290-315 and which, if exceeded, triggers actions a purveyor takes in accordance with WAC 246-290-320.

((~~(239)~~)) (243) "State board of health" and "board" means the board created by RCW 43.20.030.

((~~(240)~~)) (244) "State building code" means the codes adopted by and referenced in chapter 19.27 RCW; the state energy code; and any other codes so designated by the Washington state legislature as adopted and amended by the council.

((~~(241)~~)) (245) "State detection reporting limit (SDRL)" means the minimum reportable detection of a contaminant established in WAC 246-390-075.

((~~(242)~~)) (246) "State revolving fund (SRF)" means the revolving loan program financed by the state and federal governments and managed by the state for the purpose of assisting water systems to meet their capital needs associated with complying with the federal Safe Drinking Water Act under chapter 246-296 WAC.

((~~(243)~~)) (247) "State significant noncomplier (SSNC)" means a system that is violating or has violated department rules, and the violations may create, or have created an imminent or a significant risk to human health.

The violations include, but are not limited to:

(a) Repeated violations of monitoring requirements;

(b) Failure to address an exceedance of permissible levels of regulated contaminants;

(c) Failure to comply with treatment technique standards or requirements;

(d) Failure to comply with waterworks operator certification requirements; or

(e) Failure to submit to a sanitary survey.

((~~(244)~~)) (248) "Subpart H System" see definition for "surface water system."

((~~(245)~~)) (249) "Surface water" means a body of water open to the atmosphere and subject to surface runoff.

((~~(246)~~)) (250) "Surface water system" means a public water system that uses in whole, or in part, source water from a surface supply, or GWI supply. This includes systems that operate surface water treatment facilities, and systems that purchase "completely treated water". A "surface water system" is also referred to as a "Subpart H System" in some federal regulatory language adopted by reference and the two terms are considered equivalent for the purposes of this chapter.

((~~(247)~~)) (251) "Susceptibility assessment" means the completed susceptibility assessment survey form for groundwater sources, or a surface water checklist for surface water sources, developed by the department to evaluate the hydrologic setting of the water source and assess its contribution to the source's overall susceptibility to contamination from surface activities.

((~~(248)~~)) (252) "SUVA" means specific ultraviolet absorption.

((~~(249)~~)) (253) "SVBA" means spill resistant vacuum breaker assembly.

((~~(250)~~)) (254) "SWTR" means the surface water treatment rule.

((~~(251)~~)) (255) "Synthetic organic chemical (SOC)" means a manufactured carbon-based chemical.

((~~(252)~~)) (256) "System capacity" means the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with all relevant local, state, and federal plans and regulations.

((~~(253)~~)) (257) "System physical capacity" means the maximum number of service connections or equivalent residential units (ERUs) that the system can serve when considering the limitation of each system component such as source, treatment, storage, transmission, or distribution, individually and in combination with each other.

((~~(254)~~)) (258) "T" means disinfectant contact time in minutes.

((~~(255)~~)) (259) "Time-of-travel" means the time required for groundwater to move through the water bearing zone from a specific point to a well.

((~~(256)~~)) (260) "TNC" means transient noncommunity.

((~~(257)~~)) (261) "TOC" means total organic carbon.

((~~(258)~~)) (262) "Too numerous to count (TNTC)" means the total number of bacterial colonies exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

((~~(259)~~)) (263) "Tracer study" means a field study conducted to determine the disinfectant contact time, T, provided by a water system

component, such as a clearwell or storage reservoir, used for *Giardia lamblia* cyst and virus inactivation. The study involves introducing a tracer chemical at the inlet of the contact basin and measuring the resulting outlet tracer concentration as a function of time.

((~~(260)~~)) (264) "Transmission line" means pipes used to convey water from source, storage, or treatment facilities to points of distribution or distribution mains, and from source facilities to treatment or storage facilities. This also can include transmission mains connecting one section of distribution system to another section of distribution system as long as this transmission main is clearly defined on the plans and no service connections are allowed along the transmission main.

((~~(261)~~)) (265) "Treatment technique (TT) requirement" means a department-established requirement for a public water system to provide treatment, such as filtration or disinfection, as defined by specific design, operating, and monitoring requirements. A TT requirement is established in lieu of a primary MCL when monitoring for the contaminant is not economically or technologically feasible.

((~~(262)~~)) (266) "Triggered source water monitoring" means collection of groundwater source samples as a result of a total coliform-positive routine sample in the distribution system under WAC 246-290-300(3).

((~~(263)~~)) (267) "Trihalomethane (THM)" means one of a family of organic compounds, named as derivatives of methane, where three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure. THMs may occur when chlorine, a halogen, is added to water containing organic material and are generally found in water samples as disinfection byproducts.

((~~(264)~~)) (268) "TTHM" means total trihalomethane.

((~~(265)~~)) (269) "Turbidity event" means a single day or series of consecutive days, not to exceed ((~~fourteen~~)) 14, when one or more turbidity measurement each day exceeds 5 NTU.

((~~(266)~~)) (270) "Two-stage lime softening" means a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.

((~~(267)~~)) (271) "T10" means the time it takes ((~~ten~~)) 10 percent of the water passing through a system contact tank intended for use in the inactivation of *Giardia lamblia* cysts, viruses, and other microorganisms of public health concern, as determined from a tracer study conducted at peak hourly flow or from published engineering reports or guidance documents for similarly configured tanks.

((~~(268)~~)) (272) "ug/L" means micrograms per liter.

((~~(269)~~)) (273) "UL" means the Underwriters Laboratories, Inc.

((~~(270)~~)) (274) "umhos/cm" means micromhos per centimeter.

((~~(271)~~)) (275) "Unapproved auxiliary water supply" means a water supply (other than the purveyor's water supply) on or available to the consumer's premises that is either not approved for human consumption by the health agency having jurisdiction or is not otherwise acceptable to the purveyor.

((~~(272)~~)) (276) "Uncovered finished water storage facility" means a tank, reservoir, or other facility used to store water, which will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere without a suitable water-tight roof or cover.

((~~(273)~~)) (277) "Uniform Plumbing Code (UPC)" means the code adopted under RCW 19.27.031(4) and implemented under chapter 51-56

WAC. This code establishes statewide minimum plumbing standards applicable within the property lines of the consumer's premises.

((~~(274)~~)) (278) "Used water" means water which has left the control of the purveyor.

((~~(275)~~)) (279) "UTC" means the utilities and transportation commission.

((~~(276)~~)) (280) "Verification" means to demonstrate the results of a sample to be precise by analyzing a duplicate sample. Verification occurs when analysis results fall within plus or minus ((~~thirty~~)) 30 percent of the original sample.

((~~(277)~~)) (281) "Virus" means a virus of fecal origin which is infectious to humans and transmitted through water.

((~~(278)~~)) (282) "Volatile organic chemical (VOC)" means a manufactured carbon-based chemical that vaporizes quickly at standard pressure and temperature.

((~~(279)~~)) (283) "Voluntary curtailment" means a curtailment of water use requested, but not required of consumers.

((~~(280)~~)) (284) "WAC" means the Washington Administrative Code.

((~~(281)~~)) (285) "Waterborne disease outbreak" means the significant occurrence of acute infectious illness, epidemiologically associated with drinking water from a public water system, as determined by the appropriate local health agency or the department.

((~~(282)~~)) (286) "Water demand efficiency" means minimizing water use by the public water system's consumers through purveyor sponsored activities that may include, but are not limited to, distributing water saving devices, providing rebates or incentives to promote water efficient technologies or by providing water audits to homes, businesses, or landscapes.

((~~(283)~~)) (287) "Water facilities inventory (WFI) form" means the department form summarizing each public water system's characteristics.

((~~(284)~~)) (288) "Water right" means a certificated water right, water right permit, valid claim, or other authorization, on record with or accepted by the department of ecology, authorizing the beneficial use of water in accordance with all applicable state laws.

((~~(285)~~)) (289) "Water right self-assessment" means an evaluation of the legal ability of a water system to use water for existing or proposed usages in conformance with state water right laws. The assessment may be done by a water system, a purveyor, the department of ecology, or any combination thereof.

((~~(286)~~)) (290) "Watershed" means the region or area that:

(a) Ultimately drains into a surface water source diverted for drinking water supply; and

(b) Affects the physical, chemical, microbiological, and radiological quality of the source.

((~~(287)~~)) (291) "Water shortage" means a situation during which the water supplies of a system cannot meet normal water demands for the system, including peak periods.

((~~(288)~~)) (292) "Water shortage response plan" means a plan outlining policies and activities to be implemented to reduce water use on a short-term basis during or in anticipation of a water shortage.

((~~(289)~~)) (293) "Water supply characteristics" means the factors related to a public water system's source of water supply that may affect its availability and suitability to provide for both short-term and long-term needs.

Factors include, but are not limited to:

(a) Source location;

(b) Name of any body of water and water resource inventory area from which water is diverted or withdrawn;

(c) Production capacity;

(d) The source's natural variability;

(e) The system's water rights for the source;

(f) Other legal demands on the source such as water rights for other uses;

(g) Conditions established to protect species listed under the Endangered Species Act in 50 C.F.R. 17.11;

(h) Instream flow restrictions established under Title 173 WAC; and

(i) Any conditions established by watershed plans approved under chapter 90.82 RCW and RCW 90.54.040(1) or salmon recovery plans under chapter 77.85 RCW.

((~~(290)~~)) (294) "Water supply efficiency" means increasing a public water system's transmission, storage and delivery potential through activities that may include, but are not limited to:

(a) System-wide water audits;

(b) Documenting authorized uses;

(c) Conducting leak surveys; and

(d) Repairs on:

(i) Meters;

(ii) Lines;

(iii) Storage facilities; and

(iv) Valves.

((~~(291)~~)) (295) "Water use efficiency (WUE)" means increasing water supply efficiency and water demand efficiency to minimize water withdrawals and water use.

((~~(292)~~)) (296) "Water use efficiency program" means policies and activities focusing on increasing water supply efficiency and water demand efficiency to minimize water withdrawals and water use.

((~~(293)~~)) (297) "Well field" means a group of wells one purveyor owns or controls that:

(a) Draw from the same aquifer or aquifers as determined by comparable inorganic chemical analysis and comparable static water level and top of the open interval elevations; and

(b) Discharge water through a common pipe and the common pipe shall allow for collection of a single sample before the first distribution system connection.

((~~(294)~~)) (298) "Wellhead protection area (WHPA)" means the portion of a well's, wellfield's or spring's zone of contribution defined using WHPA criteria established by the department.

((~~(295)~~)) (299) "Wholesale system" means a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems.

((~~(296)~~)) (300) "Zone of contribution" means the area surrounding a pumping well or spring that encompasses all areas or features that supply groundwater recharge to the well or spring.

AMENDATORY SECTION (Amending WSR 17-01-062, filed 12/14/16, effective 1/14/17)

WAC 246-290-025 Adoption by reference. The following sections and subsections of Title 40 Code of Federal Regulations (C.F.R.) Part 141 National Primary Drinking Water Regulations and Part 143 National Secondary Drinking Water Regulations revised as of ((~~July 1, 2016~~)) June 25, 2024, are adopted by reference:

((~~141.2 Definitions. Only those definitions listed as follows:~~

~~Action level;~~

~~Corrosion inhibitor;~~

~~Effective corrosion inhibitor residual;~~

~~Enhanced coagulation;~~

~~Enhanced softening;~~

~~First draw sample;~~

~~Haloacetic acids (five) (HAA5);~~

~~Large water system;~~

~~Lead service line;~~

~~Maximum residual disinfectant level (MRDL);~~

~~Maximum residual disinfectant level goal (MRDLG);~~

~~Medium-size water system;~~

~~Optimal corrosion control treatment;~~

~~Service line sample;~~

~~Single family structure;~~

~~Small water system;~~

~~Specific ultraviolet absorption (SUVA); and~~

~~Total Organic Carbon (TOC).~~

~~141.13~~	~~Maximum contaminant levels for turbidity.~~
~~141.22~~	~~Turbidity sampling and analytical requirements.~~
~~141.23(a) - excluding (i)(2)~~	~~141.23(j), Inorganic chemical sampling.~~
~~141.23(m) -~~	~~141.23(o)~~
~~141.24(a) -~~	~~141.24(d), Organic chemicals, sampling and analytical requirements.~~

~~141.24 (f)(1) - 141.24 (f)(15),~~

~~141.24 (f)(18), 141.24 (f)(19),~~

~~141.24 (f)(21), 141.24 (f)(22)~~

~~141.24 (g)(1) - 141.24 (g)(9),~~

~~141.24 (g)(12) - 141.24 (g)(14),~~

~~141.24 (h)(1) - 141.24 (h)(11),~~

~~141.24 (h)(14) - 141.24 (h)(17)~~

~~141.24 (h)(20)~~

~~141.25(a),~~	~~141.25 (c) - (d), Analytical methods for radioactivity.~~
~~141.26~~	~~Monitoring frequency and compliance for radionuclides in community water systems.~~
~~141.31(d)~~	~~Reporting requirements.~~
~~141.33(e)~~	~~Record maintenance.~~

~~141.40~~	~~Monitoring requirements for unregulated contaminants.~~
~~141.61~~	~~Maximum contaminant levels for organic contaminants.~~
~~141.62, excluding (b)~~	~~Maximum contaminant levels for inorganic contaminants.~~
~~141.63(e)~~	~~Maximum contaminant levels (MCLs) for microbiological contaminants.~~
~~141.64~~	~~Maximum contaminant levels for disinfection byproducts.~~
~~141.65(c)~~	~~Maximum Residual Disinfectant Levels.~~
~~141.66~~	~~Maximum contaminant levels for radionuclides.~~
~~Control of Lead and Copper~~	
~~141.80, excluding (c)(3)(v)~~	~~General requirements.~~
~~141.81~~	~~Applicability of corrosion control treatment steps to small, medium-size and large water systems.~~
~~141.82(a) -~~	~~141.82(h) Description of corrosion control treatment requirements.~~
~~141.83~~	~~Source water treatment requirements.~~
~~141.84~~	~~Lead service line replacement requirements.~~
~~141.85~~	~~Public education and supplemental monitoring requirements.~~
~~141.86 (a) - (f)~~	~~Monitoring requirements for lead and copper in tap water.~~
~~141.87~~	~~Monitoring requirements for water quality parameters.~~
~~141.88~~	~~Monitoring requirements for lead and copper in source water.~~
~~141.89~~	~~Analytical methods.~~
~~141.90, excluding (a)(4)~~	~~Reporting requirements.~~
~~141.91~~	~~Recordkeeping requirements.~~
~~Disinfectants and Disinfection Byproducts (D/DBP)~~	
~~141.130~~	~~General requirements.~~
~~141.131~~	~~Analytical requirements.~~
~~141.132, excluding (c)(1)(i)~~	~~Monitoring requirements.~~
~~141.133~~	~~Compliance requirements.~~
~~141.134~~	~~Reporting and recordkeeping requirements.~~
~~141.135~~	~~Treatment technique for control of disinfection byproduct precursors.~~
~~Subpart O - Consumer Confidence Reports~~	
~~141.153 (h)(6) and (7)~~	~~Contents of the reports.~~
~~Enhanced Filtration and Disinfection - Systems Serving 10,000 or More People~~	
~~141.175(b)~~	~~Reporting and recordkeeping requirements.~~
~~Subpart Q - Public Notification of Drinking Water Violations~~	

