

333-061-0020 Definitions

As used in these rules, unless the context indicates otherwise:

- (1) "Act" means the Oregon Drinking Water Quality Act of 1981 (ORS 448.115-448.990 as amended).
- (2) "Action Level" means the concentration of lead or copper in water which determines, in some cases, the treatment requirements that a water system is required to complete.
- (3) "Administrator" means the Director of the Department of Human Services or his/her designee.
- (4) "Approval" or "Approved" means approved in writing.
- (5) "Approved Air Gap (AG)" means a physical separation between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressurized receiving vessel. An "Approved Air Gap" shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the vessel and in no case less than 1 inch (2.54 cm), and in accord with Oregon Plumbing Specialty Code.
- (6) "Approved Backflow Prevention Assembly" means a Reduced Pressure Principle Backflow Prevention Assembly, Reduced Pressure Principle-Detector Backflow Prevention Assembly, Double Check Valve Backflow Prevention Assembly, Double Check-Detector Backflow Prevention Assembly, Pressure Vacuum Breaker Backsiphonage Prevention Assembly, or Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly, of a make, model, orientation, and size approved by the Department. Assemblies listed in the currently approved backflow prevention assemblies list developed by the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research, or other testing laboratories using equivalent testing methods, are considered approved by the Department.
- (7) "Aquifer" means a water saturated and permeable geological formation, group of formations, or part of a formation that is capable of transmitting water in sufficient quantity to supply wells or springs.
- (8) "Aquifer Parameter" means a characteristic of an aquifer, such as thickness, porosity or hydraulic conductivity.
- (9) "Aquifer Test" means pumping a well in a manner that will provide information regarding the hydraulic characteristics of the aquifer.
- (10) "Atmospheric Vacuum Breaker (AVB)" means a non-testable device consisting of an air inlet valve or float check, a check seat and an air inlet port(s). This device is designed to protect against a non-health hazard or a health hazard under a backsiphonage condition only. Product and material approval is under the Oregon Plumbing Specialty Code.
- (11) "Auxiliary Water Supply" means any supply of water used to augment the supply obtained from the public water system, which serves the premise in question.

- (12) "Average Groundwater Velocity" means the average velocity at which groundwater moves through the aquifer as a function of hydraulic gradient, hydraulic conductivity and porosity.
- (13) "AWWA" means the American Water Works Association.
- (14) "Backflow" means the flow of water or other liquids, mixtures, or substances into the distributing pipes of a potable supply of water from any sources other than its intended source, and is caused by backsiphonage or backpressure.
- (15) "Backflow Preventer" means a device, assembly or method to prevent backflow into the potable water system.
- (16) "Backflow Prevention Assembly" means a backflow prevention assembly such as a Pressure Vacuum Breaker Backsiphonage Prevention Assembly, Spill-Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly, Double Check Valve Backflow Prevention Assembly, Double Check-Detector Backflow Prevention Assembly, Reduced Pressure Principle Backflow Prevention Assembly, or Reduced Pressure Principle-Detector Backflow Prevention Assembly and the attached shutoff valves on the inlet and outlet ends of the assembly, assembled as a complete unit.
- (17) "Backpressure" means an elevation of pressure downstream of the distribution system that would cause, or tend to cause, water to flow opposite of its intended direction.
- (18) "Backsiphonage" means a drop in distribution system pressure below atmospheric pressure (partial vacuum), that would cause, or tend to cause, water to flow opposite of its intended direction.
- (19) "Bag filter" means a pressure-driven separation device that removes particulate matter larger than one micrometer using an engineered porous filtration media. It is typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to the outside.
- (20) "Bank Filtration" means a water treatment process that uses a horizontal or vertical 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.
- (21) "Best Available Technology" or "BAT" means the best technology, treatment techniques, or other means which the EPA finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration).
- (22) "Bore-Sighted Drain to Daylight" means an unrestricted straight-line opening in an enclosure that vents to grade, and is sized and constructed to adequately drain the full flow discharge from a reduced pressure principle backflow prevention assembly thus preventing any potential for submersion of the assembly.

