

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

SARAH HAND AND GRETCHEN HAND,
a married couple

Complainant,

v.

RAINIER VIEW WATER COMPANY, INC.,

Respondent.

DOCKET UW 170924

**SARAH HAND'S EXHIBIT 32 TO
CROSS EXAMINATION**

EXHIBIT 32

TO CROSS EXAMINATION OF BOB BLACKMAN AND RACHEL STARK

July 25, 2018

WAC 246-290-010

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) **"ADD"** means an average day demand.
- (3) **"AG"** means an air gap.
- (4) **"Alternative filtration technology"** means a filtration process for substantial removal of particulates (generally > 2-log *Giardia lamblia* cysts and \geq 2-log removal of *Cryptosporidium* oocysts) by other than conventional, direct, diatomaceous earth, or slow sand filtration processes.
- (5) **"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.
- (6) **"ANSI"** means the American National Standards Institute.
- (7) **"Approved air gap"** 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.
- (8) **"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.
- (9) **"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.
- (10) **"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.
- (11) **"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.
- (12) **"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.
- (13) **"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.
- (14) **"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.
- (15) **"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, fire fighting and training, flushing of mains and sewers, street cleaning, and watering of parks and landscapes. These volumes may be billed or unbilled.
- (16) **"AVB"** means an atmospheric vacuum breaker.
- (17) **"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. ADD is typically expressed as gallons per day (gpd) per equivalent residential unit (ERU).
- (18) **"AWWA"** means the American Water Works Association.
- (19) **"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.
- (20) **"Backflow assembly tester"** means a person holding a valid BAT certificate issued under chapter 246-292 WAC.
- (21) **"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.

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

(23) **"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.

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

(25) **"BAT"** means a backflow assembly tester.

(26) **"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.

(27) **"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.

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

(29) **"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.

(30) **"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.

(31) **"CCP"** means composite correction program.

(32) **"CCS"** means a cross-connection control specialist.

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

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

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

(36) **"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.

(37) **"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.

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

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

(40) **"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.

(41) **"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.

(42) **"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.

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

(44) **"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.

(45) **"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.

(46) **"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.

(47) **"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.

(48) **"Confirmation"** means to demonstrate the accuracy of results of a sample by analyzing another sample from the same location within a reasonable period of time, generally not to exceed two weeks. Confirmation is when analysis results fall within plus or minus thirty percent of the original sample results.

(49) **"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.

(50) **"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.

(51) **"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.

(52) **"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.

(53) **"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.

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

(55) **"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.

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

(57) **"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.

(58) **"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.

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

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

(61) **"CPE"** means a comprehensive performance evaluation.

(62) **"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 70.116 RCW and chapter 246-293 WAC.

(63) **"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.

(64) **"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.

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

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

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

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

(69) **"CTA"** means comprehensive technical assistance.

(70) **"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.

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

(72) **"CWSSA"** means a critical water supply service area.

(73) **"DBPs"** means disinfection byproducts.

(74) **"DCDA"** means a double check detector assembly.

(75) **"DCVA"** means a double check valve assembly.

(76) **"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).

(77) **"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.

(78) **"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).

(79) **"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.

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

(81) **"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.

(82) **"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.

(83) **"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.

(84) **"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.

(85) **"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.

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

(87) **"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.

(88) **"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.

(89) **"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.

(90) **"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.

(91) **"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).

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

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

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

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

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

(97) **"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.

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

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

(100) **"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.

(101) **"ERU"** means an equivalent residential unit.

(102) **"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.

(103) **"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.

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

(105) **"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.

(106) **"Finished water"** means water introduced into a public water system's distribution system and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals).

(107) **"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.

(108) **"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.

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

(110) **"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).

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

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

(113) **"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.

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

(115) **"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 70.116 RCW and chapter 246-293 WAC.

(116) **"GAC"** means granular activated carbon.

(117) **"GAC10"** means granular activated carbon filter beds with an empty-bed contact time of ten minutes based on average daily flow and a carbon reactivation frequency of every one hundred eighty 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 days.

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

(119) **"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.

(120) **"gph"** means gallons per hour.

(121) **"gpm"** means gallons per minute.

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

(123) **"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.

(124) **"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.

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

(126) **"GWI"** means groundwater under the direct influence of surface water.

(127) **"GWR"** means groundwater rule.

(128) **"HAA5"** means haloacetic acids (five).

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

(130) **"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.

(131) "**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.

(132) "**HPC**" means heterotrophic plate count.

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

(134) "**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.

(135) "**IAPMO**" means the International Association of Plumbing and Mechanical Officials.

(136) "**IDSE**" means an initial distribution system evaluation.

(137) "**Inactivation**" means a process which renders pathogenic microorganisms incapable of producing disease.

(138) "**Inactivation ratio**" means the ratio obtained by dividing CT_{calc} by CT_{req}.

(139) "**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.

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

(141) "**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.

(142) "**Intertie**" means an interconnection between public water systems permitting the exchange or delivery of water between those systems.

(143) "**kPa**" means kilo pascal (SI units of pressure).