~~141.201, excluding (3)(ii) of Table 1~~	~~General public notification requirements.~~
~~141.202, excluding (3) of Table 1~~	~~Tier 1 Public Notice - Form, manner, and frequency of notice.~~
~~141.203~~	~~Tier 2 Public Notice - Form, manner, and frequency of notice.~~
~~141.204~~	~~Tier 3 Public Notice - Form, manner, and frequency of notice.~~
~~141.205~~	~~Content of the public notice.~~
~~141.206~~	~~Notice to new billing units or new customers.~~
~~141.207~~	~~Special notice of the availability of unregulated contaminant monitoring results.~~
~~141.208~~	~~Special notice for exceedances of the SMCL for fluoride.~~
~~141.211~~	~~Special notice for repeated failure to conduct monitoring of the source water for *Cryptosporidium* and for failure to determine bin classification or mean *Cryptosporidium* level.~~
~~Appendix A to Subpart Q of Part 141 - NPDWR violations and other situations requiring public notice~~	
~~Appendix B to Subpart Q of Part 141 - Standard health effects language for public notification~~	
~~Appendix C to Subpart Q of Part 141- List of acronyms used in public notification regulation~~	
~~141.400~~	~~General requirements and applicability.~~
~~141.402(c)~~	~~Groundwater source microbial monitoring and analytical methods.~~
~~141.403 (b)(3)(i) through (iii)~~	~~Treatment technique requirements for groundwater systems.~~
~~Subpart T - Enhanced Filtration and Disinfection - Systems Serving Fewer Than 10,000 People~~	
~~141.530 - 141.544~~	~~Disinfection profile and benchmark.~~
~~141.563~~	~~What follow-up action is my system required to take based on continuous turbidity monitoring?~~
~~141.570, excluding (c)~~	~~What does Subpart T require that my system report to the state?~~
~~Subpart U - Initial Distribution System Evaluations~~	
~~141.600 - 141.605~~	~~Initial distribution system evaluations.~~
~~Subpart V - Stage 2 Disinfection Byproducts Requirements~~	
~~141.620 - 141.629, excluding 624~~	~~Stage 2 Disinfection Byproducts Requirements.~~
~~Subpart W - Enhanced Treatment for *Cryptosporidium*~~	
~~141.700-722 Enhanced Treatment for *Cryptosporidium*~~	
~~Subpart Y - Revised Total Coliform Rule~~	
~~141.852~~	~~Analytical methods and laboratory certification.~~
~~141.860 (c) - (d)~~	~~Violations~~

~~Part 143 - National Secondary Drinking Water Regulations~~

~~143.1 Purpose.~~

~~143.2 Definitions.~~

~~143.3 Secondary maximum contaminant levels.~~

~~143.4 Monitoring.~~))

141.2	Definitions. Only those definitions listed as follows:
	Action level;
	Corrosion inhibitor;
	Effective corrosion inhibitor residual;
	Enhanced coagulation;
	Enhanced softening;
	First draw sample;
	Haloacetic acids (five) (HAA5);
	Large water system;
	Lead service line;
	Maximum residual disinfectant level (MRDL);
	Maximum residual disinfectant level goal (MRDLG);
	Medium-size water system;
	Optimal corrosion control treatment;
	Single family structure;
	Small water system;
	Specific ultraviolet absorption (SUVA); and
	Total Organic Carbon (TOC).
141.13	Maximum contaminant levels for turbidity.
141.22	Turbidity sampling and analytical requirements.
141.23(a) through (j) and (m) through (o), excluding (i)(2), (k), and (l)	Inorganic chemical sampling and compliance.
141.24(f)(1) through (15), (18), (19), (21), and (22)	Volatile organic monitoring and compliance.
141.24(h), excluding (13), (18), and (19)	Synthetic organic monitoring and compliance, except PFAS.
141.25(a), (c), and (d)	Analytical methods for radioactivity.
141.26	Monitoring frequency and compliance for radionuclides in community water systems.
141.31(d)	Reporting requirements.
141.33(e)	Record maintenance.
141.40	Monitoring requirements for unregulated contaminants.
141.61	Maximum contaminant levels for organic contaminants.
141.62, excluding (b)	Maximum contaminant levels for inorganic contaminants.
141.63(e)	Maximum contaminant levels (MCLs) for microbiological contaminants.
141.64	Maximum contaminant levels for disinfection byproducts.
141.65(c)	Maximum Residual Disinfectant Levels.
141.66	Maximum contaminant levels for radionuclides.
Control of Lead and Copper	
141.80, excluding (c)(3)(v)	General requirements.
141.81	Applicability of corrosion control treatment steps to small, medium-size and large water systems.
141.82(a) through (h)	Description of corrosion control treatment requirements.
141.83	Source water treatment requirements.

141.84	Lead service line replacement requirements.
141.85	Public education and supplemental monitoring requirements.
141.86(a) through (f)	Monitoring requirements for lead and copper in tap water.
141.87	Monitoring requirements for water quality parameters.
141.88	Monitoring requirements for lead and copper in source water.
141.89	Analytical methods.
141.90, excluding (a)(4)	Reporting requirements.
141.91	Recordkeeping requirements.
Disinfectants and Disinfection Byproducts (D/DBP)	
141.130	General requirements.
141.131	Analytical requirements.
141.132, excluding (c)(1)(i)	Monitoring requirements.
141.133	Compliance requirements.
141.134	Reporting and recordkeeping requirements.
141.135	Treatment technique for control of disinfection byproduct precursors.
Subpart O - Consumer Confidence Reports	
141.153 (h)(6) and (7)	Contents of the reports.
Enhanced Filtration and Disinfection - Systems Serving 10,000 or More People	
141.175(b)	Reporting and recordkeeping requirements.
Subpart Q - Public Notification of Drinking Water Violations	
141.201, excluding (3)(ii) of Table 1	General public notification requirements.
141.202, excluding (3) of Table 1	Tier 1 Public Notice - Form, manner, and frequency of notice.
141.203	Tier 2 Public Notice - Form, manner, and frequency of notice.
141.204	Tier 3 Public Notice - Form, manner, and frequency of notice.
141.205	Content of the public notice.
141.206	Notice to new billing units or new customers.
141.207	Special notice of the availability of unregulated contaminant monitoring results.
141.208	Special notice for exceedances of the SMCL for fluoride.
141.211	Special notice for repeated failure to conduct monitoring of the source water for *Cryptosporidium* and for failure to determine bin classification or mean *Cryptosporidium* level.
Appendix A to Subpart Q of Part 141	NPDWR violations and other situations requiring public notice.
Appendix B to Subpart Q of Part 141	Standard health effects language for public notification.
Appendix C to Subpart Q of Part 141	List of acronyms used in public notification regulation.
141.400	General requirements and applicability.
141.402(c)	Groundwater source microbial monitoring and analytical methods.
141.403 (b)(3)(i) through (iii)	Treatment technique requirements for groundwater systems.
Subpart T - Enhanced Filtration and Disinfection - Systems Serving Fewer Than 10,000 People	
141.530 through 141.544	Disinfection profile and benchmark.
141.563	What follow-up action is my system required to take based on continuous turbidity monitoring?
141.570, excluding (c)	What does Subpart T require that my system report to the state?
Subpart U - Initial Distribution System Evaluations	
141.600 through 141.605	Initial distribution system evaluations.
Subpart V - Stage 2 Disinfection Byproducts Requirements	
141.620 through 141.629, excluding 141.624	Stage 2 Disinfection Byproducts Requirements.

Subpart W - Enhanced Treatment for *Cryptosporidium*	
141.700 through 141.722	Enhanced Treatment for *Cryptosporidium.*
Subpart Y - Revised Total Coliform Rule	
141.852	Analytical methods and laboratory certification.
141.860(c) and (d)	Violations.
141.904	Reporting and Recording Keeping Requirements.
141.905	Violations.
Part 143 - National Secondary Drinking Water Regulations	
143.1	Purpose.
143.2	Definitions.
143.3	Secondary maximum contaminant levels.
143.4	Monitoring.

Copies of the incorporated sections and subsections of Title 40 C.F.R. are available from the Department of Health online at: http://www/doh.wa.gov/CommunityandEnvironment/DrinkingWater/RegulationandCompliance/Rules, or P.O. Box 47822, Olympia, Washington 98504-7822, or by calling the department's drinking water hotline at 800-521-0323.

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-300 Monitoring requirements. (1) General.

(a) The monitoring requirements specified in this section are minimums. The department may require additional monitoring when:

(i) Contamination is present or suspected in the water system;

(ii) A groundwater source is determined to be a potential GWI;

(iii) The degree of source protection is not satisfactory;

(iv) Additional monitoring is needed to verify source vulnerability for a requested monitoring waiver;

(v) Under other circumstances as identified in a department order; or

(vi) Additional monitoring is needed to evaluate continuing effectiveness of a treatment process where problems with the treatment process may exist.

(b) Special purpose samples collected by the purveyor do not count toward fulfillment of the monitoring requirements of this chapter unless the quality of data and method of sampling and analysis are acceptable to the department.

(c) The purveyor shall ensure samples required by this chapter are collected, transported, and submitted for analysis according to EPA-approved methods. The analyses must be performed by a laboratory accredited by the state using EPA-approved methods or other department-approved methods. Qualified water utility, accredited laboratory, health department personnel, and other parties approved by the department may conduct measurements for pH, temperature, residual disinfectant concentration, alkalinity, bromide, chlorite, TOC, SUVA, turbidity, calcium, conductivity, orthophosphate, and silica as required by this chapter, provided, these measurements are made according to EPA approved methods.

(d) Compliance samples required by this chapter must be taken at locations listed in Table 4 of this section.

(e) Purveyors failing to comply with a monitoring requirement shall notify:

(i) The department under WAC 246-290-480; and

(ii) The owner or operator of any consecutive system served and the appropriate water system users under 40 C.F.R. 141.201 and Part 7, Subpart A of this chapter.

(2) Selling and receiving water.

(a) Source monitoring. Purveyors, with the exception of those that "wheel" water to their consumers (i.e., sell water that has passed through another purchasing purveyor's distribution system), shall conduct source monitoring under this chapter for the sources under their control. The level of monitoring must satisfy the monitoring requirements associated with the total population served by the source.

(b) Distribution system monitoring. The purveyor of a system that receives and distributes water shall perform distribution-related monitoring requirements. Monitoring must include, but not be limited to, the following:

(i) Collect coliform samples under subsection (3) of this section;

(ii) Collect disinfection byproduct samples as required by subsection (6) of this section;

(iii) Perform the distribution system residual disinfectant concentration monitoring under subsection (6) of this section, and as required under WAC 246-290-451, 246-290-664, or 246-290-694. Systems with fewer than ((~~one hundred~~)) 100 connections shall measure residual disinfectant concentration at the same time and location that a routine or repeat coliform sample is collected, unless the department determines that more frequent monitoring is necessary to protect public health;

(iv) Perform lead and copper monitoring required under 40 C.F.R. 141.86, 141.87, and 141.88;

(v) Perform the distribution system monitoring under 40 C.F.R. 141.23(b) for asbestos if applicable;

(vi) Other monitoring as required by the department.

(c) Reduced monitoring for regional programs. The receiving purveyor may receive reductions in the coliform, lead and copper, disinfection byproduct (including TTHMs and HAA5) and distribution system disinfectant residual concentration monitoring requirements, provided the receiving system:

(i) Purchases water from a purveyor that has a department-approved regional monitoring program;

(ii) Has a written agreement with the supplying system or regional water supplier that is acceptable to the department, and which identifies the responsibilities of both the supplying and receiving system(s) with regards to monitoring, reporting and maintenance of the distribution system; and

(iii) Has at least one compliance monitoring location for disinfection byproducts, if applicable.

(d) Periodic review of regional programs. The department may periodically review the sampling records of public water systems participating in a department-approved monitoring program to determine if continued reduced monitoring is appropriate. If the department determines a change in the monitoring requirements of the receiving system is appropriate:

(i) The department shall notify the purveyor of the change in monitoring requirements; and

(ii) The purveyor shall conduct monitoring as directed by the department.

(3) Bacteriological.

(a) The purveyor shall be responsible for collection and submittal of coliform samples from representative points throughout the distribution system. Samples must be collected after the first service and at regular time intervals each month the system provides water to consumers. Samples must be collected that represent normal system operating conditions.

(i) Systems providing disinfection treatment shall measure the residual disinfectant concentration within the distribution system at the same time and location of routine and repeat samples.

(ii) Systems providing disinfection treatment shall assure that disinfectant residual concentrations are measured and recorded on all coliform sample report forms submitted for compliance purposes.

(b) Coliform monitoring plan.

(i) Systems shall develop a written coliform monitoring plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system. The plan is subject to department review and approval. Systems shall collect total coliform samples according to the plan. Monitoring may take place at a customer's premises, dedicated sampling station, or other designated compliance sampling location. Routine and repeat sample sites and any sampling points necessary to meet the requirements of Part 6 of this chapter and ((~~WAC 246-290-300~~)) subsection (3)(h) of this section must be identified in the plan.

(ii) Systems shall collect samples at regular time intervals throughout the month, except for systems that use groundwater and serve ((~~four thousand nine hundred~~)) 4,900 or fewer people may collect all required samples on a single day if the samples are taken from different sites.

(iii) Systems shall take at least the minimum number of required samples even if the system has had an *E. coli* MCL violation or has exceeded the coliform treatment technique triggers in WAC 246-290-320(2).

(iv) Systems may conduct more compliance monitoring than is required under subsection (3)(b) of this section to investigate potential problems in the distribution system and use monitoring as a tool to assist in identifying problems. Systems may take more than the minimum number of required routine samples and must include the results in calculating whether or not the coliform treatment technique triggers in WAC 246-290-320(2) have been exceeded only if the samples are taken in accordance with the plan and are representative of water throughout the distribution system.

(v) Systems shall identify repeat monitoring locations in the plan. Unless the provisions of subsection (3)(b)(i) through (iv) of this section are met, the system shall collect at least one repeat sample from the sample tap where the original total coliform-positive sample was taken, and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sample site. If a total coliform-positive sample is at the end of the distribution system, or one service connection away from the end of the distribution system, the system shall still take all required repeat samples. The department may allow an alternative sampling location in

lieu of the requirement to collect at least one repeat sample upstream or downstream of the original sampling site. Systems may propose repeat monitoring locations to the department that the system believes to be representative of a pathway for contamination of the distribution system. A system may elect to specify either alternative fixed locations or criteria for selecting repeat sampling sites on a situational basis in a standard operating procedure (SOP) in its plan. The system shall design its SOP to focus the repeat samples at locations that best verify and determine the extent of potential contamination of the distribution system area based on specific situations. The department may modify the SOP or require alternative monitoring locations as needed.

(vi) The purveyor shall:

(A) Keep the coliform monitoring plan on file with the system and make it available to the department for inspection upon request;

(B) Revise or expand the plan at any time the plan no longer ensures representative monitoring of the system, or as directed by the department; and

(C) Submit the plan to the department for review and approval when requested and as part of the water system plan required under WAC 246-290-100.

(c) Special purpose coliform samples. Special purpose coliform samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, must not be used to determine whether or not the coliform treatment technique trigger has been exceeded. Repeat samples taken in accordance with subsection (3) of this section are not considered special purpose coliform samples, and must be used to determine whether or not the coliform treatment technique trigger has been exceeded.

(d) Invalidation of total coliform samples. A total coliform-positive sample invalidated under subsection (3) of this section does not count toward meeting the minimum monitoring requirements of this section.

(i) The department may invalidate a total coliform-positive sample if one or more of the following conditions are met:

(A) The laboratory establishes that improper sample analysis caused the total coliform-positive result;

(B) The department, on the basis of the results of repeat samples collected as required under subsection (3) of this section, determines that the total coliform-positive samples resulted from a domestic or other nondistribution system plumbing problem. The department may not invalidate a sample on the basis of repeat sample results unless all repeat samples collected at the same tap as the original total coliform-positive sample are also total coliform-positive, and all repeat samples collected at a location other than the original tap are total coliform-negative. For example, the department may not invalidate a total coliform-positive sample on the basis of repeat samples if all the repeat samples are total coliform-negative, or if the system has only one service connection; or

(C) The department has substantial grounds to believe that a total coliform-positive result is due to a circumstance or condition that does not reflect water quality in the distribution system. In this case, the system shall still collect all repeat samples required under subsection (3) of this section, and use the samples to determine whether a coliform treatment technique trigger under WAC 246-290-320(2) has been exceeded.