- (23) "Bottled Water" means potable water from a source approved by the Department for domestic use which is placed in small, easily transportable containers.
- (24) "Calculated Fixed Radius" means a technique to delineate a wellhead protection area, based on the determination of the volume of the aquifer needed to supply groundwater to a well over a given length of time.
- (25) "Cartridge filter" means a pressure-driven separation device that removes particulate matter larger than one micrometer using an engineered porous filtration media. It is typically constructed of rigid or semi-rigid, self-supporting filter elements housed in a pressure vessel in which flow is from the outside of the cartridge to the inside.
- (26) "CFR" means the Code of Federal Regulations. Specifically, it refers to those sections of the code which deal with the National Primary and Secondary Drinking Water Regulations.
- (27) "Check Valve" means a valve, which allows flow in only one direction.
- (28) "Coagulation" means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into floc.
- (29) "Coliform-Positive" means the presence of coliform bacteria in a water sample.
- (30) "Combined distribution system" means the interconnected distribution system consisting of the distribution systems of wholesale water systems and of the purchasing water systems that receive finished water.
- (31) "Community Water System" means a public water system that has 15 or more service connections used by year-round residents, or that regularly serves 25 or more year-round residents.
- (32) "Compliance Cycle" means the nine-year calendar year cycle during which public water systems must monitor. Each compliance cycle consists of three three-year compliance periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001.
- (33) "Compliance Period" means a three-year calendar year period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; and the third from January 1, 1999 to December 31, 2001.
- (34) "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 CPE must consist of at least the following components: Assessment of plant performance; evaluations of major unit processes; identification and

- prioritization of performance limiting factors; assessment of the applicability of comprehensive technical assistance; and preparation of a CPE report.
- (35) "Conceptual Model" means a three-dimensional representation of the groundwater system, including the location and extent of the hydrogeologic units, areas of recharge and discharge, hydrogeologic boundaries and hydraulic gradient.
- (36) "Confined Well" means a well completed in a confined aquifer. More specifically, it is a well which produces water from a formation that is overlain by an impermeable material of extensive area. This well shall be constructed according to OAR chapter 690, division 200 "Well Construction and Maintenance" standards.
- (37) "Confluent Growth" means a continuous bacterial growth covering the entire filtration area of a membrane filter, or a portion thereof, in which bacterial colonies are not discrete.
- (38) "Constructed Conveyance" means any human-made conduit such as ditches, culverts, waterways, flumes, mine drains, canals or any human-altered natural water bodies or waterways as determined by the Department.
- (39) "Contaminant" means any physical, chemical, biological, or radiological substance or matter in water that creates a health hazard.
- (40) "Contingency Plan" means a document setting out an organized, planned and coordinated course of action to be followed in the event of a loss of capacity to supply water to the distribution system or in case of a fire, explosion or release of hazardous waste which could threaten human health or the environment.
- (41) "Corrosion Inhibitor" means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.
- (42) "Cross Connection" means any actual or potential unprotected connection or structural arrangement between the public or user's potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas, or substances other than the intended potable water with which the system is supplied. Bypass arrangements, jumper connections, removable sections, swivel, or change-over devices, and other temporary or permanent devices through which, or because of which, backflow can occur are considered to be cross connections.
- (43) "CT" means the product of the residual disinfectant concentration "C" (measured in mg/l) and disinfectant contact time(s), "T" (measured in minutes).
- (44) "Degree of Hazard" means either pollution (non-health hazard) or contamination (health hazard) and is determined by an evaluation of hazardous conditions within a system.

- (45) "Delineation" means the determination of the extent, orientation and boundaries of a wellhead protection area using factors such as geology, aquifer characteristics, well pumping rates and time of travel.
- (46) "Demonstration Study" means a series of tests performed to prove an overall effective removal and/or inactivation rate of a pathogenic organism through a treatment or disinfection process.
- (47) "Department" means the Department of Human Services (DHS).
- (48) "Discharge" means the volume rate of loss of groundwater from the aquifer through wells, springs or to surface water.
- (49) "Disinfectant Contact Time" means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfection residual measurement to a point before or at the point where residual disinfectant concentration is measured.
- (50) "Disinfectant Residual Maintenance" means a process where public water systems add chlorine (or other chemical oxidant) for the purpose of maintaining a disinfectant residual in the distribution system, when the source(s) is not at risk of microbial contamination.
- (51) "Disinfection" means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.
- (52) "Disinfection profile" means a summary of *Giardia lamblia* inactivation through the treatment plant.
- (53) "Distribution System" means the network of pipes and other facilities, which are used to distribute water from the source, treatment, transmission, or storage facilities to the water user.
- (54) "Domestic or other non-distribution system plumbing problem" means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform-positive sample was taken.
- (55) "Dose Equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).
- (56) "Double Check-Detector Backflow Prevention Assembly (DCDA)" means a specially designed assembly composed of a line size approved double check valve assembly assembled with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accurately for only very low rates of flow up to three gallons per minute and shall show a registration for all rates of flow. This assembly is designed to protect against a non-health hazard.
- (57) "Double Check Valve Backflow Prevention Assembly (DC)" means an assembly of two independently acting approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the

assembly and fitted with properly located resilient seated test cocks. This assembly is designed to protect against a non-health hazard.

