

Dear Senators HEIDER, Nuxoll, Schmidt, and
Representatives THOMPSON, Anderst, Smith:

The Legislative Services Office, Research and Legislation, has received the enclosed rules of the
Department of Environmental Quality:

IDAPA 58.01.08 - Idaho Rules for Public Drinking Water Systems - Proposed Rulemaking (Docket
No. 58-0108-1501).

Pursuant to Section 67-454, Idaho Code, a meeting on the enclosed rules may be called by the
cochairmen or by two (2) or more members of the subcommittee giving oral or written notice to Research
and Legislation no later than fourteen (14) days after receipt of the rules' analysis from Legislative
Services. The final date to call a meeting on the enclosed rules is no later than 07/27/2015. If a meeting is
called, the subcommittee must hold the meeting within forty-two (42) days of receipt of the rules' analysis
from Legislative Services. The final date to hold a meeting on the enclosed rules is 08/24/2015.

The germane joint subcommittee may request a statement of economic impact with respect to a
proposed rule by notifying Research and Legislation. There is no time limit on requesting this statement,
and it may be requested whether or not a meeting on the proposed rule is called or after a meeting has
been held.

To notify Research and Legislation, call 334-4834, or send a written request to the address on the
memorandum attached below.



Eric Milstead
Director

Legislative Services Office

Idaho State Legislature

Serving Idaho's Citizen Legislature

MEMORANDUM

TO: Rules Review Subcommittee of the Senate Health & Welfare Committee and the House Environment, Energy & Technology Committee

FROM: Principal Legislative Research Analyst - Katharine Gerrity

DATE: July 08, 2015

SUBJECT: Department of Environmental Quality

IDAPA 58.01.08 - Idaho Rules for Public Drinking Water Systems - Proposed Rulemaking (Docket No. 58-0108-1501)

The Department of Environmental Quality submits notice of proposed rulemaking at IDAPA 58.01.08 - Idaho Rules for Public Drinking Water Systems. According to the department, the purpose of the rulemaking is to adopt into state rules the federal Revised Total Coliform Rule (RTCR) which was promulgated by the EPA in February of 2013. The department notes that in order to maintain primary enforcement authority, Idaho is required to adopt the RTCR by April of 2016. The department notes that the RTCR does contain some options to negotiate such as reduced monitoring provisions, qualifications of assessors for Level 2 assessments, criteria for waiving seasonal system start-up requirements, methods for consulting with the state and types of sanitary defects, all of which were discussed during the department's negotiated rulemaking process. The department indicates that the RTCR is intended to increase public health protections through the reduction of potential pathways of entry for fecal contamination into public water distribution systems.

The department states that the RTCR establishes a maximum contaminant level for E.coli and uses E.coli and total coliform positive results to trigger assessments and follow up corrections as a "find and fix" approach to address fecal contamination that could enter into the distribution system. The rule removes the total coliform maximum contaminant level and replaces it with a trigger level under which to perform an assessment. The department notes that the rule also requires systems that operate seasonally to follow start-up procedures unless the system qualifies for an exemption. The department goes on to state that most of the substantive changes in the rule include performing assessments and changes in monitoring requirements.

The department indicates that there are also some proposed changes in the rule that are not associated with the RTCR. The department states that the proposed changes should provide clarification and remove unnecessary requirements and include removing the lower temperature flow criteria for slow-sand filters, adding flushing as an adequate means to remove contamination following depressurization and providing clarifying language for the types of chemicals allowed in performing tracer studies to demonstrate disinfection contact time.

Mike Nugent, Manager
Research & Legislation

Cathy Holland-Smith, Manager
Budget & Policy Analysis

April Renfro, Manager
Legislative Audits

Glenn Harris, Manager
Information Technology

The department confirms that the proposed rule does not regulate an activity not regulated by the federal government, nor is it broader in scope or more stringent than federal regulations. Negotiated rulemaking was conducted. The rulemaking appears to be authorized pursuant to Chapter 1, Title 39, Idaho Code, and Chapter 21, Title 37, Idaho Code.

cc: Department of Environmental Quality
Paula J. Wilson

IDAPA 58 - DEPARTMENT OF ENVIRONMENTAL QUALITY

58.01.08 - IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS

DOCKET NO. 58-0108-1501

NOTICE OF RULEMAKING - PROPOSED RULEMAKING

AUTHORITY: In compliance with Section 67-5221(1), Idaho Code, notice is hereby given that this agency has initiated proposed rulemaking. This rulemaking action is authorized by Chapter 1, Title 39, Idaho Code, and Chapter 21, Title 37, Idaho Code.