(ii) Unless total coliforms are detected, a laboratory shall invalidate a total coliform sample if the sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined such as the multiple-tube fermentation technique, produces a turbid culture in the absence of an acid reaction in the presence-absence coliform test, or exhibits confluent growth or produces colonies TNTC with an analytical method using a membrane filter such as a membrane filter technique. If a laboratory invalidates a sample because of such interference, the system shall collect another sample from the same location as the original sample within ((~~twenty-four~~)) 24 hours of notification of the interference problem, and have it analyzed for the presence of total coliforms. The system shall continue to resample within ((~~twenty-four~~)) 24 hours and have the samples analyzed until it obtains a valid result. The department may waive the ((~~twenty-four~~)) 24 hour time limit on a case-by-case basis.

(e) Monitoring frequency. The number of required routine coliform samples is based on total population served.

(i) Purveyors of community systems shall collect and submit for analysis no less than the number of routine samples listed in Table 2 of this section during each calendar month of operation;

(ii) Unless directed otherwise by the department, purveyors of noncommunity systems shall collect and submit for analysis no less than the number of samples required in Table 2 of this section. Each month's population must be based on the average daily population and must include all residents and nonresidents served during that month. During months when the average daily population served is less than ((~~twenty-five~~)) 25, routine sample collection is not required when:

(A) Using only protected groundwater sources;

(B) The system has a clean compliance history for a minimum of ((~~twelve~~)) 12 months;

(C) The system has no sanitary defects or significant deficiencies;

(D) The system has detected no total coliform-positive routine or repeat samples in the previous month; and

(E) The system has collected and submitted for analysis one routine sample during one of the previous two months.

(iii) Purveyors of NTNC and TNC systems are not required to collect routine samples in months when the population served is zero.

(iv) Purveyors of systems serving both a resident and a nonresident population shall base their minimum sampling requirement on the total of monthly populations served, both resident and nonresident as determined by the department, but no less than the minimum required in Table 2 of this section.

(v) Seasonal systems.

(A) In accordance with WAC 246-290-480 (2)(f)(ii), seasonal systems shall certify that a department-approved start-up procedure, which may include a requirement for start-up sampling, was completed prior to serving water to the public.

(B) Seasonal systems shall monitor every month that it is in operation unless it meets the criteria in subsection (3)(e)(ii) of this section.

(C) The department may exempt a seasonal system from some or all of the requirements in subsection (3)(e)(v)(A) of this section if the entire distribution system remains pressurized during the entire period that the system is not operating, except that systems that monitor less frequently than monthly shall still monitor during the vulnerable period designated by the department.

Table 2
Total Coliform Monitoring Frequency

Population served	Minimum number of samples per month
1 to 1,000*	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

*Noncommunity systems using only protected groundwater sources and serving less than ((~~twenty-five~~)) 25 individuals, may collect and submit for analysis, one sample every three months per WAC 246-290-300 (3)(e)(ii).

(f) Repeat monitoring.

(i) If a routine sample taken under subsection (3) of this section is total coliform-positive, the system shall collect a set of repeat samples within ((~~twenty-four~~)) 24 hours of being notified of the positive result. Additional treatment, such as batch or shock chlorination must not be started prior to the collection of repeat samples

unless the department gives prior authorization. The purveyor shall contact the department to determine the best interim approach in this situation. The system shall collect no fewer than three repeat samples for each total coliform-positive sample found. The department may extend the ((~~twenty-four~~)) 24 hour limit on a case-by-case basis if the system has a logistical problem in collecting the repeat samples within ((~~twenty-four~~)) 24 hours that is beyond its control. Following the collection of repeat samples, and before the analytical results are known, the system may provide interim precautionary treatment or other means to protect public health.

(ii) The system shall collect all repeat samples on the same day, except the department may allow a system with a single connection to collect the required set of repeat samples over a three-day period or to collect a larger volume of repeat samples in one or more sample containers of any size, as long as the total volume collected is at least 300 mL.

(iii) The system shall collect an additional set of repeat samples in the manner specified in subsection (3)(f)(i) through (iii) of this section if one or more repeat samples in the current set of repeat samples is total coliform-positive. The system shall collect the additional set of repeat samples within ((~~twenty-four~~)) 24 hours of being notified of the positive result, unless the department extends the time limit as provided in subsection (3)(f)(i) of this section. The system shall continue to collect additional sets of repeat samples until either total coliforms are not detected in one complete set of repeat samples or the system determines that a coliform treatment technique trigger specified in WAC 246-290-320 (2)(a) has been exceeded as a result of a repeat sample being total coliform-positive and notifies the department. If a treatment technique trigger identified in WAC 246-290-320 (2)(a) is exceeded as a result of a routine sample being total coliform-positive, the system is required to conduct only one round of repeat monitoring for each total coliform-positive routine sample.

(iv) After a system collects a routine sample and before it gets the results of the analysis of that sample, if it collects subsequent routine samples from within five adjacent service connections of the initial sample, and the initial sample, after analysis, is found to contain total coliforms, then the system may count the subsequent samples as a repeat sample instead of as a routine sample.

(v) Results of all routine and repeat samples taken under subsection (3)(e) and (f) of this section not invalidated by the department under subsection (3)(d) of this section must be used to determine whether a coliform treatment technique trigger specified in WAC 246-290-320 (2)(a) has been exceeded.

(g) *E. coli* testing.

(i) If any routine or repeat sample is total coliform-positive, the system shall analyze that total coliform-positive culture medium to determine if *E. coli* are present. If *E. coli* are present, the system shall notify the department by the end of the day when the system is notified of the test result.

(ii) The department may allow a system, on a case-by-case basis, to forgo *E. coli* testing on a total coliform-positive sample if the system assumes that the total coliform-positive sample is *E. coli*-positive. Accordingly, the system shall notify the department as specified in WAC 246-290-320 (1)(a).

(h) Triggered source water monitoring.

(i) All groundwater systems with their own groundwater sources must conduct triggered source water monitoring unless the following conditions exist:

(A) The system has submitted a project report and received department approval that it provides at least 4-log treatment of viruses using inactivation, removal, or a department-approved combination of 4-log virus inactivation and removal before or at the first customer for each groundwater source; and

(B) The system is conducting compliance monitoring under WAC 246-290-453(2).

(ii) Any groundwater source sample required under this subsection (3) must be collected at the source prior to any treatment unless otherwise approved by the department.

(iii) Any groundwater source sample collected under this subsection (3) must be at least 100 mL in size and must be analyzed for *E. coli* using one of the analytical methods under 40 C.F.R. 141.402(c).

(iv) Groundwater systems shall collect at least one sample from each groundwater source in use at the time a routine sample collected under subsection (3) of this section is total coliform-positive and not invalidated under subsection (3)(d) of this section. These source samples must be collected within ((~~twenty-four~~)) 24 hours of notification of the total coliform-positive sample. The following exceptions apply:

(A) The ((~~twenty-four~~)) 24 hour time limit may be extended if granted by the department and will be determined on a case-by-case basis. If an extension is granted, the system shall sample by the deadline set by the department.

(B) Systems with more than one groundwater source may meet the requirements of subsection (3)(h)(iv) of this section by sampling a representative groundwater source or sources. The system shall have a department-approved triggered source water monitoring plan that identifies one or more groundwater sources that are representative of each monitoring site in the system's coliform monitoring plan under subsection (3)(b) of this section. The plan must be approved by the department before representative sampling will be allowed.

(v) Groundwater systems with an *E. coli* positive source water sample that is not invalidated under subsection (3)(h)(vii) of this section, shall:

(A) Notify the department by the end of the day when the system is notified of the test result.

(B) Provide Tier 1 public notice as required under Part 7, Subpart A of this chapter and special notification under WAC 246-290-71005 (4) and (5);

(C) If directed by the department, take corrective action as required under WAC 246-290-453(1); and

(D) Systems that are not directed by the department to take corrective action shall collect five additional samples from the same source within ((~~twenty-four~~)) 24 hours of being notified of the *E. coli* positive source water sample. If any of the five additional samples are *E. coli* positive, the system shall take corrective action under WAC 246-290-453(1).

(vi) Any consecutive groundwater system that has a total coliform-positive routine sample collected under this subsection and not invalidated under subsection (3)(d) of this section shall notify each wholesale system it receives water from within ((~~twenty-four~~)) 24 hours of being notified of the total coliform-positive sample and comply with subsection (3)(h) of this section.

(A) A wholesale groundwater system that receives notice from a consecutive system under subsection (3)(h)(vi) of this section shall conduct triggered source water monitoring under subsection (3)(h) of this section unless the department determines and documents in writing that the total coliform-positive sample collected was caused by a distribution system deficiency in the consecutive system.

(B) If the wholesale groundwater system source sample is *E. coli* positive, the wholesale system shall notify all consecutive systems served by that groundwater source within ((~~twenty-four~~)) 24 hours of being notified of the results and shall meet the requirements of subsection (3)(h)(v) of this section.

(C) Any consecutive groundwater system receiving water from a source with an *E. coli* positive sample shall notify water system users as required under subsection (3)(h)(v)(B) of this section.

(vii) An *E. coli* positive groundwater source sample may be invalidated only if one of the following conditions apply:

(A) The system provides the department with written notice from the laboratory that improper sample analysis occurred; or

(B) The department determines and documents in writing that there is substantial evidence that the *E. coli* positive groundwater sample is not related to source water quality.

(viii) If the department invalidates an *E. coli* positive groundwater source sample, the system shall collect another source water sample within ((~~twenty-four~~)) 24 hours of being notified by the department of its invalidation decision and have the sample analyzed using the same analytical method. The department may extend the ((~~twenty-four~~)) 24 hour time limit as allowed under subsection (3)(h)(iv)(A) of this section.

(ix) Groundwater systems that fail to meet any of the monitoring requirements of subsection (3)(h) of this section shall conduct Tier 2 public notification under Part 7, Subpart A of this chapter.

(i) Assessment source water monitoring. If directed by the department, a groundwater system shall conduct assessment source water monitoring which may include, but is not limited to, the collection of at least one representative groundwater source sample each month the source provides groundwater to the public, for a minimum of ((~~twelve~~)) 12 months.

(i) Sampling must be conducted as follows:

(A) Source samples must be collected at a location prior to any treatment. If the water system's configuration does not allow sampling at the source itself, the department may approve an alternative source sampling location representative of the source water quality.

(B) Source samples must be at least 100 mL in size and must be analyzed for *E. coli* using one of the analytical methods under 40 C.F.R. 141.402(c).

(ii) A groundwater system may use a triggered source water sample collected under subsection (3)(h) of this section to meet the requirements for assessment source water monitoring.

(iii) A groundwater system with an *E. coli* positive assessment source water sample that is not invalidated under subsection (3)(h)(vii) of this section, and consecutive systems receiving water from this source shall:

(A) Provide Tier 1 public notice under Part 7, Subpart A of this chapter and special notification under WAC 246-290-71005 (4) and (5); and

(B) Take corrective action as required under WAC 246-290-453(1).

(iv) A groundwater system that fails to conduct assessment source water monitoring as directed by the department shall provide Tier 2 public notice under Part 7, Subpart A of this chapter.

(4) Inorganic chemical and physical.

(a) A complete inorganic chemical and physical analysis must consist of the primary and secondary chemical and physical contaminants.

(i) Primary chemical and physical contaminants are antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, nitrate (as N), nitrite (as N), selenium, sodium, thallium, and for unfiltered surface water, turbidity. (Except that the MCL for arsenic under WAC 246-290-310 does not apply to TNC systems.)

(ii) Secondary chemical and physical contaminants are chloride, color, hardness, iron, manganese, specific conductivity, silver, sulfate, total dissolved solids, and zinc. Total dissolved solids are required only when specific conductivity exceeds ((~~seven hundred~~)) 700 micromhos/centimeter.

(b) Purveyors shall monitor for all primary and secondary chemical and physical contaminants identified in WAC 246-290-310, Table 5 and Table 6. Samples must be collected in accordance with the monitoring requirements referenced in 40 C.F.R. 141.23 introductory text, 141.23(a) through 141.23(j), and 40 C.F.R. 143.4, except for composite samples for systems serving less than ((~~three thousand three hundred one~~)) 3,301 persons. For these systems, compositing among different systems may be allowed if the systems are owned or operated by a department-approved satellite management agency.

(c) Samples required by this subsection must be taken at designated locations under 40 C.F.R. 141.23(a) through 141.23(j), and 40 C.F.R. 143.4, and Table 4 of this section.

(i) Wellfield samples are allowed from department designated wellfields; and

(ii) Under 40 C.F.R. 141.23 (a)(3), alternate sampling locations may be used if approved by the department. The process for determining these alternate sites is described in department guidance. Purveyors of community and NTNC systems may ask the department to approve an alternate sampling location for multiple sources within a single system that are blended prior to entry to the distribution system. Alternate sampling plans must address the following:

(A) Source vulnerability;

(B) Individual source characteristics;

(C) Previous water quality information;

(D) Status of monitoring waiver applications; and

(E) Other information deemed necessary by the department.

(d) Composite samples:

(i) Under 40 C.F.R. 141.23 (a)(4), purveyors may ask the certified laboratory to composite samples representing as many as five individual samples from within one system. Sampling procedures and protocols are outlined in department guidance; and

(ii) For systems serving a population of less than ((~~three thousand three hundred one~~)) 3,301, the department may approve composite sampling between systems when those systems are part of an approved satellite management agency.

(e) When the purveyor provides treatment for one or more inorganic chemical or physical contaminants, the department may require the purveyor to sample before and after treatment. The department shall notify the purveyor if and when this additional source sampling is required.

(f) Inorganic monitoring plans.

(i) Purveyors of community and NTNC systems shall prepare an inorganic chemical monitoring plan and base routine monitoring on the plan.

(ii) The purveyor shall:

(A) Keep the monitoring plan on file with the system and make it available to the department for inspection upon request;

(B) Revise or expand the plan at any time the plan no longer reflects the monitoring requirements, procedures or sampling locations, or as directed by the department; and

(C) Submit the plan to the department for review and approval when requested and as part of the water system plan required under WAC 246-290-100.

(g) Monitoring waivers.

(i) Purveyors may request in writing, a monitoring waiver from the department for any nonnitrate/nitrite inorganic chemical and physical monitoring requirements identified in this chapter.

(ii) Purveyors requesting a monitoring waiver shall comply with applicable subsections of 40 C.F.R. 141.23 (b)(3), and 141.23 (c)(3).

(iii) Purveyors shall update and resubmit requests for waiver renewals as applicable during each compliance cycle or period or more frequently as directed by the department.

(iv) Failure to provide complete and accurate information in the waiver application may be grounds for denial of the monitoring waiver.

(h) The department may require the purveyor to repeat sample for confirmation of results.

(i) Purveyors with emergency and seasonal sources shall monitor those sources when they are in use.

(5) Lead and copper. Monitoring for lead and copper shall be conducted in accordance with 40 C.F.R. 141.86 (a) - (f), 141.87, and 141.88. All systems that have fewer than five drinking water taps used for human consumption shall collect at least one sample from each tap and then collect additional samples from those taps on different days during the monitoring period to meet the required number of samples as described in 40 C.F.R. 141.86(c).

(6) Disinfection byproducts (DBP), disinfectant residuals, and disinfection byproduct precursors (DBPP). Purveyors of community and NTNC systems providing water treated with chemical disinfectants and TNC systems using chlorine dioxide shall monitor as follows:

(a) General requirements.

(i) Systems shall collect samples during normal operating conditions.