- (58) "Drawdown" means the difference, measured vertically, between the static water level in the well and the water level during pumping.
- (59) "Drinking Water Protection" means implementing strategies within a drinking water protection area to minimize the potential impact of contaminant sources on the quality of water being used as a drinking water source by a Public Water System.
- (60) "Drinking Water Protection Area (DWPA)" means the source area supplying drinking water to a Public Water System. For a surface water-supplied drinking water source the DWPA is all or a specifically determined part of a lake's, reservoir's or stream's watershed that has been certified by the Department of Environmental Quality. For a groundwater-supplied drinking water source the DWPA is the area on the surface that directly overlies that part of the aquifer that supplies groundwater to a well, well field or spring that has been certified by the Department.
- (61) "Drinking Water Protection Plan" means a plan, certified by the Department of Environmental Quality according to OAR 340-040-0160 to 340-040-0180, which identifies the actions to be taken at the local level to protect a specifically defined and certified drinking water protection area. The plan is developed by the local Responsible Management Authority and/or team and includes a written description of each element, public participation efforts, and an implementation schedule.
- (62) "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 for HAA5. Dual sample sets are collected for the purposes of conducting an Initial Distribution System Evaluation (IDSE) as prescribed in 333-061-0036(4)(b) of these rules, and for determining compliance with the maximum contaminant levels for TTHM and HAA5 listed in OAR 333-061-0030(2)(b).
- (63) "Effective Corrosion Inhibitor Residual" means a concentration sufficient to form a passivating film on the interior walls of a pipe.
- (64) "Effective Porosity" means the ratio of the volume of interconnected voids (openings) in a geological formation to the overall volume of the material.
- (65) "Element" means one of seven objectives considered by the U.S. EPA as the minimum required components in any state wellhead protection program: specification of duties, delineation of the wellhead protection area, inventory of potential contaminant sources, specification of management approaches, development of contingency plans, addressing new (future) wells, and ensuring public participation.
- (66) "Emergency" means a condition resulting from an unusual calamity such as a flood, storm, earthquake, drought, civil disorder, volcanic eruption, an accidental spill of hazardous material, or other occurrence which disrupts

water service at a public water system or endangers the quality of water produced by a public water system.

- (67) "Emergency Response Plan" means a written document establishing contacts, operating procedures, and actions taken for a public water system to minimize the impact or potential impact of a natural disaster, accident, or intentional act which disrupts or damages, or potentially disrupts or potentially damages the public water system or drinking water supply, and returns the public water system to normal operating condition.
- (68) "Enhanced coagulation" means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment.
- (69) "Enhanced softening" means the improved removal of disinfection byproduct precursors by precipitative softening.
- (70) "EPA" means the United States Environmental Protection Agency.
- (71) "Filter profile" means a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from start-up to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.
- (72) "Filtration" means a process for removing particulate matter from water through porous media.
 - (a) "Conventional Filtration Treatment" means a series of processes including coagulation (requiring the use of a primary coagulant and rapid mix), flocculation, sedimentation, and filtration resulting in substantial particulate removal.
 - (b) "Direct Filtration Treatment" means a series of processes including coagulation (requiring the use of a primary coagulant and rapid mix) and filtration but excluding sedimentation resulting in substantial particulate removal.
 - (c) "Slow Sand Filtration" means a treatment process involving passage of raw water through a bed of sand at low velocity (generally less than 235 gallons per square foot per day) resulting in substantial particulate removal by physical and biological mechanisms.
 - (d) "Diatomaceous Earth Filtration" means a process resulting in substantial particulate removal in which:
 - (A) A precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum); and
 - (B) While the water is filtered by passing through the cake on the septum, additional filter media, known as body feed, is continuously added to the feed water, in order to maintain the permeability of the filter cake.
- (73) "Finished water" means water that is introduced into the distribution system of a public water system and intended for distribution and consumption without further treatment, except as necessary to maintain water quality in

the distribution system such as booster disinfection or the addition of corrosion control chemicals.