(144) "**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.

(145) "**Legionella**" means a genus of bacteria containing species which cause a type of pneumonia called Legionnaires' Disease.

(146) "**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.

(147) "**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.

(148) "**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.

(149) "**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.

(150) "**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.

(151) "**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.

(152) "**LRAA**" means the locational running annual average.

(153) "**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).

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

(155) "**Marginal costs**" means the costs incurred by producing the next increment of supply.

(156) "**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.

(157) "**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.

(158) "**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 hour period, excluding unusual events or emergencies. MDD is typically expressed as gallons per day per ERU (gpd/ERU).

(159) "**MCL**" means the maximum contaminant level.

(160) "**MDD**" means the maximum day demand.

(161) "**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.

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

(163) "**mL**" means a milliliter.

(164) "**mm**" means a millimeter.

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

(166) "**MRDL**" means the maximum residual disinfectant level.

(167) "**MRDLG**" means the maximum residual disinfectant level goal.

(168) "**MTTP**" means maximum total trihalomethane potential.

(169) "**Municipal water supplier**" means an entity that supplies water for municipal water supply purposes.

(170) "**Municipal water supply purposes**" means a beneficial use of water:

(a) For residential purposes through fifteen or more residential service connections or for providing residential use of water for a nonresidential population that is, on average, at least twenty-five people for at least sixty 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.

(171) "**Nested storage**" means one component of storage is contained within the component of another.

(172) "**Nonacute**" means posing a possible or less than immediate risk to human health.

(173) "**Nonresident**" means a person having access to drinking water from a public water system who lives elsewhere.

Examples include travelers, transients, employees, students, etc.

(174) "**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.

(175) "**NSF**" means NSF International (formerly known as the National Sanitation Foundation (NSF)).

(176) "**NTNC**" means nontransient noncommunity.

(177) "**NTU**" means a nephelometric turbidity unit.

(178) "**ONORM**" means Osterreichisches Normungsinstitut.

(179) "**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.

(180) "**PAA**" means a project approval application.

(181) "**pCi/L**" means picocuries per liter.

(182) "**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 minute time period. PHD is typically expressed in gallons per minute (gpm).

(183) "**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.

(184) "**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.

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

(186) "**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-month period. For seasonal water systems that are in operation for less than three consecutive months per year, their sources shall also be considered to be permanent.

(187) "**PHD**" means peak hourly demand.

(188) "**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.

(189) "**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.

(190) "**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 shall be 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 shall be computed by multiplying the number of active services by two and one-half.

(191) "**Potable**" means water suitable for drinking by the public.

(192) "**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 feet or less from the ground surface at the wellhead and located within two hundred feet of a surface water, and all Ranney wells, infiltration galleries, and springs.

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

(194) "**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.

(195) "**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.

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

(197) "**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.

(198) "**Primary standards**" means standards based on chronic, nonacute, or acute human health effects.

(199) "**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).

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

(201) "**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.

(202) "**psi**" means pounds per square inch.

(203) "**Public forum**" means a meeting open to the general public that allows for their participation.

(204) "**Public water system**" is defined and referenced under WAC 246-290-020.

(205) "**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.

(206) "**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.

(207) "**PVBA**" means a pressure vacuum breaker assembly.

(208) "**RAA**" means the running annual average.

(209) "**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.

(210) "**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.

(211) "**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.

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

(213) "**Regularly**" means four hours or more per day for four days or more per week.

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

(215) "**Repeat sample**" means a sample collected to confirm the results of a previous analysis.

(216) "**Resident**" means an individual living in a dwelling unit served by a public water system.

(217) "**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.

(218) "**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.

(219) "**RPBA**" means reduced pressure backflow assembly.

(220) "**RPDA**" means reduced pressure detector assembly.

(221) "**SAL**" means state advisory level.

(222) "**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.

(223) "**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.

(224) "**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.

(225) **"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.

(226) **"SCA"** means a sanitary control area.

(227) **"SDWA"** means the Safe Drinking Water Act.

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

(229) **"Seasonal system"** means a noncommunity water system defined and referenced under 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.

(230) **"Secondary standards"** means standards based on factors other than health effects.

(231) **"SEPA"** means the State Environmental Policy Act.

(232) **"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 70.116 RCW and 246-293 WAC.

(233) **"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 shall be 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) In no case shall the calculated number of services be less than one.

(234) **"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.

(235) **"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.

(236) **"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/ft²) that results in substantial particulate removal (> 2-log *Giardia lamblia* cysts) by physical and biological mechanisms.

(237) **"SMA"** means a satellite system management agency.

(238) **"SOC"** means a synthetic organic chemical.

(239) **"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.

(240) **"Source meter"** means a meter that measures total output of a water source over specific time periods.

(241) **"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.

(242) **"SPI"** means a special purpose investigation.

(243) **"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.

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

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

(246) **"SRF"** means the state revolving fund.

(247) **"SSNC"** means state significant noncomplier.

(248) **"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.