(ii) All monitoring shall be conducted in accordance with the analytical requirements in 40 C.F.R. 141.131.

(iii) Systems required to monitor under this subsection shall prepare and implement a monitoring plan in accordance with 40 C.F.R. 141.132(f) or 40 C.F.R. 141.622, as applicable.

(A) Community and NTNC surface water and GWI systems that deliver water that has been treated with a disinfectant other than ultraviolet light and serve more than ((~~three thousand three hundred~~)) 3,300 people shall submit a monitoring plan to the department.

(B) The department may require submittal of a monitoring plan from systems not specified in subsection (6)(a)(iii)(A) of this section, and may require revision of any monitoring plan.

(C) Failure to monitor for TTHM, HAA5, or bromate will be treated as a violation for the entire period covered by the annual average where compliance is based on a locational running annual average or

running annual average of monthly or quarterly samples or averages, as applicable.

(D) Failure to monitor for chlorine and chloramine residuals will be treated as a violation for the entire period covered by the annual average where compliance is based on a running annual average of monthly or quarterly samples or averages and the systems' failure to monitor makes it impossible to determine compliance with the MRDLs.

(b) Disinfection byproducts - Community and NTNC systems only.

(i) TTHMs and HAA5.

(A) Systems shall monitor for TTHM and HAA5 in accordance with 40 C.F.R. 141.620, 141.621, and 141.622.

(B) With department approval, systems may reduce monitoring in accordance with 40 C.F.R. 141.623.

(C) Systems on department-approved reduced monitoring schedules may be required to return to routine monitoring, or initiate increased monitoring in accordance with 40 C.F.R. 141.625 or 40 C.F.R. 141.627, as applicable.

(D) Systems must meet requirements of 40 C.F.R. 141.628 and 40 C.F.R. 141.625(c) to return to routine monitoring.

(E) Systems must calculate operational evaluation levels each calendar quarter and take action, as needed, in accordance with 40 C.F.R. 141.626.

(F) NTNC systems serving ((~~ten thousand~~)) 10,000 or more people and community systems must comply with the provisions of 40 C.F.R. Subpart U - Initial Distribution System Evaluation under:

40 C.F.R. 141.600	General requirements.
40 C.F.R. 141.601	Standard monitoring.
40 C.F.R. 141.602	System specific studies.
40 C.F.R. 141.603	40/30 certification.
40 C.F.R. 141.604	Very small system waivers.
40 C.F.R. 141.605	Subpart V compliance monitoring location recommendations.

(ii) Chlorite - Only systems that use chlorine dioxide.

(A) Systems using chlorine dioxide shall conduct daily and monthly monitoring in accordance with 40 C.F.R. 141.132 (b)(2)(i) and additional chlorite monitoring in accordance with 40 C.F.R. 141.132 (b)(2)(ii).

(B) With department approval, monthly monitoring may be reduced in accordance with 40 C.F.R. 141.132 (b)(2)(iii)(B). Daily monitoring at entry to distribution required by 40 C.F.R. 141.132 (b)(2)(i)(A) may not be reduced.

(iii) Bromate - Only systems that use ozone.

(A) Systems using ozone for disinfection or oxidation must conduct bromate monitoring in accordance with 40 C.F.R. 141.132 (b)(3)(i).

(B) With department approval, monthly bromate monitoring may be reduced to once per quarter in accordance with 40 C.F.R. 141.132 (b)(3)(ii)(B).

(c) Disinfectant residuals.

(i) Chlorine and chloramines. Systems that deliver water continuously treated with chlorine or chloramines, including consecutive systems, shall monitor and record the residual disinfectant level in the distribution system under WAC 246-290-300 (2)(b), 246-290-451, 246-290-664(6), or 246-290-694(8).

(ii) Chlorine dioxide. Community, NTNC, or TNC systems that use chlorine dioxide shall monitor in accordance with 40 C.F.R. 141.132 (c)(2) and record results.

(d) Disinfection byproducts precursors.

Community and NTNC surface water or GWI systems that use conventional filtration with sedimentation as defined in WAC 246-290-660(3) shall monitor under 40 C.F.R. 141.132(d), and meet the requirements of 40 C.F.R. 141.135.

(7) Organic chemicals.

(a) Purveyors of community and NTNC water systems shall comply with monitoring requirements under 40 C.F.R. 141.24 (f)(1) - (f)(15), 141.24 (f)(18) - (19), 141.24 (f)(21), 141.24 (h)(1) - (11), ((~~and~~)) 141.24 (h)(14) - (17)<u>, and 141.902</u>.

(b) Sampling locations shall be as defined in 40 C.F.R. 141.24(f) ((~~and~~))<u>,</u> 141.24(h)<u>, and 141.902 (a)(1) - (2)</u>.

(i) Wellfield samples are allowed from department designated wellfields; and

(ii) Under 40 C.F.R. 141.24 (f)(3) ((~~and~~))<u>,</u> 141.24 (h)(3), <u>and 141.902 (a)(1) - (2),</u> alternate sampling locations may be allowed if approved by the department. These alternate locations are described in department guidance. Purveyors may ask the department to approve an alternate sampling location for multiple sources within a single system that are blended prior to entry to the distribution system. The alternate sampling location shall consider the following:

(A) Source vulnerability;

(B) An updated organic monitoring plan showing location of all sources with current and proposed sampling locations;

(C) Individual source characteristics;

(D) Previous water quality information;

(E) Status of monitoring waiver applications; and

(F) Other information deemed necessary by the department.

(c) Composite samples:

(i) <u>With the exception of PFAS, p</u>urveyors may ask the certified lab to composite samples representing as many as five individual samples from within one system. Sampling procedures and protocols are outlined in department guidance;

(ii) For systems serving a population of less than ((~~three thousand three hundred one~~)) <u>3,301</u>, the department may approve composite sampling between systems when those systems are part of an approved satellite management agency.

(d) The department may require the purveyor to sample both before and after treatment for one or more organic contaminants. The department shall notify the purveyor if and when this additional source sampling is required.

(e) Organic chemical monitoring plans.

(i) Purveyors of community and NTNC systems shall prepare an organic chemical monitoring plan and base routine monitoring on the plan.

(ii) The purveyor shall:

(A) Keep the monitoring plan on file with the system and make it available to the department for inspection upon request;

(B) Revise or expand the plan at any time the plan no longer reflects the monitoring requirements, procedures or sampling locations, or as directed by the department; and

(C) Submit the plan to the department for review and approval when requested and as part of the water system plan required under WAC 246-290-100.

(f) Monitoring waivers.

(i) Purveyors may request in writing, a monitoring waiver from the department for any organic monitoring requirement, except for PFAS for community and NTNC systems;

(ii) Purveyors requesting a monitoring waiver shall comply with 40 C.F.R. 141.24 (f)(7), 141.24 (f)(10), 141.24 (h)(6), and 141.24 (h)(7);

(iii) Purveyors shall update and resubmit requests for waiver renewals as directed by the department; and

(iv) Failure to provide complete and accurate information in the waiver application shall be grounds for denial of the monitoring waiver.

(g) Purveyors with emergency and seasonal sources shall monitor those sources under the applicable requirements of this section when they are actively providing water to consumers.

(8) Radionuclides. Monitoring for radionuclides shall be conducted under 40 C.F.R. 141.26.

(9) *Cryptosporidium* and *E. coli* source monitoring. Purveyors with surface water or GWI sources shall monitor the sources in accordance with 40 C.F.R. 141.701 and 702.

(10) Contaminants with a SAL under WAC 246-290-315, Table 9.

(a) Purveyors shall monitor for contaminants with a SAL in accordance with Tables 3 and 4 of this section. Source sample locations and blended samples are allowed as consistent with other federally regulated organic contaminants referenced in subsection (7)(b) of this section.

TABLE 3
SAL MONITORING

Contaminant or Group of Contaminants	Applicable Water System Classification	Initial Sampling	Routine Sampling Frequency	Sampling Location
Organic Contaminants				
Per- and polyfluoroalkyl substances (PFAS)	Community and NTNC, and if applicable, TNC	One sample on or before December 31, 2025	Once every three years	Per the locations described in WAC 246-290-300 (7)(b) and Table 4 of this section

(b) Purveyors shall monitor for PFAS contaminants using an approved method in WAC 246-390-075 (17)(a) and all method specific contaminants as listed on Table 7 in WAC 246-390-075.

(i) Purveyors, on a schedule determined by the department, but no later than December 31, 2025, shall complete initial sampling for PFAS from a sample location representing each source as listed in Table 4 of this section.

(ii) Initial PFAS sampling prioritization and scheduling is based on the following criteria:

(A) Susceptibility of the source water to contamination by surface activities due to physical attributes of the source;

(B) Vulnerability of the source water to PFAS contamination; and

(C) Population served.

(iii) Purveyors of TNC systems determined by the department to be at risk of PFAS contamination due to proximity of the system's water supply to known PFAS contamination shall collect a sample for analysis as directed by the department and, if detected, comply with the follow-up requirements under WAC 246-290-320(8).

(c) Analytical results for contaminants or groups of contaminants listed in Table 3 of this section reported prior to January 1, 2023, that meet the SDRL and requirements established in chapter 246-390 WAC with the effective date of January 1, 2022, or later may be used to comply with the initial PFAS monitoring requirement in this chapter.

(d) For sources that become active after January 1, 2022, purveyors shall perform the required monitoring as part of the source approval process under WAC 246-290-130.

(e) The department may require a confirmation sample. If a confirmation sample is required by the department, the result will be averaged with the first sampling result and the average is used as the final result. The department has the discretion to delete results of obvious sampling errors from this calculation.

(f) After completing initial sampling as described in Table 3 of this section, each source must be monitored as follows:

(i) For sources with organic results less than the SDRL, purveyors shall begin routine monitoring as described in Table 3 of this section, unless a monitoring waiver is granted by the department under (h) of this subsection.

(ii) For sources with organic detections equal to or greater than the SDRL, purveyors shall conduct follow-up monitoring under WAC 246-290-320(8).

(iii) For sources with inorganic detections below the SAL, purveyors shall monitor as identified in subsection (4) of this section.

(iv) For sources with inorganic detections above the SAL, purveyors shall conduct follow-up monitoring under WAC 246-290-320(9).

(g) For public water systems required to sample for PFAS under EPA's fifth Unregulated Contaminant Monitoring Rule (UCMR5), if the minimum reporting limits are less than ((~~fifty~~)) 50 percent of any SAL, the department shall accept data that has been accepted by EPA under UCMR5 for the purposes of meeting initial monitoring requirements under WAC 246-290-300. Public water systems required to sample for PFAS shall submit all results to the department to be considered in compliance with the initial monitoring requirements.

(i) If the minimum reporting limit for a result is greater than ((~~twenty~~)) 20 percent of any SAL, but the result is reported as a nondetect, then follow-up monitoring per WAC 246-290-320 will not be required.

(ii) If a detection is reported below the minimum detection limit and is greater than ((~~twenty~~)) 20 percent of a SAL, then one additional quarter of follow-up monitoring will be required per WAC 246-290-320 (8)(b).

(h) Monitoring waivers for contaminants with a SAL.

(i) The department may grant a waiver for SAL monitoring requirements identified in this chapter.

(ii) As a condition of the waiver, the department may require a purveyor take a minimum of one sample per source while the waiver is effective.

(11) Other contaminants. On the basis of public health concerns, the department may require a purveyor to monitor for additional contaminants.

TABLE 4
MONITORING LOCATION

Sample Type	Sample Location
Asbestos	One sample from distribution system or if required by department, from the source.
Bacteriological	From representative points throughout distribution system.
Cryptosporidium and *E. coli* (Source Water) - WAC 246-290-630(16)	Under 40 C.F.R. 141.703.
Complete Inorganic Chemical & Physical	From a point representative of the source, after treatment, and prior to entry to the distribution system.
Lead/Copper	From the distribution system at targeted sample tap locations.
Nitrate/Nitrite	From a point representative of the source, after treatment, and prior to entry to the distribution system.
Disinfection Byproducts - TTHMs and HAA5 - WAC 246-290-300(6)	Under 40 C.F.R. 141.132 (b)(1) (Subpart L of the C.F.R.).
Disinfection Byproducts - TTHMs and HAA5 - WAC 246-290-300(6)	Under 40 C.F.R. 141.600 - 629 (IDSE and LRAA in Subparts U and V of the C.F.R.).
Disinfection Byproducts - Chlorite (Systems adding chlorine dioxide)	Under 40 C.F.R. 141.132 (b)(2).
Disinfection Byproducts - Bromate (Systems adding ozone)	Under 40 C.F.R. 141.132 (b)(3).
Disinfectant Residuals - Chlorine and Chloramines	Under 40 C.F.R. 141.132 (c)(1).
Disinfectant Residuals - Chlorine dioxide	Under 40 C.F.R. 141.132 (c)(2).
Disinfection Precursors - Total Organic Carbon (TOC)	Under 40 C.F.R. 141.132(d).
Disinfection Precursors - Bromide (Systems using ozone)	From the source before treatment.
Radionuclides	From a point representative of the source, after treatment and prior to entry to distribution system.
Organic Chemicals (VOCs, SOCs, & PFAS)	From a point representative of the source, after treatment and prior to entry to distribution system.
Other contaminants without an MCL, MRDL, TT or SAL	As directed by the department.

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-310 Maximum contaminant levels (MCLs) and maximum residual disinfectant levels (MRDLs). (1) General.

(a) The purveyor shall be responsible for complying with the standards of water quality identified in this section. If a contaminant exceeds its MCL or its maximum residual disinfectant level (MRDL), the purveyor shall take follow-up action under WAC 246-290-320.

(b) When enforcing the standards described under this section, the department shall enforce compliance with the primary standards as its first priority.

(2) Bacteriological.

(a) An *E. coli* MCL under this subsection is considered a primary standard.

(b) *E. coli* MCL. An *E. coli* MCL violation occurs each month in which a system is required to monitor for total coliforms when there is:

(i) *E. coli* presence in a repeat sample following a total coliform presence routine sample;

(ii) Total coliform presence in any repeat samples collected as a follow-up to a sample with *E. coli* presence;

(iii) The system fails to take all required repeat samples following an *E. coli* presence routine sample; or

(iv) The system fails to test for *E. coli* when any repeat samples test positive for total coliform.

(3) Inorganic chemical and physical.

(a) The primary and secondary standards are listed in Tables 5 and 6 of this section:

TABLE 5
INORGANIC CHEMICAL CHARACTERISTICS

Contaminant	Primary MCLs (mg/L)
Antimony (Sb)	0.006
Arsenic (As)	0.010*
Asbestos	7 million fibers/liter (longer than 10 microns)
Barium (Ba)	2.0
Beryllium (Be)	0.004
Cadmium (Cd)	0.005
Chromium (Cr)	0.1
Copper (Cu)	**
Cyanide (CN)	0.2
Fluoride (F)	4.0***
Lead (Pb)	**
Mercury (Hg)	0.002
Nitrate (as N)	10.0
Nitrite (as N)	1.0
Selenium (Se)	0.05
Sodium (Na)	**

Thallium (Tl)	0.002

Contaminant	Secondary MCLs (mg/L)
Chloride (Cl)	250.0
Fluoride (F)	2.0***
Iron (Fe)	0.3
Manganese (Mn)	0.05
Silver (Ag)	0.1
Sulfate (SO_4)	250.0
Zinc (Zn)	5.0

Note* Does not apply to TNC systems.

Note** Although the state board of health has not established MCLs for copper, lead, and sodium, there is sufficient public health significance connected with copper, lead, and sodium levels to require inclusion in inorganic chemical and physical source monitoring. For lead and copper, the EPA has established distribution system related levels at which a system is required to consider corrosion control. These levels, called "action levels," are 0.015 mg/L for lead and 1.3 mg/L for copper and are applied to the highest concentration in ((~~ten~~)) 10 percent of all samples collected from the distribution system. The EPA has also established a recommended level of ((~~twenty~~)) 20 mg/L for sodium as a level of concern for those consumers that may be restricted for daily sodium intake in their diets.