- (74) "First Customer" means the initial service connection or tap on a public water supply after any treatment processes.
- (75) "First Draw Sample" means a one-liter sample of tap water that has been standing in plumbing pipes at least 6 hours and is collected without flushing the tap.
- (76) "Flocculation" means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.
- (77) "Flowing stream" means a course of running water flowing in a definite channel.
- (78) "Future Groundwater Sources" means wells and/or springs that may be required by the public water system in the future to meet the needs of the system.
- (79) "GAC 10" means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with OAR 333-061-0030(2)(b) shall be 120 days.
- (80) "GAC 20" means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.
- (81) "Gross Alpha Particle Activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.
- (82) "Gross Beta Particle Activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.
- (83) "Groundwater System" means any public water system that uses groundwater, including purchasing water systems that receive finished groundwater, but excluding public water systems that combine all of their groundwater with surface water or groundwater under the direct influence of surface water prior to treatment.
- (84) "Groundwater under the direct influence of surface water (GWUDI)" means any water beneath the surface of the ground with significant occurrence of insects or other macro-organisms, algae or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.
- (85) "Haloacetic acids (five) (HAA5)" mean the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid and dibromoacetic acid), rounded to two significant figures after addition.
- (86) "Hauled Water" means water for human consumption transported from a Public Water System in a manner approved by the Department.

- (87) "Health Hazard (Contamination)" means an impairment of the quality of the water that could create an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids, waste, or other substances.
- (88) "Human Consumption" means water used for drinking, personal hygiene bathing, showering, cooking, dishwashing and maintaining oral hygiene.
- (89) "Hydraulic Conductivity" means the capacity of the medium, e.g., soil, aquifer, or any hydrogeological unit of interest, to transmit water.
- (90) "Hydraulic Connection" refers to a well, spring or other groundwater collection system in which it has been determined that part of the water supplied by the collection system is derived, either naturally or induced, from a surface water source.
- (91) "Hydraulic Gradient" means the slope of the water table or potentiometric surface, calculated by dividing the change in hydraulic head between two points by the horizontal distance between the points in the direction of groundwater flow.
- (92) "Hydraulic Head" means the energy possessed by the water mass at a given point, related to the height above the datum plane that water resides in a well drilled to that point. In a groundwater system, the hydraulic head is composed of elevation head and pressure head.
- (93) "Hydrogeologic Boundary" means physical features that bound and control direction of groundwater flow in a groundwater system. Boundaries may be in the form of a constant head, e.g. streams, or represent barriers to flow, e.g. groundwater divides and impermeable geologic barriers.
- (94) "Hydrogeologic Mapping" means characterizing hydrogeologic features (e.g. hydrogeologic units, hydrogeologic boundaries, etc.) within an area and determining their location, areal extent and relationship to one another.
- (95) "Hydrogeologic Unit" means a geologic formation, group of formations, or part of a formation that has consistent and definable hydraulic properties.
- (96) "Impermeable Material" means a material that limits the passage of water.
- (97) "Impounding Reservoir" means an uncovered body of water formed behind a dam across a river or stream, and in which water is stored.
- (98) "Infiltration Gallery" means a system of perforated pipes laid along the banks or under the bed of a stream or lake installed for the purpose of collecting water from the formation beneath the stream or lake.
- (99) "Initial Compliance Period" means the 1993-95 three-year compliance period for systems with 150 or more service connections and the 1996-98 three-year compliance period for systems having fewer than 150 service connections for the contaminants prescribed in OAR 333-061-0036(2)(a)(A)(v), 333-061-0036(3)(a)(J) and (3)(c)(N).
- (100) "Interfering Wells" means wells that, because of their proximity and pumping characteristics, and as a result of the aquifer's hydraulic properties, produce drawdown cones that overlap during simultaneous pumping. The

result is a lowering of the pumping level in each well below what it would be if that well were pumping by itself.

- (101) "Inventory of Potential Contaminant Sources" means the reconnaissance level location of land use activities within the Drinking Water Protection Area that as a category have been associated with groundwater or surface water contamination in Oregon and elsewhere in the United States.
- (102) "Lake/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.
- (103) "Lead Free" when used with respect to solders and flux shall mean solders and flux containing not more than 0.2 percent lead, and when used with respect to pipes and fittings shall mean pipes and fittings containing not more than 8.0 percent lead. When used with respect to plumbing fittings and fixtures intended for dispensing water for human consumption shall mean in compliance with standards established in accordance with 42 U.S.C. 300g-6(e) and ANSI/NSF standard 61, section 9.
- (104) "Lead Service Line" means a service line made of lead, which connects the water main to the building inlet and any pigtail, gooseneck or other fitting, which is connected to such lead line.
- (105) "*Legionella*" means a genus of bacteria, some species of which have caused a type of pneumonia called Legionnaires Disease.
- (106) "Local Administrative Authority" means the individual official, board, department or agency established and authorized by a state, county or city to administer and enforce the provisions of the Oregon State Plumbing Specialty Code adopted under OAR 918-750-0110.
- (107) "Locational running annual average (LRAA)" means the arithmetic average of analytical results for samples taken at a specific monitoring location during the previous four calendar quarters.
- (108) "Major Additions or Modifications" means changes of considerable extent or complexity including, but not limited to, projects involving water sources, treatment facilities, facilities for continuous disinfection, finished water storage, pumping facilities, transmission mains, and distribution mains, except main replacements of the same length and diameter.
- (109) "Man-made Beta Particle and Photon Emitters" means all radionuclides emitting beta particles and/or photons listed in **Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure, NBS Handbook 69**, except the daughter products of Thorium-232, Uranium-235 and Uranium-238.
- (110) "Master Plan" means an overall plan, which shows the projected development of a distribution system and alternatives for source development.
- (111) "Maximum Contaminant Level (MCL)" means the maximum allowable level of a contaminant in water delivered to the user's of a public water