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

(250) "**State advisory level (SAL)**" means a level established by the department and state board of health for a contaminant without an existing MCL. The SAL represents a level that when exceeded, indicates the need for further assessment to determine if the chemical is an actual or potential threat to human health.

(251) "**State board of health**" and "**board**" means the board created by RCW 43.20.030.

(252) "**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.

(253) "**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.

(254) "**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.

(255) "**Subpart H System**" see definition for "**surface water system.**"

(256) "**Surface water**" means a body of water open to the atmosphere and subject to surface runoff.

(257) "**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.

(258) "**Susceptibility assessment**" means the completed Susceptibility Assessment Survey Form 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.

(259) "**SUVA**" means specific ultraviolet absorption.

(260) "**SVBA**" means spill resistant vacuum breaker assembly.

(261) "**SWTR**" means the surface water treatment rule.

(262) "**Synthetic organic chemical (SOC)**" means a manufactured carbon-based chemical.

(263) "**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.

(264) "**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.

(265) "**T**" means disinfectant contact time in minutes.

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

(267) "**TNC**" means transient noncommunity.

(268) "**TNTC**" means too numerous to count.

(269) "**TOC**" means total organic carbon.

(270) "**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.

(271) "**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.

(272) "**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.

(273) "**Treatment technique 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 "treatment technique requirement" is established in lieu of a primary MCL when monitoring for the contaminant is not economically or technologically feasible.

(274) "**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).

(275) "**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.

(276) **"TTHM"** means total trihalomethane.

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

(278) **"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.

(279) **"T10"** means the time it takes ten 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.

(280) **"ug/L"** means micrograms per liter.

(281) **"UL"** means the Underwriters Laboratories, Inc.

(282) **"umhos/cm"** means micromhos per centimeter.

(283) **"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.

(284) **"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.

(285) **"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.

(286) **"UPC"** means the Uniform Plumbing Code.

(287) **"Used water"** means water which has left the control of the purveyor.

(288) **"UTC"** means the utilities and transportation commission.

(289) **"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 percent of the original sample.

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

(291) **"VOC"** means a volatile organic chemical.

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

(293) **"Voluntary curtailment"** means a curtailment of water use requested, but not required of consumers.

(294) **"WAC"** means the Washington Administrative Code.

(295) **"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.

(296) **"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.

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

(298) **"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.

(299) **"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.

(300) **"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.

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

(302) **"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.

(303) **"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.

(304) **"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.

(305) **"Water use efficiency (WUE)"** means increasing water supply efficiency and water demand efficiency to minimize water withdrawals and water use.

(306) **"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.

(307) **"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.

(308) **"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.

(309) **"WFI"** means a water facilities inventory form.

(310) **"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.

(311) **"WHPA"** means a wellhead protection area.

(312) **"WUE"** means water use efficiency.

(313) **"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.

[Statutory Authority: RCW 43.20.050 and 70.119A.080. WSR 17-01-062, § 246-290-010, filed 12/14/16, effective 1/14/17; WSR 10-20-068, § 246-290-010, filed 9/29/10, effective 11/1/10. Statutory Authority: RCW 43.20.050. WSR 09-21-045, § 246-290-010, filed 10/13/09, effective 1/4/10. Statutory Authority: RCW 70.119A.180 and 43.20.050. WSR 08-03-061, § 246-290-010, filed 1/14/08, effective 2/14/08. Statutory Authority: RCW 70.119A.180. WSR 07-02-025B, § 246-290-010, filed 12/22/06, effective 1/22/07. Statutory Authority: RCW 43.20.050 and 70.119A.080. WSR 04-04-056, § 246-290-010, filed 1/30/04, effective 3/1/04. Statutory Authority: RCW 43.20.050 (2) and (3) and 70.119A.080. WSR 03-08-037, § 246-290-010, filed 3/27/03, effective 4/27/03. Statutory Authority: RCW 43.02.050 [43.20.050]. WSR 99-07-021, § 246-290-010, filed 3/9/99, effective 4/9/99. Statutory Authority: RCW 43.20.050. WSR 94-14-001, § 246-290-010, filed 6/22/94, effective 7/23/94; WSR 93-08-011 (Order 352B), § 246-290-010, filed 3/25/93, effective 4/25/93; WSR 92-04-070 (Order 241B), § 246-290-010, filed 2/4/92, effective 3/6/92. Statutory Authority: Chapter 43.20 RCW. WSR 91-07-031 (Order 150B), § 246-290-010, filed 3/15/91, effective 4/15/91. Statutory Authority: RCW 43.20.050. WSR 91-02-051 (Order 124B), recodified as § 246-290-010, filed 12/27/90, effective 1/31/91. Statutory Authority: P.L. 99-339. WSR 89-21-020 (Order 336), § 248-54-015, filed 10/10/89, effective 11/10/89. Statutory Authority: RCW 34.04.045. WSR 88-05-057 (Order 307), § 248-54-015, filed 2/17/88. Statutory Authority: RCW 43.20.050. WSR 83-19-002 (Order 266), § 248-54-015, filed 9/8/83.]