Note*** If a water system provides community fluoridation, the level of fluoride and associated requirements are set under WAC 246-290-460.

TABLE 6
PHYSICAL CHARACTERISTICS

Contaminant	Secondary MCLs
Color	15 Color Units
Specific Conductivity	700 umhos/cm
Total Dissolved Solids (TDS)	500 mg/L

(b) Compliance with the MCLs, except for nitrate and nitrite, in this subsection is determined by a running annual average at each sampling point. The system will not be considered in violation of the MCL until it has completed one year of quarterly sampling and at least one sampling point is in violation of the MCL. If one sampling point is in violation of the MCL, the system is in violation of the MCL.

(i) If any sample will cause the running annual average to exceed the MCL at any sampling point, the system is out of compliance with the MCL immediately.

(ii) If a system fails to collect the required number of samples, compliance will be based on the total number of samples collected.

(iii) If a sample result is less than the detection limit, zero will be used to calculate the running annual average.

(c) Compliance with the MCLs for nitrate and nitrite is determined based on one sample if the levels of these contaminants are below the MCLs as determined under Table 5 of this section. If the levels of nitrate or nitrite exceed the MCLs in the initial sample, a confirmation sample is required under 40 C.F.R. 141.23 (f)(2), and compliance shall be determined based on the average of the initial and confirmation samples.

(4) Disinfection byproducts.

(a) The department shall consider standards under this subsection as primary standards. The MCLs in this subsection apply to monitoring required by WAC 246-290-300(6) and 40 C.F.R. 141.620 - 629.

(b) The MCLs for disinfection byproducts are as follows:

TABLE 7
DISINFECTION BYPRODUCTS

Disinfection Byproduct	MCL (mg/L)
Total Trihalomethanes (TTHMs)	0.080
Haloacetic acids (five) (HAA5)	0.060
Bromate	0.010
Chlorite	1.0

(c) Whether a system has exceeded the disinfection byproduct MCLs shall be determined in accordance with 40 C.F.R. 141.133. Beginning on the dates specified for compliance in 40 C.F.R. 141.620(c), compliance with the TTHMs and HAA5 MCLs shall be based on the LRAAs as required by 40 C.F.R. 141.64 (b)(2) and 40 C.F.R. 141.620(d). Compliance with the bromate and chlorite MCL will continue to be determined in accordance with 40 C.F.R. 141.133.

(5) Disinfectant residuals.

(a) The department shall consider standards under this subsection primary standards. The MRDLs in this subsection apply to monitoring required by WAC 246-290-300(6).

(b) The MRDL for disinfectants is as follows:

TABLE 8
DISINFECTANT RESIDUAL MRDLs

Disinfectant Residual	MRDL (mg/L)
Chlorine	4.0 (as Cl_2)
Chloramines	4.0 (as Cl_2)
Chlorine Dioxide	0.8 (as ClO_2)

(c) Whether a system has exceeded MRDLs shall be determined in accordance with 40 C.F.R. 141.133.

(6) Radionuclides.

(a) The department shall consider standards under this subsection primary standards.

(b) The MCLs for radium-226 and radium-228, gross alpha particle activity, beta particle and photon radioactivity, and uranium shall be as listed in 40 C.F.R. 141.66.

(7) Organic chemicals.

(a) The department shall consider standards under this subsection primary standards.

(b) VOCs.

(i) The MCLs for VOCs are as follows:

Contaminant	Chemical Abstract Service (CAS) Number	MCL (ppb)
Vinyl chloride	75–01–4	2
Benzene	71–43–2	5
Carbon tetrachloride	56–23–5	5
1,2-Dichloroethane	107–06–2	5
Trichloroethylene	79–01–6	5
para-Dichlorobenzene	106–46–7	75
1,1-Dichloroethylene	75–35–4	7
1,1,1-Trichloroethane	71–55–6	200
cis-1,2-Dichloroethylene	156–59–2	70
1,2-Dichloropropane	78–87–5	5

Contaminant	Chemical Abstract Service (CAS) Number	MCL (ppb)
Ethylbenzene	100–41–4	700
Monochlorobenzene	108–90–7	100
o-Dichlorobenzene	95–50–1	600
Styrene	100–42–5	100
Trichloroethane	127–18–4	5
Toluene	108–88–3	1,000
trans-1,2-Dichloroethylene	156–60–5	100
Xylenes (total)	1330–20–7	10,000
Dichloromethane	75–09–2	5
1,2,4-Trichlorobenzene	120–82–1	70
1,1,2-Trichloroethane	79–00–5	5

(ii) The department shall determine compliance with this subsection based on compliance with 40 C.F.R. 141.24(f).

(c) SOCs, except PFAS.

(i) MCLs for SOCs shall be as listed in 40 C.F.R. 141.61(c).

(ii) The department shall determine compliance with this subsection based on compliance with 40 C.F.R. 141.24(h).

(d) PFAS.

(i) The MCLs for PFAS, effective in accordance with 40 C.F.R. 141.6, are as follows:

Contaminant	Chemical Abstract Service (CAS) Number	MCL (ppt or ng/L)	HBWC (ppt or ng/L) for hazard index calculation
PFOA	45285–51–6	4.0	Not applicable
PFOS	45298–90–6	4.0	Not applicable
PFHxS	108427–53–8	10	10
HFPO-DA	122499–17–6	10	10
PFNA	72007–68–2	10	10
PFBS	45187–15–3	No individual MCL	2,000
Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, and PFNA)	Not applicable	1 (unitless)[1]	Not applicable

[1]The PFAS Mixture Hazard Index (HI) is the sum of component hazard quotients (HQs), which are calculated by dividing the measured component PFAS concentration in water by the relevant health-based water concentration when expressed in the same units (shown in ppt for simplification). The HBWC for PFHxS is 10 ng/l; the HBWC for HFPO-DA is 10 ng/l; the HBWC for PFNA is 10 ng/l; and the HBWC for PFBS is 2000 ng/l.

(ii) The MCLs for PFAS will become effective according to the dates outlined in 40 C.F.R. 141.6.

(8) Other contaminants.

The state board of health shall determine state MCLs for any additional contaminants as described in WAC 246-290-315 (5) through (8).

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-320 Follow-up action. (1) General.

(a) When an MCL or MRDL violation or SAL exceedance occurs, the purveyor shall take follow-up action as described in this section.

(b) When a primary standard violation occurs the purveyor shall:

(i) Notify the department under WAC 246-290-480;

(ii) Notify the consumers served by the system and the owner or operator of any consecutive system served in accordance with 40 C.F.R. 141.201 through 208, and Part 7, Subpart A of this chapter;

(iii) Investigate the cause of the contamination, within the purveyor's control; and

(iv) Take action as directed by the department.

(c) When a secondary standard violation occurs, the purveyor shall notify the department and take action as directed by the department.

(d) When a SAL exceedance under WAC 246-290-315 occurs, the purveyor shall:

(i) Notify the department in accordance with WAC 246-290-480;

(ii) Notify water system users and the owner or operator of any consecutive system served water in exceedance of the SAL in accordance with WAC 246-290-71006;

(iii) Continue monitoring in accordance with subsection (8) or (9) of this section, as applicable;

(iv) Investigate the cause of the contamination within the purveyor's control; and

(v) Take action as directed by the department.

(e) The department may require additional sampling for confirmation of results.

(2) Bacteriological. Coliform treatment technique triggers and assessment requirements for protection against potential fecal contamination.

(a) Treatment technique triggers. Systems shall conduct assessments in accordance with (b) of this subsection after exceeding treatment technique triggers as follows:

(i) Level 1 treatment technique triggers.

(A) For systems taking ((~~forty~~)) 40 or more routine samples per month, the system exceeds 5.0 percent total coliform-positive samples for the month.

(B) For systems taking fewer than ((~~forty~~)) 40 routine samples per month, the system has two or more total coliform-positive samples in the same month.

(C) The system fails to take every required repeat sample after any single total coliform-positive routine sample.

(ii) Level 2 treatment technique triggers.

(A) An *E. coli* MCL violation, as specified in WAC 246-290-310 (2)(b).

(B) A second level 1 treatment technique trigger as defined in (a)(i) of this subsection within a rolling ((~~twelve~~)) 12-month period, unless the department has determined a likely reason that the samples that caused the first level 1 treatment technique trigger were total coliform-positive and has established that the system has corrected the problem.

(b) Requirements for assessments.

(i) Systems shall conduct level 1 and 2 assessments to identify the possible presence of sanitary defects and defects in distribution system coliform monitoring practices. Level 1 assessments must be conducted by the system operator or purveyor. Level 2 assessments must be conducted by the department or a party approved by the department which may include the system operator.

(ii) When conducting assessments, systems shall direct the assessor to evaluate minimum elements that include:

(A) Review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired;

(B) Changes in distribution operation and maintenance that could affect distributed water quality, including water storage;

(C) Source and treatment considerations that bear on distributed water quality, where appropriate. For example, whether or not a groundwater system is disinfected;

(D) Existing water quality monitoring data;

(E) Inadequacies in sample sites, sampling protocol, and sample processing; and

(F) The system shall conduct the assessment consistent with any department directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.

(iii) Level 1 assessments. A system shall conduct a level 1 assessment consistent with the requirements in subsection (2)(b) of this section if the system exceeds one of the treatment technique triggers in (a)(i) of this subsection.

(A) The system shall complete a level 1 assessment as soon as practical after any treatment technique trigger is met in (a)(i) of this subsection. The completed assessment must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment may also note that no sanitary defects were identified. The system shall submit the completed level 1 assessment to the department within ((~~thirty~~)) 30 days after the system learns that it has exceeded a treatment technique trigger.

(B) Upon completion and submission of the level 1 assessment by the system, the department shall determine if the system has identified a likely cause for the level 1 treatment technique trigger and has corrected the problem. If the system has not corrected the problem, the department shall determine if the proposed timetable for corrective action is sufficient.

(C) If after reviewing the completed level 1 assessment, the department determines the assessment is not sufficient, including any proposed timetable for any corrective actions not already completed, the department may require the system to submit a revised assessment to the department within ((~~thirty~~)) 30 days from the date of department notification.

(iv) Level 2 assessments. A system shall conduct a level 2 assessment consistent with requirements in subsection (2)(b) of this section if the system exceeds one of the treatment technique triggers in (a)(ii) of this subsection. The system shall comply with any expedited actions or additional actions required by the department in the case of an *E. coli* MCL violation.

(A) A level 2 assessment must be conducted as soon as practical after any treatment technique trigger in (a)(ii) of this subsection and shall be conducted by either a water distribution manager 2, 3, or 4 certified in accordance with chapter 246-292 WAC, a licensed professional engineer that meets the requirements of WAC 246-290-040(1), a local health jurisdiction, or the department. The system shall submit a completed level 2 assessment to the department within ((~~thirty~~)) 30 days after the system learns that it has exceeded a treatment technique trigger. The completed assessment must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed in accordance with (d) of

this subsection. The assessment may also note that no sanitary defects were identified.

(B) Upon completion and submission of the level 2 assessment by the system, the department shall determine if the system has identified a likely cause for the level 2 treatment technique trigger and has corrected the problem. If the system has not corrected the problem, the department shall determine if the proposed timetable for corrective action is sufficient.

(C) If after reviewing the submitted level 2 assessment, the department determines the assessment is not sufficient, including any proposed timetable for any corrective actions not already completed in accordance with (d) of this subsection, the department may require the system to submit a revised assessment within ((~~thirty~~)) 30 days from the date of department notification.

(c) To achieve compliance with the MCL for *E. coli* under WAC 246-290-310 (2)(b), the following are identified as the best technology, treatment techniques, or other means available:

(i) Protection of wells from fecal contamination by appropriate placement and construction;

(ii) Maintenance of a disinfectant residual throughout the distribution system;

(iii) Proper maintenance of the distribution system including appropriate pipe replacement and repair procedures, main flushing programs, proper operation and maintenance of storage tanks and reservoirs, cross-connection control, and continual maintenance of positive water pressure in all parts of the distribution system;

(iv) Filtration, disinfection, or both, of surface water, using the proper strength of oxidants such as chlorine, chlorine dioxide, or ozone; and

(v) For systems using groundwater, compliance with a wellhead protection program developed and implemented under WAC 246-290-135(3).

(d) Corrective action. Systems shall correct sanitary defects found through either a level 1 or level 2 assessment conducted under (b) of this subsection. For corrections not completed by the time of submission of the assessment to the department, the system shall complete the corrective actions in compliance with a timetable approved by the department in consultation with the system under (e) of this subsection. The system shall notify the department when each scheduled corrective action is completed.

(e) Consultation. At any time during the assessment or corrective action phase, the water system may request a consultation with the department to determine the appropriate actions to be taken. The system may consult with the department on all relevant information that may impact the system's ability to comply with the requirements of subsection (2) of this section, including the method of accomplishment, an appropriate time frame, and other relevant information.

(f) A treatment technique violation occurs when a system exceeds a treatment technique trigger specified in subsection (2)(a) of this section and then fails to conduct the required assessment or complete corrective actions within the time frame specified in subsection (2)(b) and (d) of this section.

(3) Inorganic chemical and physical follow-up monitoring shall be conducted in accordance with the following:

(a) For nonnitrate/nitrite primary inorganic chemicals, 40 C.F.R. 141.23 (a)(4), 141.23 (b)(8), 141.23 (c)(7), 141.23 (c)(9), 141.23 (f)(1), 141.23(g), 141.23(m) and 141.23(n);

(b) For nitrate, 40 C.F.R. 141.23 (a)(4), 141.23 (d)(2), 141.23 (d)(3), 141.23 (f)(2), 141.23(g), 141.23(m), 141.23(n), and 141.23(o);

(c) For nitrite, 40 C.F.R. 141.23 (a)(4), 141.23 (e)(3), 141.23 (f)(2), and 141.23(g); or

(d) The purveyor of any public water system providing service that has secondary inorganic MCL exceedances shall take follow-up action as required by the department. Follow-up action shall be commensurate with the degree of consumer acceptance of the water quality and their willingness to bear the costs of meeting the secondary standard. For new community water systems and new nontransient noncommunity water systems without active consumers, treatment for secondary contaminant MCL exceedances will be required.

(4) Lead and copper follow-up monitoring shall be conducted in accordance with 40 C.F.R. 141.85(c), 141.86 (d)(2), 141.86 (d)(3), 141.87(c), 141.87(d) and 141.88(b) through 141.88(d).

(5) Turbidity.

Purveyors monitoring turbidity in accordance with Part 6 of this chapter shall provide follow-up under WAC 246-290-634.

(6) Organic chemicals. Follow-up monitoring shall be conducted in accordance with the following:

(a) For VOCs, 40 C.F.R. 141.24 (f)(11) through 141.24 (f)(15), and 141.24 (f)(22); or

(b) For SOCs, 40 C.F.R. 141.24 (h)(7) through 141.24 (h)(11), ((~~and~~)) 141.24 (h)(20)<u>, 141.902 (b)(2), and 141.903</u>.

(7) Radionuclide follow-up monitoring shall be conducted under 40 C.F.R. 141.26 (a)(2)(iv), 141.26 (a)(3)(ii) through (v), 141.26 (a)(4), 141.26 (b)(6), and 141.26 (c)(5).

(8) Organic contaminants with a SAL.

(a) All increased monitoring for organic contaminants will be for the test panel on which the contaminant is listed in WAC 246-390-075.