system, except in the case of turbidity where the maximum allowable level is measured at the point of entry to the distribution system.

- (112) "Maximum Residual Disinfectant Level (MRDL)" means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.
- (113) "Membrane filtration" means a pressure or vacuum driven separation process in which particulate matter larger than one 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.
- (114) "Multi-purpose Piping System" means a piping system within residential dwellings intended to serve both domestic and fire protection needs. This type of system is considered part of a potable water system.
- (115) "New Groundwater Sources" means additional or modified wells and/or springs owned by the Public Water System.
- (116) "Non-Health Hazard (Pollution)" means an impairment of the quality of the water to a degree that does not create a hazard to the public health, but does adversely affect the aesthetic qualities of such water for potable use.
- (117) "Non-Transient Non-Community Water System (NTNC)" means a public water system that is not a Community Water System and that regularly serves at least 25 of the same persons over 6 months per year.
- (118) "Open Interval" means in a cased well, the sum of the length(s) of the screened or perforated zone(s) and in an uncased (open-hole) well, the sum of the thickness(es) of the water-bearing zones or, if undeterminable, 10 percent of the length of the open hole.
- (119) "Optimal Corrosion Control Treatment" means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while insuring that the treatment does not cause the water system to violate any national primary drinking water regulations.
- (120) "Pathogenic" means a specific agent (bacterium, virus or parasite) causing or capable of causing disease.
- (121) "Peak Daily Demand" means the maximum rate of water use, expressed in gallons per day, over the 24-hour period of heaviest consumption.
- (122) "Permit" means official permission granted by the Department for a public water system which exceeds maximum contaminant levels to delay, because of economic or other compelling factors, the installation of water treatment facilities which are necessary to produce water which does not exceed maximum contaminant levels.
- (123) "Person" means any individual, corporation, association, firm, partnership, municipal, state or federal agency, or joint stock company and includes any receiver, special master, trustee, assignee, or other similar representative thereof.

- (124) "Picocurie (pCi)" means that quantity of radioactive material producing 2.22 nuclear transformations per minute.
- (125) "Pilot Study" means the construction and operation of a scaled down treatment system during a given period of time to determine the feasibility a full-scale treatment facility.
- (126) "Plant intake" means the works or structures at the head of a conduit through which water is diverted from a source, such as a river or lake, into a treatment plant.
- (127) "Plug Flow" means movement of water in a pipe such that particles pass through the pipe and are discharged in the same sequence in which they entered.
- (128) "Point of Delivery (POD)" means the point of connection between a public water system and the user's water system. Beyond the point of delivery, the Oregon Plumbing Specialty Code applies. See "Service Connection."
- (129) "Point of Disinfectant Application" is the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water runoff.
- (130) "Point-of-Entry Treatment Device" is a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.
- (131) "Point-of-Use Treatment Device" is a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap.
- (132) "Pollutant" means a substance that creates an impairment of the quality of the water to a degree which does not create a hazard to the public health, but which does adversely affect the aesthetic qualities of the water.
- (133) "Porous Media Assumption" means the assumption that groundwater moves in the aquifer as if the aquifer were granular in character, i.e. moves directly down-gradient, and the velocity of the groundwater can be described by Darcy's Law.
- (134) "Potable Water." See Safe Drinking Water.
- (135) "Potential Contaminant Source Inventory" means the determination of the location within the wellhead protection area of activities known to use or produce materials that can contaminate groundwater.
- (136) "Potential Cross Connection" means a cross connection that would most likely occur, but may not be taking place at the time of an inspection.
- (137) "Potentiometric Surface" means a surface that denotes the variation of hydraulic head in the given aquifer across an area.
- (138) "Premise" means real estate and the structures on it.
- (139) "Premise Isolation" means the practice of protecting the public water supply from contamination or pollution by installing backflow prevention assemblies at, or near, the point of delivery where the water supply enters

the premise. Premise isolation does not guarantee protection to persons on the premise.