PUBLIC HEARING SCHEDULE: No hearings have been scheduled. Pursuant to Section 67-5222(2), Idaho Code, a public hearing will be held if requested in writing by twenty-five (25) persons, a political subdivision, or an agency. Written requests for a hearing must be received by the undersigned on or before July 15, 2015. If no such written request is received, a public hearing will not be held.

DESCRIPTIVE SUMMARY: This rulemaking has been initiated to adopt into state rules the federal Revised Total Coliform Rule (RTCR) (40 CFR 141, Subpart Y). The Environmental Protection Agency promulgated the RTCR on February 13, 2013. The RTCR is intended to increase public health protection through the reduction of potential pathways of entry for fecal contamination into public water distribution systems. To maintain primary enforcement authority, Idaho is required to adopt the RTCR by April 2016. The RTCR contains some options to negotiate.

The RTCR establishes a maximum contaminant level (MCL) for E.coli and uses E.coli and total coliform positive results to initiate or trigger assessments and follow up corrections as a “find and fix” approach to address fecal contamination that could enter into the distribution system. The rule removes the total coliform MCL and replaces it with a trigger level under which to perform an assessment. This rule also requires systems that operate seasonally to follow start-up procedures unless the system qualifies for an exemption from these procedures. Most of the substantive changes in the rule include performing assessments and changes in monitoring requirements.

DEQ proposes to incorporate most of the RTCR by reference from 40 CFR 141, Subpart Y, which addresses the definitions, sample siting plans, MCLs, assessment triggers and requirements, as well as monitoring and reporting requirements. Incorporation by reference simplifies the overall rule and reduces agency costs for rulemaking.

The negotiated rulemaking committee did discuss portions of the rule where options exist, which include reduced monitoring provisions, qualifications of assessors for Level 2 Assessments, criteria for waiving seasonal system start-up requirements, methods for consulting with the state, and types of sanitary defects.

Additionally, there are some changes DEQ proposes to make to the Idaho Rules for Public Drinking Water Systems that are not associated with the RTCR. These changes should provide clarification and remove unnecessary requirements and include removing the lower temperature flow criteria for slow-sand filters, adding flushing as an adequate means to remove contamination following depressurization, and providing clarifying language for the types of chemicals allowed in performing tracer studies to demonstrate disinfection contact time.

Drinking water system owners and operators, developers, consultants, engineers, cities, counties, industry, drinking water professional organizations, and the public at large may be interested in commenting on this proposed rule. The proposed rule text is in legislative format. Language the agency proposes to add is underlined. Language the agency proposes to delete is struck out. It is these additions and deletions to which public comment should be addressed.

After consideration of public comments, DEQ intends to present the final proposal to the Board of Environmental Quality in the fall of 2015 for adoption of a pending rule. The rule is expected to be final and effective upon adjournment of the 2016 legislative session if adopted by the Board and approved by the Legislature.

INCORPORATION BY REFERENCE: Pursuant to Section 67-5229(2)(a), Idaho Code, the following is a brief synopsis of why the incorporation by reference is necessary:

This proposed rule incorporates federal regulations by reference. Incorporation by reference is necessary to ensure that the state rules are consistent with federal regulations. An electronic copy of the federal regulations incorporated by reference can be obtained at www.gpoaccess.gov/ecfr.

NEGOTIATED RULEMAKING: The text of the proposed rule has been drafted based on discussions held and concerns raised during negotiations conducted pursuant to Idaho Code § 67-5220 and IDAPA 58.01.23.810-815. The Notice of Negotiated Rulemaking was published in the April 2015 Idaho Administrative Bulletin, **Vol. 15-4**, and a preliminary draft rule was made available for public review. A meeting was held on April 22, 2015. Several members of the public participated in this negotiated rulemaking process by attending the meeting. The negotiated rulemaking record, which includes the negotiated rule drafts, and documents distributed during the negotiated rulemaking process, is available at www.deq.idaho.gov/58-0108-1501.

All comments received during the negotiated rulemaking process were considered by DEQ when making decisions that resulted in drafting the proposed rule. At the conclusion of the negotiated rulemaking process, DEQ formatted the final rule draft for publication as a proposed rule. DEQ is now seeking public comment on the proposed rule.

IDAHO CODE SECTION 39-107D STATEMENT: This proposed rule does not regulate an activity not regulated by the federal government, nor is it broader in scope or more stringent than federal regulations.

FISCAL IMPACT STATEMENT: The following is a specific description, if applicable, of any negative fiscal impact on the state general fund greater than ten thousand dollars (\$10,000) during the fiscal year when the pending rule will become effective: Not applicable.

ASSISTANCE ON TECHNICAL QUESTIONS AND SUBMISSION OF WRITTEN COMMENTS: For assistance on technical questions concerning this rulemaking, contact Jerri Henry at jerri.henry@deq.idaho.gov or (208) 373-0471.