(b) The purveyor shall monitor quarterly as shown in Table 10 of this section. The number of samples required in the three quarters after the first detection will be determined based on the highest detection in the year of monitoring. For public water systems required to sample for PFAS under the federal Unregulated Contaminant Monitoring Rule 5 (UCMR5), if a detection is reported below the minimum detection limit per UCMR5 and is greater than ((~~twenty~~)) <u>20</u> percent of a SAL, then one additional quarter of follow-up monitoring is required. The samples must be taken:

(i) Beginning in the calendar quarter following the first confirmed detection per WAC 246-290-315 (4)(b); and

(ii) At each sampling point from which the result was equal to or greater than the SDRL under chapter 246-390 WAC.

TABLE 10
MONITORING REQUIREMENTS FOLLOWING THE FIRST DETECTION OF AN ORGANIC CONTAMINANT WITH A SAL

If the highest detection in the first year is:	Total number of additional consecutive quarters.
≤ 20% of the SAL.	1
> 20% but < 80% of the SAL.	2
≥ 80% of the SAL.	3

(c) Ongoing monitoring is specified in Table 11 of this section, or as directed by the department. Ongoing monitoring is based upon the results of samples collected in the most recent year of monitoring, or

the most recent result for samples collected less frequently than annually.

TABLE 11
ONGOING MONITORING REQUIREMENTS FOR SOURCES WITH ORGANIC CONTAMINANTS WITH A SAL

If highest detection being considered is:	Monitoring frequency:
≤ 20% of the SAL.	Every 3 years
> 20% but < 80% of the SAL.	Annually
≥ 80% of the SAL.	1. Quarterly, if contaminant is Tier 1, or Tier 2 and bioaccumulative per Table 17 in WAC 246-290-71006. 2. Annually if the contaminant is Tier 2 and not bioaccumulative per Table 17 in WAC 246-290-71006.

(d) When the monitoring frequency is less often than quarterly, the purveyor shall collect samples during the quarter assigned by the department.

(e) The department may reduce the annual monitoring frequency to one sample every three years after three consecutive years of results that demonstrate the levels are less than ((~~eighty~~)) 80 percent of the SAL.

(f) The department may increase the monitoring frequency from once every year or once every three years to once every quarter if results of reduced monitoring are equal to or greater than ((~~eighty~~)) 80 percent of the SAL.

(9) Inorganic contaminants with a SAL.

(a) The purveyor shall collect quarterly samples at each sampling point beginning in the quarter following a detection greater than the SAL under Table 9 of this section. Increased monitoring for inorganic contaminants will be for a specific contaminant which is detected above the SAL.

(b) The department may reduce the quarterly monitoring frequency when results are reliably and consistently below the SAL. When the monitoring frequency is less often than quarterly, the purveyor shall collect samples during the quarter assigned by the department.

(10) If a contaminant has no MCL, MRDL, TT, or SAL, the department may use an EPA *health advisory level* to determine subsequent monitoring per this section.

(11) The department shall determine the purveyor's follow-up action when a contaminant not included in this chapter is detected.

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-71002 Public notice content. (1) Public notices required under WAC 246-290-71001(1) must contain the elements and standard language required under 40 C.F.R. 141.205 (a), (b), and (d) and be

presented in accordance with 40 C.F.R. 141.205 (c), except that notification of the availability of results required per 40 C.F.R. 141.40 and notification of an exceedance of the secondary MCL for fluoride must be in accordance with WAC 246-290-71005.

(2) Public notices required under WAC 246-290-71001 (3)(a) and (c) for the issuance of a departmental order or category red operating permit must include:

(a) A clear, concise, and simple explanation of the violation;

(b) Discussion of potential adverse health effects and any segments of the population that may be at higher risk;

(c) Mandatory health effects information in accordance with WAC 246-290-71004(2);

(d) A list of steps the purveyor has taken or is planning to take to remedy the situation;

(e) A list of steps the consumer should take, including advice on seeking an alternative water supply if necessary;

(f) The purveyor's name and telephone number; and

(g) When appropriate, notices must be bilingual or multilingual.

(3) The purveyor may provide additional information to further explain the situation.

((~~Note: The purveyor may provide additional information to further explain the situation.~~))

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-72004 Report contents—Definitions. (1) Each report must include the following definitions:

(a) Maximum contaminant level goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

(b) Maximum contaminant level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(2) A report for a community water system operating under a variance or an exemption issued under WAC 246-290-060 must include the following definition: Variances and exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

(3) A report that contains data on contaminants that the Environmental Protection Agency regulates using any of the following terms must include the applicable definitions:

(a) Treatment technique: A required process intended to reduce the level of a contaminant in drinking water.

(b) Action level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

(c) Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

(d) Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing

evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(e) Hazard index or HI: The hazard index is an approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. The hazard index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO-DA, and/or PFBS allowed in water delivered by a public water system. A hazard index greater than 1 requires a system to take action.

(4) A report that contains level 1 or level 2 assessment information must include the applicable definitions:

(a) Level 1 assessment: A level 1 assessment is a study of the water system to identify potential problems and determine, if possible, why total coliform bacteria have been found in our water system.

(b) Level 2 assessment: A level 2 assessment is a very detailed study of the water system to identify potential problems and determine, if possible, why an *E. coli* MCL violation has occurred and, if applicable, why total coliform bacteria have been found in our water system on multiple occasions.

(5) A report that contains information regarding a detection of a contaminant with a SAL must include the following definition: State action level (SAL) means the concentration of a contaminant or group of contaminants, without an MCL, in drinking water established to protect public health and which, if exceeded, triggers actions a water system purveyor must take. SALs are established for contaminants without an MCL, federal action level, or treatment technique.

AMENDATORY SECTION (Amending WSR 21-23-097, filed 11/17/21, effective 1/1/22)

WAC 246-290-72012 Regulated contaminants.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants						
Total Coliform Bacteria	TT	-	TT	0	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
E. coli	Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.	-	Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.	0	Human and animal fecal waste	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.
Fecal indicators (*E. coli*)	TT	-	TT	0	Human and animal fecal waste	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Total organic carbon	TT	-	TT	N/A	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Turbidity	TT	-	TT	N/A	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Giardia lamblia Viruses *Cryptosporidium*	TT	-	TT	0	Human and animal fecal waste	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Heterotrophic plate count (HPC) bacteria	TT	-	TT	N/A	HPC measures a range of bacteria that are naturally present in the environment	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Legionella	TT	-	TT	0	Found naturally in water; multiplies in heating systems	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Radioactive Contaminants						
Beta/photon emitters	4 mrem/yr	-	4 mrem/yr	0	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters [gross alpha excluding uranium and radon]	15 pCi/l	-	15 (pCi/L)	0	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium [226 & 228]	5 pCi/l	-	5 (pCi/L)	0	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium	30 ppb	-	30 ppb	0	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Inorganic Contaminants						
Antimony	.006 ppm	1000	6 ppb	6 ppb	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic	0.010 ppm	1000	10 ppb	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos	7 MFL	-	7 MFL	7 MFL	Decay of asbestos cement water mains; Erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium	2 ppm	-	2 ppm	2 ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium	.004 ppm	1000	4 ppb	4 ppb	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Cadmium	.005 ppm	1000	5 ppb	5 ppb	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chromium	.1 ppm	1000	100 ppb	100 ppb	Discharge from steel and pulp mills; Erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Copper	TT AL = 1.3 ppm	-	TT AL = 1.3 ppm	1.3 ppm	Corrosion of household plumbing systems; Erosion of natural deposits	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide	.2 ppm	1000	200 ppb	200 ppb	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride	4 ppm	-	4 ppm	4 ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Lead	TT AL = .015 ppm	1000	TT AL = 15 ppb	0	Corrosion of household plumbing systems; Erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury [inorganic]	.002 ppm	1000	2 ppb	2 ppb	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate		-	10.0 ppm	10.0 ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Nitrite	1.0 ppm	-	1.0 ppm	1.0 ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium	.05 ppm	1000	50 ppb	50 ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thalium	.002 ppm	1000	2 ppb	0.5 ppb	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Disinfection Byproducts (DBPs)						
Bromate	.010 ppm	1000	10 ppb	0	Byproduct of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines	MRDL = 4 ppm	-	MRDL = 4 ppm	MRDLG = 4 ppm	Water additive used to control microbes	Some people who use drinking water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine	MRDL = 4 ppm	-	MRDL = 4 ppm	MRDLG = 4 ppm	Water additive used to control microbes	Some people who use drinking water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite	1 ppm	-	1 ppm	0.8 ppm	Byproduct of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant mothers who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine dioxide	MRDL = .8 ppm	1000	MRDL = 800 ppb	MRDLG = 800 ppb	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant mothers who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Haloacetic Acids (HAA5)	60 ppb	-	60 ppb	N/A for combined dichloroacetic acid = 0; monochloroacetic acid = 70 ppb; trichloroacetic acid = 20 ppb	Byproduct of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Total Trihalomethanes [TTHMs]	80 ppb	-	80 ppb	N/A (chloroform = 70 ppb; dibromochloromethane = 60 ppb; bromoform = 0; bromodichloromethane = 0)	Byproduct of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.
Synthetic Organic Contaminants including Pesticides and Herbicides, <u>except PFAS</u>						
2,4-D	70 ppb	-	70 ppb	70 ppb	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [Silvex]	50 ppb	-	50 ppb	50 ppb	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Alachlor	2 ppb	-	2 ppb	0	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine	3 ppb	-	3 ppb	3 ppb	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAH]	.2 ppb	1000	200 ppt	0	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran	40 ppb	-	40 ppb	40 ppb	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
Chlordane	2 ppb	-	2 ppb	0	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon	200 ppb	-	200 ppb	200 ppb	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Di(2-ethylhexyl) adipate	400 ppb	-	400 ppb	400 ppb	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects or reproductive difficulties.
Di(2-ethylhexyl) phthalate	6 ppb	-	6 ppb	0	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane [DBCP]	.2 ppb	1000	200 ppt	0	Runoff/ leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive problems and may have an increased risk of getting cancer.
Dinoseb	7 ppb	-	7 ppb	7 ppb	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Dioxin [2,3,7,8-TCDD]	.03 ppt	1,000	30 ppb	0	Emissions from waste incineration and other combustion; Discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Diquat	.02 ppb	1000	20 ppt	20 ppt	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Endothall	100 ppb	-	100 ppb	100 ppb	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin	2 ppb	-	2 ppb	2 ppb	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Ethylene dibromide	.05 ppb	1000	50 ppt	0	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate	700 ppb	-	700 ppb	700 ppb	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor	.4 ppb	1000	400 ppt	0	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide	.2 ppb	1000	200 ppt	0	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Hexachlorobenzene	1 ppb	-	1 ppb	0	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclo-pentadiene	50 ppb	-	50 ppb	50 ppb	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
Lindane	.2 ppb	1000	200 ppt	200 ppt	Runoff/ leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor	40 ppb	-	40 ppb	40 ppb	Runoff/ leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate]	200 ppb	-	200 ppb	200 ppb	Runoff/ leaching from insecticide used on apples, potatoes and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls]	.5 ppb	1000	500 ppt	0	Runoff from landfills; Discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Pentachlorophenol	1 ppb	-	1 ppb	0	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
((~~PFOA~~	~~10 ppt~~	-	~~10 ppt~~	~~N/A~~	~~Run-off or leaching from firefighting foam, industrial discharge, and landfills; wastewater treatment plants~~	~~Some people who drink water containing PFOA in excess of the SAL over many years may experience problems with their cholesterol, liver, thyroid or immune system; have high blood pressure during pregnancy, have babies with lower birthweights; and be at higher risk of getting certain types of cancers.~~
~~PFOS~~	~~15 ppt~~	-	~~15 ppt~~	~~N/A~~	~~Run-off or leaching from firefighting foam, industrial discharge, and landfills; wastewater treatment plants~~	~~Some people who drink water containing PFOS in excess of the SAL over many years may experience problems with their cholesterol, liver, thyroid, kidney, or immune systems; or have children with lower birthweights.~~
~~PFHxS~~	~~65 ppt~~	-	~~65 ppt~~	~~N/A~~	~~Run-off or leaching from firefighting foam, industrial discharge, and landfills; wastewater treatment plants~~	~~Some people who drink water containing PFHxS in excess of the SAL over many years may experience liver or immune problems, or thyroid hormone problems during pregnancy and infancy. It is possible that exposed children may have increased risk of abnormal behavior.~~

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
~~PFNA~~	~~9 ppt~~	~~-~~	~~9 ppt~~	~~N/A~~	~~Run-off or leaching from firefighting foam, industrial discharge, and landfills; wastewater treatment plants~~	~~Some people who drink water containing PFNA in excess of the SAL over many years may experience cholesterol, immune, liver or reproductive problems. Children exposed prenatally may have lower birthweights and increased risk of abnormal development.~~
~~PFBS~~	~~345 ppt~~	~~-~~	~~345 ppt~~	~~N/A~~	~~Run-off or leaching from firefighting foam, industrial discharge, and landfills; wastewater treatment plants~~	~~Some people who drink water containing PFBS in excess of the SAL may experience higher risk of cholesterol, liver, kidney or thyroid problems. Early life is the most sensitive period for altered thyroid hormone; sensitive populations include persons who are pregnant, nursing or less than a year old.~~))
Picloram	500 ppb	-	500 ppb	500 ppb	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Simazine	4 ppb	-	4 ppb	4 ppb	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene	3 ppb	-	3 ppb	0	Runoff/ leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Synthetic Organic Contaminants - PFAS						
HFPO-DA	10 ppt	-	10 ppt	10 ppt	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Some people who drink water containing HFPO-DA in excess of the MCL over many years may have increased health risks such as immune, liver, and kidney effects. There is also a potential concern for cancer associated with HFPO-DA exposure. In addition, there may be increased risks of developmental effects for people who drink water containing HFPO-DA in excess of the MCL following repeated exposure during pregnancy and/or childhood.
PFOA	10 ppt (SAL, effective for CCRs until 4/26/27) 4.0 ppt (MCL, effective for CCRs starting 4/26/27)	-	10 ppt (SAL, effective for CCRs until 4/26/27) 4.0 ppt (MCL, effective for CCRs starting 4/26/27)	0 ppt	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Some people who drink water containing PFOA in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including kidney and testicular cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOA in excess of the MCL following repeated exposure during pregnancy and/or childhood.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
PFOS	15 ppt (SAL, effective for CCRs until 4/26/27) 4.0 ppt (MCL, effective for CCRs starting 4/26/27)	-	15 ppt (SAL, effective for CCRs until 4/26/27) 4.0 ppt (MCL, effective for CCRs starting 4/26/27)	0 ppt	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Some people who drink water containing PFOS in excess of the MCL over many years may have increased health risks such as cardiovascular, immune, and liver effects, as well as increased incidence of certain types of cancers including liver cancer. In addition, there may be increased risks of developmental and immune effects for people who drink water containing PFOS in excess of the MCL following repeated exposure during pregnancy and/or childhood.
PFHxS	65 ppt (SAL, effective for CCRs until 4/26/27) 10 ppt (MCL, effective for CCRs starting 4/26/27)	-	65 ppt (SAL, effective for CCRs until 4/26/27) 10 ppt (MCL, effective for CCRs starting 4/26/27)	10 ppt	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Some people who drink water containing PFHxS in excess of the MCL over many years may have increased health risks such as immune, thyroid, and liver effects. In addition there may be increased risks of developmental effects for people who drink water containing PFHxS in excess of the MCL following repeated exposure during pregnancy and/or childhood.
PFNA	9 ppt (SAL, effective for CCRs until 4/26/27) 10 ppt (MCL, effective for CCRs starting 4/26/27)	-	9 ppt (SAL, effective for CCRs until 4/26/27) 10 ppt (MCL, effective for CCRs starting 4/26/27)	10 ppt	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Some people who drink water containing PFNA in excess of the MCL over many years may have increased health risks such as elevated cholesterol levels, immune effects, and liver effects. In addition, there may be increased risks of developmental effects for people who drink water containing PFNA in excess of the MCL following repeated exposure during pregnancy and/or childhood.
PFBS	345 ppt (SAL, effective for CCRs until 4/26/27) MCL is part of Hazard Index as of 4/26/27)	-	345 ppt (SAL, effective for CCRs until 4/26/27) MCL is part of Hazard Index as of 4/26/27)	-	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Some people who drink water containing PFBS in excess of the SAL may experience higher risk of cholesterol, liver, kidney or thyroid problems. Early life is the most sensitive period for altered thyroid hormone; sensitive populations include persons who are pregnant, nursing or less than a year old.
Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, and PFNA)	1 (unitless)	-	1 (unitless)	1 (unitless)	Discharge from manufacturing and industrial chemical facilities, use of certain consumer products, occupational exposures, and certain firefighting activities	Per- and polyfluoroalkyl substances (PFAS) can persist in the human body and exposure may lead to increased risk of adverse health effects. Low levels of multiple PFAS that individually would not likely result in increased risk of adverse health effects may result in adverse health effects when combined in a mixture. Some people who consume drinking water containing mixtures of PFAS in excess of the Hazard Index (HI) MCL may have increased health risks such as liver, immune, and thyroid effects following exposure over many years and developmental and thyroid effects following repeated exposure during pregnancy and/or childhood.
Volatile Organic Contaminants						