- (140) "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.
- (141) "Pressure Vacuum Breaker Backsiphonage Prevention Assembly (PVB)" means an assembly consisting of an independently operating, internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. This assembly is to be equipped with properly located resilient seated test cocks and tightly closing resilient seated shutoff valves attached at each end of the assembly. This assembly is designed to protect against a non-health hazard or a health hazard under backsiphonage conditions only.
- (142) "Provisional Delineation" means approximating the wellhead protection area for a well by using the wellhead protection area from another well in the same hydrogeologic setting or by using generalized values for the aquifer characteristics to generate an approximate wellhead protection area for the well. Used only for the purpose of evaluating potential siting of new or future groundwater sources. Not an acceptable way to formally delineate a wellhead protection area.
- (143) "Public Health Hazard" means a condition, device or practice which is conducive to the introduction of waterborne disease organisms, or harmful chemical, physical, or radioactive substances into a public water system, and which presents an unreasonable risk to health.
- (144) "Public Water System" means a system for the provision to the public of piped water for human consumption, if such system has more than three service connections, or supplies water to a public or commercial establishment that operates a total of at least 60 days per year, and that is used by 10 or more individuals per day. Public water system also means a system for the provision to the public of water through constructed conveyances other than pipes to at least 15 service connections or regularly serves at least 25 individuals daily at least 60 days of the year. A public water system is either a "Community Water System," a "Transient Non-Community Water System," a "Non-Transient Non-Community Water System" or a "State Regulated Water System."
- (145) "Purchasing Water System" means a public water system which obtains its water in whole or in part from another public water system. Delivery may be through a direct connection or through the distribution system of one or more purchasing water systems.
- (146) "Recharge" means the process by which water is added to a zone of saturation, usually by downward infiltration from the surface.
- (147) "Recharge Area" means a land area in which water percolates to the zone of saturation through infiltration from the surface.

- (148) "Recovery" means the rise in water level in a well from the pumping level towards the original static water level after pumping has been discontinued.
- (149) "Reduced Pressure Principle Backflow Prevention Assembly (RP)" means an assembly containing two independently acting approved check valves, together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located resilient seated test cocks and tightly closing resilient seated shutoff valves at each end of the assembly. This assembly is designed to protect against a non-health hazard or a health hazard.
- (150) "Reduced Pressure Principle-Detector Backflow Prevention Assembly (RPDA)" means a specifically designed assembly composed of a line size approved reduced pressure principle backflow prevention assembly with a bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly. The meter shall register accurately for only very low rates of flow up to three gallons per minute and shall show a registration for all rates of flow. This assembly is designed to protect against a non-health hazard or a health hazard.
- (151) "Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.
- (152) "Repeat Compliance Period" means any subsequent compliance period after the initial compliance period.
- (153) "Residual disinfectant concentration" means the concentration of disinfectant measured in mg/l in a representative sample of water.
- (154) "Responsible Management Authority" means the Public Water System whose water supply is being protected and any government entity having management, rule or ordinance-making authority to implement wellhead protection management strategies within the wellhead protection area. The Responsible Management Authority is responsible for implementation of the Wellhead Protection Plan and includes cities, counties, special districts, Indian tribes, state/federal entities as well as public water systems.
- (155) "Safe Drinking Water" means water which has sufficiently low concentrations of microbiological, inorganic chemical, organic chemical, radiological or physical substances so that individuals drinking such water at normal levels of consumption, will not be exposed to disease organisms or other substances which may produce harmful physiological effects.
- (156) "Sanitary Survey (Water System Survey)" means an on-site review of the water source(s), facilities, equipment, operation, maintenance and monitoring compliance of a public water system to evaluate the adequacy of the water system, its sources and operations in the distribution of safe drinking water. The sanitary survey also identifies sources of contamination by using the results of source water assessments where available.