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Benzene	5 ppb	-	5 ppb	0	Discharge from factories; Leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon tetrachloride	5 ppb	-	5 ppb	0	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chlorobenzene	100 ppb	-	100 ppb	100 ppb	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
o-Dichlorobenzene	600 ppb	-	600 ppb	600 ppb	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
p-Dichlorobenzene	75 ppb	-	75 ppb	75 ppb	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane	5 ppb	-	5 ppb	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-Dichloroethylene	7 ppb	-	7 ppb	7 ppb	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene	70 ppb	-	70 ppb	70 ppb	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene	100 ppb	-	100 ppb	100 ppb	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane	5 ppb	-	5 ppb	0	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane	5 ppb	-	5 ppb	0	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene	700 ppb	-	700 ppb	700 ppb	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Styrene	100 ppb	-	100 ppb	100 ppb	Discharge from rubber and plastic factories; Leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Tetrachloroethylene	5 ppb	-	5 ppb	0	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene	70 ppb	-	70 ppb	70 ppb	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-Trichloroethane	200 ppb	-	200 ppb	200 ppb	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane	5 ppb	-	5 ppb	3 ppb	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Toluene	1000 ppm	-	1000 ppm	1000 ppm	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
Vinyl Chloride	2 ppb	-	2 ppb	0	Leaching from PVC piping: Discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes	10,000 ppb	-	10,000 ppb	10,000 ppb	Discharge from petroleum factories; Discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
Treatment Technique Violations						
Acrylamide	TT	-	TT	0	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Epichlorohydrin	TT	-	TT	0	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.
Groundwater rule TT violations	TT	-	TT	N/A	-	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

Key

AL = Action Level

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

MFL = million fibers per liter

MRDL = Maximum Residual Disinfectant Level

MRDLG = Maximum Residual Disinfectant Level Goal

mrem/year = millirems per year (a measure of radiation absorbed by the body)

N/A = Not Applicable

Contaminant	MCL or SAL (units match lab results)	To convert lab results for CCR, multiply by	MCL or SAL in CCR units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
NTU = Nephelometric Turbidity Units (a measure of water clarity) **pCi/L** = picocuries per liter (a measure of radioactivity) **ppm** = parts per million, or milligrams per liter (mg/L) **ppb** = parts per billion, or micrograms per liter (ug/L) **ppt** = parts per trillion, or nanograms per liter (ng/L) **ppq** = parts per quadrillion, or picograms per liter (pg/L) **SAL** = state action level **TT** = Treatment Technique						

AMENDATORY SECTION (Amending WSR 21-23-096, filed 11/17/21, effective 1/1/22)

WAC 246-390-010 Definitions, abbreviations, and acronyms. The definitions, abbreviations, and acronyms in this section apply throughout this chapter, unless the context clearly indicates otherwise.

(1) "µmhos/cm" means micromhos per centimeter (1 µmhos/cm = 1 S/cm).

(2) "µg/L" means micrograms per liter (1 µg/L = 1 ppb).

(3) "Acute" means posing an immediate risk to human health.

(4) "Bioaccumulative" means a chemical that can accumulate in the body when regular exposure occurs through drinking water.

(5) "C.F.R." means the Code of Federal Regulations.

(6) "CFU" means colony-forming unit.

(7) "Chronic" means posing a risk to human health only when exposure occurs over many years to a contaminant above a state or federal health standard.

(8) "Close of business" means the latest time during a business day when a lab is no longer in routine operation for accepting or performing drinking water sample analysis.

(9) "Confirmation" means to demonstrate that the results of a sample accurately represents the original sample result by analyzing another sample from the same location within a reasonable given period of time. This confirmation analysis is in addition to any analytical method confirmation requirements.

(10) "Contaminant" means a substance present in drinking water that may adversely affect the health of the consumer or the aesthetic quality of the water. It is measured using an analytical method for compliance purposes under chapters 246-290 and 246-291 WAC.

(11) "Contracted lab" means a certified lab that receives a drinking water sample from another certified lab for analysis.

(12) "Contracting lab" means a certified lab that sends a drinking water sample to another certified lab to be analyzed.

(13) "CU" means color unit.

(14) "Department" means the Washington state department of health or health officer as identified in a joint plan of responsibility under WAC 246-290-030(1).

(15) "Ecology" means the Washington state department of ecology.

(16) "EPA" means the United States Environmental Protection Agency.

(17) "Estimated concentration" means the level of the contaminant reported to the department is above a lab's MDL, but below the lab's MRL.

(18) "GWR" means groundwater rule.

(19) "Lab" or "certified lab" means an environmental lab accredited under chapter 173-50 WAC for one or more drinking water contaminants and meets the requirements of this chapter.

(20) "Maximum contaminant level (MCL)" means the maximum permissible level of a contaminant in water that a public water system delivers to consumers. MCLs are established in chapters 246-290 and 246-291 WAC.

(21) "Minimum detectable activity (MDA)" means the smallest activity or concentration of radioactive material in a sample that will yield a net count (above sample background) that can be detected with 95 percent probability.

(22) "Minimum detection level (MDL)" means the minimum measured concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from the method blank results.

(23) "Method reporting limit (MRL)" means the lowest concentration of a standard used for calibration.

(24) "MFL" means microfibers per liter.

(25) "mg/L" means milligrams per liter (1 mg/L = 1 ppm).

(26) "MPN" means most probable number.

(27) "ng/L" means nanograms per liter (1 ng/L = 1 ppt).

(28) "NTU" means nephelometric turbidity units.

(29) "pCi/L" means picocuries per liter.

(30) "ppb" means parts per billion (1 ppb = 1 µg/L).

(31) "ppm" means parts per million (1 ppm = 1 mg/L).

(32) "ppt" means parts per trillion (1 ppt = 1 ng/L).

(33) "Proficiency testing (PT)" means the evaluation of sample analysis results, the true values of which are known to the supplier of the samples, but unknown to the lab conducting the analysis. PT samples are provided by a source external to the certified lab.

(34) "Public water system" is defined under WAC 246-290-020 and 246-291-010.

(35) "Quality control (QC)" means a set of measures used during an analytical method to ensure that the process is within specified control parameters.

(36) "State action level (SAL)" means the concentration of a contaminant or group of contaminants((~~, without an MCL,~~)) established to protect public health in accordance with WAC 246-290-315 and which, if exceeded, triggers actions a purveyor takes in accordance with WAC 246-290-320.

(37) "State detection reporting limit (SDRL)" means the minimum reportable detection of a contaminant as established in Tables 3 through 7 of this chapter.

(38) "Tentatively identified compound (TIC)" means compounds detected in samples that are not target compounds, internal standards, system monitoring compounds or surrogates.

AMENDATORY SECTION (Amending WSR 21-23-096, filed 11/17/21, effective 1/1/22)

WAC 246-390-075 Reporting. (1) A lab shall report analytical results to the department and the public water system.

(2) A lab submitting paper reports shall complete and submit to the department data reports following the procedures and templates in the department's *Laboratory Reporting Guidance*, Publication DOH 331-530, ((~~January 2022~~)) April 2025.

(3) A lab submitting electronic reports shall complete and submit to the department data reports following the procedures in the department's *Electronic Reporting Guidance*, Publication 331-289, ((~~January 2022~~)) April 2025.

(4) Labs shall submit reports to the public water system in the format and time frame that was agreed upon when executing the service agreement between the laboratory and the public water system.

(5) Labs shall submit reports of acute contaminant results within 10 business days after receiving the sample.

(6) Labs shall submit reports of chronic contaminants within 30 calendar days after receiving the sample.

(7) Analytical results must be complete, legible, and accurate.

(8) A lab shall report numerical results consistent with the accuracy of the EPA-approved methods and any associated lab instruments, glassware, or tools.

(9) A lab shall report numerical results out to, but not exceed, one decimal place past the SDRL in cases where the last definitely known digit exceeds one decimal place past the SDRL as follows:

(a) If the digit 5, 6, 7, 8, or 9 is dropped, increase the preceding digit by one unit;

(b) If the digit 0, 1, 2, 3, or 4 is dropped, do not alter the preceding digit; or

(c) If the SDRL is 1.1 and the result, out to the last definitely known digit is ((~~1.132~~)) 1.13, then the value reported to the department is ((~~1.13;~~

~~(b) If the digit 6, 7, 8, or 9 is dropped, increase the preceding digit by one unit;~~

~~(c) If the digit 0, 1, 2, 3, or 4 is dropped, do not alter the preceding digit; or~~

~~(d) If the digit 5 is dropped, round off the preceding digit to the nearest even number. For example, 2.25 becomes 2.2, and 2.35 becomes 2.4~~)) 1.1. If the result is 1.15, then the value reported to the department is 1.2.

(10) A lab shall include the following data qualifiers adjacent to the results that are affected:

(a) "B" - This data qualifier is used when the target contaminant is detected in the method blank above the lab's established MRL or SDRL, whichever is lower;

(b) "J" - This data qualifier is used when the result is an estimated concentration per subsections (13), (14), and (17) of this section;

(c) "NDDS" - This data qualifier is used when the contaminant is not detected in duplicate sample; or

(d) "U" - This data qualifier is used when the radiochemistry contaminant is not detected at or above the lab's established MDA.

(11) A lab shall notate on the report to the public water system and the department when any analysis is completed using a provisional accreditation.

(12) At the department's request, a lab shall submit the following information:

(a) The method specific QC for any given analytical report.

(b) The most recent MDL procedures performed for any given contaminant.

(c) The most recent PT study performed for any given contaminant.

(13) The SDRLs for organic chemical contaminants are established in Tables 3 and 7 of this section. All contaminants in Tables 3 and 7 are considered chronic contaminants.

(a) Labs shall ((~~attach to the analytical result a copy of the method specific QC results for any organic chemical detection that is reported to the department which is at or above the SDRLs listed in Table 3 of this section except for:~~

~~(i) Chloroform (0027);~~

~~(ii) Bromodichloromethane (0028);~~

~~(iii) Dibromochloromethane (0029);~~

~~(iv) Bromoform (0030);~~

~~(v) Monochloroacetic Acid (0411);~~

~~(vi) Dichloroacetic Acid (0412);~~
~~(vii) Trichloroacetic Acid (0413);~~
~~(viii) Monobromoacetic Acid (0414);~~
~~(ix) Monobromoacetic Acid (0415); and~~
~~(x) Total Organic Carbon (0421)~~)) provide a copy of the method specific QC results at the request of the department.

(b) A lab shall report organic chemical contaminant results when the lab's established MRL is greater than the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the SDRL and MRL;

(ii) An estimated concentration, notated with a "J" data qualifier when a result is equal to or greater than the SDRL, but less than the lab's established MRL;

(iii) A number when a result is equal to or greater than the lab's established MRL.

(c) A lab shall report organic chemical contaminant results when the lab's established MRL is less than the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the lab's established MRL;

(ii) "Nondetect" or "ND" when a lab's result is less than the established SDRL; or

(iii) A number when a result is equal to or greater than the SDRL.

(d) A lab shall report organic chemical contaminant results when their established MRL is equal to the SDRL as:

(i) "Nondetect" or "ND" when a lab's result is less than the SDRL and MRL; or

(ii) A number when a result is equal to or greater than the SDRL and the lab's established MRL.

Table 3 - Organic Contaminants

Contaminant Name	Contaminant Number	Units	SDRL
1,1 Dichloroethane	0058	µg/L	0.5
1,1 Dichloroethylene	0046	µg/L	0.5
1,1 Dichloropropene	0062	µg/L	0.5
1,1,1 Trichloroethane	0047	µg/L	0.5
1,1,1,2 Tetrachloroethane	0072	µg/L	0.5
1,1,2 Trichloroethane	0067	µg/L	0.5
1,1,2,2 Tetrachloroethane	0080	µg/L	0.5
1,2 Dichlorobenzene	0084	µg/L	0.5
1,2 Dichloroethane	0050	µg/L	0.5
1,2 Dichloropropane	0063	µg/L	0.5
1,2,3 Trichlorobenzene	0098	µg/L	0.5
1,2,3 Trichloropropane	0079	µg/L	0.5
1,2,4 Trichlorobenzene	0095	µg/L	0.5
1,2,4 Trimethylbenzene	0091	µg/L	0.5
1,3 Dichloropropane	0070	µg/L	0.5
1,3 Dichloropropene	0154	µg/L	0.5
1,3,5 Trimethylbenzene	0089	µg/L	0.5
1,4 Dichlorobenzene	0052	µg/L	0.5
2,2 Dichloropropane	0059	µg/L	0.5
2,3,7,8 TCDD (dioxin)	0149	ng/L	0.005

Contaminant Name	Contaminant Number	Units	SDRL
2,4 D	0037	µg/L	0.1
2,4 DB	0135	µg/L	1
2,4,5 T	0136	µg/L	0.4
2,4,5 TP (Silvex)	0038	µg/L	0.2
3,5 Dichlorbenzoic Acid	0226	µg/L	0.5
4,4 DDD	0232	µg/L	0.1
4,4 DDE	0233	µg/L	0.1
4,4 DDT	0234	µg/L	0.1
Acenaphthylene	0244	µg/L	0.2
Acifluorfen	0223	µg/L	2
Alachlor	0117	µg/L	0.2
Aldicarb	0142	µg/L	0.5
Aldicarb Sulfone	0143	µg/L	0.8
Aldicarb Sulfoxide	0144	µg/L	0.5
Aldrin	0118	µg/L	0.1
Anthracene	0246	µg/L	0.2
Arochlor 1016	0180	µg/L	0.08
Arochlor 1221	0173	µg/L	20
Arochlor 1232	0174	µg/L	0.5
Arochlor 1242	0175	µg/L	0.3
Arochlor 1248	0176	µg/L	0.1
Arochlor 1254	0177	µg/L	0.1
Arochlor 1260	0178	µg/L	0.2
Atrazine	0119	µg/L	0.1
Bentazon	0220	µg/L	0.5
Benzene	0049	µg/L	0.5
Benzo (a) anthracene	0247	µg/L	0.2
Benzo (a) Pyrene	0120	µg/L	0.02
Benzo (b) fluoroanthene	0248	µg/L	0.2
Benzo (k) fluoranthene	0250	µg/L	0.2
Benzyl Butyl Phthalate	0258	µg/L	1.0
Bromacil	0179	µg/L	0.1
Bromobenzene	0078	µg/L	0.5
Bromochloromethane	0086	µg/L	0.5
Bromodichloromethane	0028	µg/L	0.5
Bromoform	0030	µg/L	0.5
Bromomethane	0054	µg/L	0.5
Butachlor	0121	µg/L	0.1
Carbaryl	0145	µg/L	2
Carbofuran	0146	µg/L	0.9
Carbon Tetrachloride	0048	µg/L	0.5
Chlordane (total)	0122	µg/L	0.2
Chlorobenzene	0071	µg/L	0.5
Chloroethane	0055	µg/L	0.5
Chloroform	0027	µg/L	0.5
Chloromethane	0053	µg/L	0.5