- (157) "Secondary Contaminant" means those contaminants, which, at the levels generally found in drinking water, do not present an unreasonable risk to health, but do:
- (a) Have adverse effects on the taste, odor and color of water;
 - (b) Produce undesirable staining of plumbing fixtures; or
 - (c) Interfere with treatment processes applied by water suppliers.
- (158) "Secondary Maximum Contaminant Level (SMCL)" means the level of a secondary contaminant which when exceeded may adversely affect the aesthetic quality of the drinking water which thereby may deter public acceptance of drinking water provided by public water systems or may interfere with water treatment methods.
- (159) "Sedimentation" means a process for removal of solids before filtration by gravity or separation.
- (160) "Sensitivity" means the intrinsic characteristics of a drinking water source such as depth to the aquifer for groundwater or highly erodible soils in a watershed that increase the potential for contamination to take place if a contaminant source is present.
- (161) "Service Connection" means the piping connection by means of which water is conveyed from a distribution main of a public water system to a user's premise. For a community water system, the portion of the service connection that conveys water from the distribution main to the user's property line, or to the service meter, where provided, is under the jurisdiction of the water supplier.
- (162) "Significant Deficiency" means a defect in design, operation, or maintenance, or a malfunction of the source(s), treatment, storage, or distribution system that has been determined to cause or have the potential for causing the introduction of contamination into the water delivered to consumers.
- (163) "Single Connection System" means a public water system serving only one installation, such as a restaurant, campground or place of employment.
- (164) "Single Family Structure" means a building constructed as a single-family residence that is currently used as either a residence or a place of business.
- (165) "Source Water Assessment" means the information compiled by the Department and the Department of Environmental Quality (DEQ), consisting of the delineation, inventory and susceptibility analyses of the drinking water source, which enable public water systems to develop and implement drinking water protection plans.
- (166) "Specific Ultraviolet Absorption (SUVA) at 254 nanometers" means an indicator of the humic content of water as a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nanometers (UV254) by its concentration of dissolved organic carbon (DOC) (in milligrams per liter).
- (167) "Spill Resistant Pressure Vacuum Breaker Backsiphonage Prevention Assembly (SVB)" means an assembly containing an independently

operating, internally loaded check valve and independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with a properly located resilient seated test cock, a properly located bleed/vent valve, and tightly closing resilient seated shutoff valves attached at each end of the assembly. This assembly is designed to protect against a non-health hazard or a health hazard under a backsiphonage condition only.

- (168) "Spring" means a naturally occurring discharge of flowing water at the ground surface, or into surface water. Springs can be derived from groundwater or they can be surface water influenced.
- (169) "Stand-alone Fire Suppression System" means a piping system within a premise intended to only serve as a fire protection system separated from the potable water system.
- (170) "State Regulated Water System" means a public water system, which serves 4 to 14 service connections or serves 10 to 24 people. Monitoring requirements for these systems are the same as those for Transient Non-Community water systems.
- (171) "Static Water Level" means the vertical distance from ground surface to the water level in the well when the well is at rest, i.e., the well has not been pumped recently and the water level is stable. The natural level of water in the well.
- (172) "Surface Water" means all water, which is open to the atmosphere and subject to surface runoff.
- (173) "Susceptibility" means the potential, as a result of the combination of land use activities and source water sensitivity that contamination of the drinking water source may occur.
- (174) "Team" means the local Wellhead Protection team, which includes representatives from the Responsible Management Authorities and various interests and stakeholders potentially affected by the Wellhead Protection Plan.
- (175) "Thermal Expansion" means the pressure increase due to a rise in water temperature that occurs in water piping systems when such systems become "closed" by the installation of a backflow prevention assembly or other means, and will not allow for expansion beyond that point of installation.
- (176) "These Rules" means the Oregon Administrative Rules encompassed by OAR 333-061-0005 through 333-061-0098.
- (177) "Time-of-Travel (TOT)" means the amount of time it takes groundwater to flow to a given well. The criterion that effectively determines the radius in the calculated fixed radius method and the up-gradient distance to be used for the analytical and numerical models during delineation of the wellhead protection area.
- (178) "Too Numerous To Count (TNTC)" means that the total number of bacterial colonies exceeds 200 on a 47 mm diameter membrane filter used for coliform bacteria detection.

- (179) "Total Organic Carbon (TOC)" means total organic carbon in milligrams per liter measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two significant figures.
- (180) "Total Trihalomethanes (TTHM)" means the sum of the concentrations in milligrams per liter of the trihalomethane compounds bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform), rounded to two significant figures after addition.
- (181) "Transient Non-Community Water System" means a public water system that serves a transient population of 25 or more persons.
- (182) "Turbidity" means a measure of the cloudiness of water caused by suspended particles. The units of measure for turbidity are nephelometric turbidity units (NTU).
- (183) "Two-stage lime softening" means a process in which a chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.
- (184) "Unconfined Well" means a well completed in an unconfined aquifer. More specifically, a well which produces water from a formation that is not overlaying by impermeable material. This well shall be constructed according to OAR chapter 690, division 200 "Well Construction and Maintenance" standards.
- (185) "Uncovered finished water storage facility" means a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere.
- (186) "University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research (USC FCCCHR)" is an agency that conducts laboratory and field tests to evaluate and grant "Certificates of Approval" to backflow prevention assemblies meeting approved standards.
- (187) "Vadose Zone" means the zone between the ground surface and the water table where the available open spaces between soil and sediment particles, in rock fractures, etc., are most filled with air.
- (188) "Variance" means official permission granted by the Department for public water systems to exceed maximum contaminant levels because the quality of the raw water is such that the best available treatment techniques are not capable of treating the water so that it complies with maximum contaminant levels, and there is no unreasonable risk to health.
- (189) "Vault" means an approved enclosure above or below ground to house a backflow prevention assembly that complies with the local administrative authority having jurisdiction.
- (190) "Virus" means a virus of fecal origin, which is infectious to humans by waterborne transmission.

- (191) "Waiver" means official permission from the Department for a public water system to deviate from the construction standards set forth in these rules.
- (192) "Water-bearing Zone" means that part or parts of the aquifer encountered during drilling that yield(s) water to a well.
- (193) "Waterborne disease outbreak" means the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system which is deficient in treatment, as determined by the Department.
- (194) "Water Supplier" means a person, group of persons, municipality, district, corporation or other entity, which owns or operates a public potable water system.
- (195) "Water Source" means any lake, stream, spring, groundwater supply, impoundment or other source of water from which water is obtained for a public water system. In some cases, a public water system can be the source of supply for one or more other public water systems.
- (196) "Water System" means a system for the provision of piped water for human consumption.
- (197) "Water System Operations Manual" means a written document describing the actions and procedures necessary to operate and maintain the entire water system.
- (198) "Water Table" means the upper surface of an unconfined aquifer, the surface of which is at atmospheric pressure and fluctuates seasonally. It is defined by the levels at which water stands in wells that penetrate the aquifer.
- (199) "Well" means an artificial opening or artificially altered natural opening, however made, by which ground water is sought or through which ground water flows under natural pressure or is artificially withdrawn or injected, provided that this definition shall not include a natural spring, or wells drilled for the purpose of exploration or production of oil or gas.
- (200) "Wellfield" means two or more drinking water wells, belonging to the same water system that are within 2,500 feet, or as determined by the Department, and produce from the same and no other aquifer.
- (201) "Wellhead Protection." See Drinking Water Protection.
- (202) "Wellhead Protection Area (WHPA)." See Drinking Water Protection Area.
- (203) "Wellhead Protection Plan." See Drinking Water Protection Plan.
- (204) "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 purchasing water systems.

333-061-0025

Responsibilities of Water Suppliers

Water suppliers are responsible for taking all reasonable precautions to assure that the water delivered to water users does not exceed maximum contaminant levels,

to assure that water system facilities are free of public health hazards, and to assure that water system operation and maintenance are performed as required by these rules. This includes, but is not limited to, the following:

- (1) Routinely collect and submit water samples for laboratory analyses at the frequencies prescribed by OAR 333-061-0036;
- (2) Take immediate corrective action when the results of analyses or measurements indicate that maximum contaminant levels have been exceeded and report the results of these analyses as prescribed by OAR 333-061-0040;
- (3) Continue to report as prescribed by OAR 333-061-0040, the results of analyses or measurements which indicate that maximum contaminant levels have not been exceeded;
- (4) Notify all customers of the system, as well as the general public in the service area, when the maximum contaminant levels have been exceeded;
- (5) Notify all customers served by the system when the reporting requirements are not being met, or when public health hazards are found to exist in the system, or when the operation of the system is subject to a permit or a variance;
- (6) Maintain monitoring and operating records and make these records available for review when the system is inspected;
- (7) Maintain a pressure of at least 20 pounds per square inch (psi) at all service connections at all times;
- (8) Follow-up on complaints relating to water quality from users and maintain records and reports on actions undertaken;
- (9) Conduct an active program for systematically identifying and controlling cross connections;
- (10) Submit, to the Department, plans prepared by a professional engineer registered in Oregon for review and approval before undertaking the construction of new water systems or major modifications to existing water systems, unless exempted from this requirement;
- (11) Assure that the water system is in compliance with OAR 333-061-0205 relating to certification of water system operators; and
- (12) Assure that Transient Non-Community water systems utilizing surface water sources or groundwater sources under the influence of surface water are in compliance with OAR 333-061-0065(2)(c) relating to required special training.