Contaminant Name	Contaminant Number	Units	SDRL
Chrysene	0251	µg/L	0.2
Cis- 1,2 Dichloroethylene	0060	µg/L	0.5
Cis- 1,3 Dichloropropene	0065	µg/L	0.5
Dalapon	0137	µg/L	1
DBCP	0103	µg/L	0.02
DBCP (screening)	0428	µg/L	0.5
DCPA Acid Metabolites	0225	µg/L	0.1
Di (2-Ethylhexyl) Adipate	0124	µg/L	0.6
Di (2-Ethylhexyl) Phthalate	0125	µg/L	0.6
Dibromoacetic Acid	0415	µg/L	1
Dibromochloromethane	0029	µg/L	0.5
Dibromomethane	0064	µg/L	0.5
Dicamba	0138	µg/L	0.2
Dichloroacetic Acid	0412	µg/L	1
Dichlorodifluoromethane	0104	µg/L	0.5
Dichlorprop	0221	µg/L	0.5
Dieldrin	0123	µg/L	0.1
Diethyl Phthalate	0260	µg/L	1.0
Dimethyl Phthalate	0261	µg/L	1.0
Di-n-butyl Phthalate	0259	µg/L	1.0
Dinoseb	0139	µg/L	0.2
Diquat	0150	µg/L	0.4
EDB	0102	µg/L	0.01
EDB (screening)	0427	µg/L	0.5
Endothal	0151	µg/L	9
Endrin	0033	µg/L	0.01
EPTC	0208	µg/L	0.1
Ethylbenzene	0073	µg/L	0.5
Fluorene	0254	µg/L	0.2
Glyphosate	0152	µg/L	6
HAA(5)	0416	µg/L	+
Heptachlor	0126	µg/L	0.04
Heptachlor Epoxide	0127	µg/L	0.02
Hexachlorobenzene	0128	µg/L	0.1
Hexachlorobutadiene	0097	µg/L	0.5
Hexachlorocyclo pentadiene	0129	µg/L	0.1
Isopropylbenzene	0087	µg/L	0.5
Lindane (bhc - gamma)	0034	µg/L	0.02
M- dichlorobenzene	0083	µg/L	0.5
M/P Xylenes (MCL for total)	0074	µg/L	0.5
Methomyl	0147	µg/L	4
Methoxychlor	0035	µg/L	0.1
Methylene Chloride (Dichloromethane)	0056	µg/L	0.5
Metolachlor	0130	µg/L	0.1
Metribuzin	0131	µg/L	0.1
Molinate	0218	µg/L	0.1

Contaminant Name	Contaminant Number	Units	SDRL
Monobromoacetic Acid	0414	µg/L	1
Monochloroacetic Acid	0411	µg/L	2
Naphthalene	0096	µg/L	0.5
N-Butylbenzene	0094	µg/L	0.5
N-Propylbenzene	0088	µg/L	0.5
O- Chlorotoluene	0081	µg/L	0.5
O- Xylene (MCL for total)	0075	µg/L	0.5
Oxamyl	0148	µg/L	2
P- Chlorotoluene	0082	µg/L	0.5
Paraquat	0400	µg/L	0.8
PCB (as Decachlorobiphenyl)	0401	µg/L	0.1
Pentachlorophenol	0134	µg/L	0.04
Phenanthrene	0256	µg/L	0.2
Picloram	0140	µg/L	0.1
P-Isopropyltoluene	0093	µg/L	0.5
Propachlor	0132	µg/L	0.1
Pyrene	0257	µg/L	0.2
Sec- Butylbenzene	0092	µg/L	0.5
Simazine	0133	µg/L	0.07
Styrene	0076	µg/L	0.5
Terbacil	0190	µg/L	0.1
Tert- Butylbenzene	0090	µg/L	0.5
Tetrachloroethylene	0068	µg/L	0.5
Toluene	0066	µg/L	0.5
Total organic carbon	0421	mg/L	0.7
Total Trihalomethane	0031	µg/L	+
Total Xylenes	0160	µg/L	0.5
Toxaphene	0036	µg/L	1
Trans- 1,2 Dichloroethylene	0057	µg/L	0.5
Trans- 1,3 Dichloropropene	0069	µg/L	0.5
Trichloroacetic Acid	0413	µg/L	1
Trichloroethylene	0051	µg/L	0.5
Trichlorofluoromethane	0085	µg/L	0.5
Trifluralin	0243	µg/L	0.1
Vinyl Chloride	0045	µg/L	0.5

+ Results are calculated values based on other analytical results.

(14) The SDRLs for inorganic chemical contaminants are established in Table 4 of this section. All contaminants in Table 4 are considered chronic contaminants except annual, quarterly, or monthly nitrate analysis which is considered an acute contaminant. Labs shall report analytical results within 10 business days after receiving the nitrate sample. If nitrate analysis is part of a routine complete inorganic compound panel, then labs shall submit a report to the department within 30 calendar days after receiving the sample.

(a) Labs shall provide a copy of the method specific QC results at the request of the department.

(b) A lab shall report inorganic chemical contaminant results when the lab's established MRL is greater than the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the SDRL and MRL;

(ii) An estimated concentration, notated with a "J" data qualifier, when a result is equal to or greater than the SDRL, but less than the lab's established MRL; or

(iii) A number when a result is equal to or greater than the lab's established MRL.

((~~(b)~~)) (c) A lab shall report inorganic chemical contaminant results when the lab's established MRL is less than the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the lab's established MRL;

(ii) "Nondetect" or "ND" when a lab's result is less than the department's established SDRL, but greater than the lab's established MRL; or

(iii) A number when a result is equal to or greater than the SDRL.

((~~(c)~~)) (d) A lab shall report inorganic chemical contaminant results when the lab's established MRL is equal to the SDRL as:

(i) "Nondetect" or "ND" when a lab's result is less than the SDRL and MRL; or

(ii) A number when a result is equal to or greater than the SDRL and the lab's established MRL.

Table 4 - Inorganic Contaminants

Contaminant Name	Contaminant Number	Units	SDRL
Alkalinity-Lab	0403	mg/L	5
Antimony	0112	mg/L	0.003
Arsenic	0004	mg/L	0.001
Asbestos	0115	MFL	0.20
Barium	0005	mg/L	0.1
Beryllium	0110	mg/L	0.0003
Bromate	0419	mg/L	0.005/0.001
Cadmium	0006	mg/L	0.001
Chloride	0021	mg/L	2
Chlorite	0418	mg/L	0.02
Chromium	0007	mg/L	0.007
Color	0018	CU	15
Conductivity	0016	µmhos/cm	70
Copper	0023	mg/L	0.02
Cyanide	0116	mg/L	0.05
Fluoride	0019	mg/L	0.2
Hardness	0015	mg/L	10
Iron	0008	mg/L	0.1
Lead	0009	mg/L	0.001
Manganese	0010	mg/L	0.01
Mercury	0011	mg/L	0.0002
Nickel	0111	mg/L	0.005
Nitrate-n	0020	mg/L	0.5
Nitrite-n	0114	mg/L	0.1
Selenium	0012	mg/L	0.002
Silver	0013	mg/L	0.1

Contaminant Name	Contaminant Number	Units	SDRL
Sodium	0014	mg/L	5
Sulfate	0022	mg/L	2
TDS-total dissolved solids	0026	mg/L	100
Thallium	0113	mg/L	0.001
Total nitrate/nitrite	0161	mg/L	0.5
Turbidity	0017	NTU	0.1
Zinc	0024	mg/L	0.2

Labs that use EPA Methods 317.0, 326.0 or 321.8 must meet a 0.0010 mg/L SDRL for bromate.

(15) The SDRLs for radiochemistry contaminants are established in Table 5 of this section. All contaminants in Table 5 are considered chronic contaminants.

(a) A lab's MDA must meet the established SDRL levels for the analysis to be considered for compliance purposes.

(b) A lab shall report radiochemistry contaminant results as:

(i) A number and a "U" qualifier if the contaminant was analyzed for, but not detected at or above the lab's established MDA; or

(ii) A number when a result is equal to or greater than the lab's established MDA.

Table 5 - Radiochemistry Contaminants

Contaminant Name	Contaminant Number	Units	SDRL
Cesium 134	0107	pCi/L	10.0
Gross Alpha	0165	pCi/L	3.0
Gross Alpha (Minus Uranium)	0041	pCi/L	+
Gross Beta	0042	pCi/L	4.0
Iodine 131	0108	pCi/L	1.0
Radium 226	0039	pCi/L	1.0
Radium 226 + 228	0040	pCi/L	+
Radium 228	0166	pCi/L	1.0
Radon	0109	pCi/L	+
Strontium 90	0044	pCi/L	2.0
Tritium	0043	pCi/L	1000
Uranium	0105	µg/L	1.0

+ Results are calculated values based on other analytical results.

(16) The units for microbiology contaminants are established in Table 6 of this section. All contaminants in Table 6 are considered acute contaminants.

(a) Total coliform and *E. coli* results for routine and repeat samples in accordance with 40 C.F.R. 141 Subpart Y - Revised Total Coliform Rule, GWR triggered, and GWR assessment source sample results that are absent or present as follows:

(i) "Satisfactory" if no total coliforms are detected.

(ii) "Unsatisfactory" if:

(A) Total coliforms are detected; and

(B) *E. coli* absent if *E. coli* is not detected; or

(C) *E. coli* present if *E. coli* is detected.

(b) A lab shall report routine filtered and unfiltered surface water microbiology contaminant results as a number.

(c) A lab shall report routine heterotrophic plate count results as a number.

(d) A lab shall report results of investigative samples or samples collected for information only to the public water system for total coliforms, fecal coliforms, and *E. coli* as a number or, as absent or present. Investigative samples or samples collected for information only are not required to be reported to the department.

Table 6 - Microbiology Contaminants

Contaminant Name	Contaminant Number	Units
E. coli (numerical)	0003	CFU/100mL
E. coli (numerical)	0003	MPN/100mL
E. coli (absence/presence)	0003	N/A
Fecal Coliform (numerical)	0002	CFU/100mL
Fecal Coliform (numerical)	0002	MPN/100mL
Fecal Coliform (absence/presence)	0002	N/A
Heterotrophic Plate Count (numerical)	0101	CFU/1mL
Heterotrophic Plate Count (numerical)	0101	MPN/mL
Total Coliform (numerical)	0001	CFU/100mL
Total Coliform (numerical)	0001	MPN/100mL
Total Coliform (absence/presence)	0001	N/A

(17) The SDRLs for per- and polyfluoroalkyl substances (PFAS) are established in Table 7 of this section. All contaminants in Table 7 are considered chronic contaminants.

(a) A lab shall analyze PFAS samples using EPA method 537.1 version 2 (3/20), or EPA method 533((~~, or with written approval, other department-approved methods~~)).

(b) Labs shall provide a copy of the method specific QC results at the request of the department.

(c) A lab shall report PFAS contaminant results when the lab's established MRL is greater than the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the SDRL and MRL;

(ii) An estimated concentration, notated with a "J" data qualifier when a result is equal to or greater than the SDRL, but less than the lab's established MRL; or

(iii) A number when a result is equal to or greater than the lab's established MRL.

((~~(c)~~)) (d) A lab shall report PFAS contaminant results when the lab's established MRL is less than the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the lab's established MRL;

(ii) "Nondetect" or "ND" when a lab's result is less than the established SDRL; or

(iii) A number when a result is equal to or greater than the SDRL.

((~~(d)~~)) (e) A lab shall report PFAS contaminant results when the lab's established MRL is equal to the SDRL as follows:

(i) "Nondetect" or "ND" when a lab's result is less than the SDRL and MRL; or

(ii) A number when a result is equal to or greater than the SDRL and the lab's established MRL.

((~~(e)~~)) (f) A lab shall report to the department any tentatively identified compounds (TIC) that are detected while analyzing a PFAS sample if the approved method allows for TIC determinations to be made.

((~~(f)~~)) (g) A lab shall ((~~attach to the analytical result~~)) provide a copy of the method-specific QC results for any TIC detections that are reported to the department.

Table 7 - Per- and Polyfluoroalkyl Contaminants

Contaminant Name	Contaminant Number	Units	SDRL	[3]Required Contaminant List for EPA 537.1 version 2 (3/20)	[4]Required Contaminant List for EPA 533
(11Cl-PF3OUdS) 11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	448	ng/L	2.0	Y	Y
(4:2FTS) 1H,1H, 2H, 2H-Perfluorohexane sulfonic acid	450	ng/L	2.0	N	Y
(6:2FTS) 1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	451	ng/L	2.0	N	Y
(8:2FTS) 1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	452	ng/L	2.0	N	Y
(9Cl-PF3ONS) 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	446	ng/L	2.0	Y	Y
(ADONA) 4,8-Dioxa-3H-perfluorononanoic acid	445	ng/L	2.0	Y	Y
(HFPO-DA) Hexafluoropropylene oxide dimer acid	447	ng/L	2.0	Y	Y
(NEtFOSAA) N-ethyl perfluorooctanesulfonamidoacetic acid	441	ng/L	((~~3~~)) 2.0	Y	N
(NFDHA) Nonafluoro-3,6-dioxaheptanoic acid	453	ng/L	2.0	N	Y
(NMeFOSAA) N-methyl perfluorooctanesulfonamidoacetic acid	442	ng/L	((~~3~~)) 2.0	Y	N
(PFBA) Perfluorobutanoic acid	454	ng/L	2.0	N	Y
(PFBS) Perfluorobutanesulfonic acid	429	ng/L	2.0	Y	Y
(PFDA) Perfluorodecanoic acid	436	ng/L	2.0	Y	Y
(PFDoA) Perfluorododecanoic acid	438	ng/L	2.0	Y	Y
(PFEESA) Perfluoro(2-ethoxyethane)sulfonic acid	460	ng/L	2.0	N	Y
(PFHpA) Perfluoroheptanoic acid	430	ng/L	2.0	Y	Y
(PFHpS) Perfluoroheptanesulfonic acid	455	ng/L	2.0	N	Y
(PFHxA) Perfluorohexanoic acid	435	ng/L	2.0	Y	Y
(PFHxS) Perfluorohexanesulfonic acid	431	ng/L	2.0	Y	Y
(PFMBA) Perfluoro-4-methoxybutanoic acid	456	ng/L	2.0	N	Y
(PFMPA) Perfluoro-3-methoxypropanoic acid	457	ng/L	2.0	N	Y
(PFNA) Perfluorononanoic acid	432	ng/L	2.0	Y	Y
(PFOA) Perfluorooctanoic acid	434	ng/L	2.0	Y	Y
(PFOS) Perfluorooctanesulfonic acid	433	ng/L	2.0	Y	Y
(PFPeA) Perfluoropentanoic acid	458	ng/L	2.0	N	Y
(PFPeS) Perfluoropentanesulfonic acid	459	ng/L	2.0	N	Y
(PFTA) Perfluorotetradecanoic acid	440	ng/L	2.0	Y	N
(PFTrDA) Perfluorotridecanoic acid	439	ng/L	2.0	Y	N
(PFUnA) Perfluoroundecanoic acid	437	ng/L	2.0	Y	Y

[3] For a water system to qualify for a monitoring waiver these contaminants must be reported to the department if analyzing the sample using EPA method 537.1 version 2 (3/20).

[4] For a water system to qualify for a monitoring waiver these contaminants must be reported to the department if analyzing the sample using EPA method 533.