Anyone may submit written comments by mail, fax or email at the address below regarding this proposed rule. DEQ will consider all written comments received by the undersigned on or before July 29, 2015.

Dated this 1st Day of July, 2015.

Paula J. Wilson, Hearing Coordinator
Department of Environmental Quality
1410 N. Hilton, Boise, Idaho 83706-1255
(208)373-0418/Fax No. (208)373-0481
paula.wilson@deq.idaho.gov

THE FOLLOWING IS THE PROPOSED TEXT OF DOCKET NO. 58-0108-1501
(Only those Sections being amended are shown.)

002. INCORPORATION BY REFERENCE AND AVAILABILITY OF REFERENCED MATERIALS.

01. Incorporation by Reference. The following documents are incorporated by reference into these rules. (4-11-06)

a. 40 CFR Part 141, revised as of July 1, ~~2011~~ 2015 (excluding annual monitoring provisions in 40 CFR 141.854(a)(4),(d),(e),(f) and (h), and the Aircraft Drinking Water Rule in Subsection X), and 40 CFR Part 143, revised as of July 1, 2011. Any reference in these rules to requirements, procedures, or specific forms contained in any section or subsection of 40 CFR Parts 141 and 143 shall constitute the full adoption by reference of that section or subsection, including any notes and appendices therein, unless expressly provided otherwise in these rules.

~~(4-4-13)~~()

b. American Water Works Association (AWWA) Standards, effective December 2009, available for a fee from the AWWA, 6666 West Quincy Avenue, Denver, Colorado 80235, Telephone (800) 926-7337, <http://apps.awwa.org/ebusmain/OnlineStore.aspx>. (4-7-11)

02. Availability of Specific Referenced Material. Copies of specific documents referenced within these rules are available at the following locations: (4-11-06)

a. All federal regulations: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Telephone (202)783-3238; U.S. Government Bookstore, Room 194, Federal Bldg., 915 Second Ave., Seattle, WA 98174, (206) 553-4270; or **Online at** <http://www.gpoaccess.gov/ecfr/index.html>. (4-7-11)

b. All documents incorporated by reference are available for review at the Department of Environmental Quality, 1410 N. Hilton, Boise, ID 83706-1255, (208) 373-0502. (4-7-11)

c. Recommended Standards for Water Works: a report of the Water Supply Committee of the Great Lakes -- Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, published by Health Education Services, P.O. Box 7126, Albany, New York 12224, Telephone (518) 439-7286. (4-7-11)

d. Manual of Individual and Non-Public Water Supply Systems (EPA 570/9-91-004), published by the U.S. Environmental Protection Agency, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.20402, Telephone (202) 782-3238. (5-3-03)

e. U.S. Department of Commerce, National Bureau of Standards Handbook, No. 69, "Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure" as amended in 1963, NCRP Publications, P.O. Box 20175, Washington, D.C. 20014. (12-10-92)

f. Rules of the Idaho Water Resources Board are available at <http://www.adminrules.idaho.gov/rules/37/37index.htm>, or the Idaho Department of Water Resources, Idaho Water Center, 322 E. Front St., P.O. Box 83720, Boise, Idaho 83720-0098, Telephone (208) 287-4800. (3-30-07)

g. ANSI/NSF Standard 44-2002e -- 2004, Residential Cation Exchange Water Softeners, available from the National Sanitation Foundation, 789 N. Dixboro Road, Ann Arbor, Michigan 48105, Telephone (734) 769-8010. (4-6-05)

h. ANSI/NSF Standard 53-2002e -- 2003, Drinking Water Treatment Units -- Health Effects, available from the National Sanitation Foundation, 789 N. Dixboro Road, Ann Arbor, Michigan 48105, Telephone (734) 769-8010. (4-6-05)

i. ANSI/NSF Standard 55-2002 -- 2002, Ultraviolet Microbiological Water Treatment Systems, available from the National Sanitation Foundation, 789 N. Dixboro Road, Ann Arbor, Michigan 48105, Telephone (734) 769-8010. (4-6-05)

j. ANSI/NSF Standard 58-2003 -- 2004, Reverse Osmosis Drinking Water Treatment Systems, available from the National Sanitation Foundation, 789 N. Dixboro Road, Ann Arbor, Michigan 48105, Telephone (734) 769-8010. (4-6-05)

k. ANSI/NSF Standard 60-2000a -- 2000, Drinking Water Treatment Chemicals -- Health Effects, available from the National Sanitation Foundation, 789 N. Dixboro Road, Ann Arbor, Michigan 48105, Telephone (734) 769-8010. (4-6-05)

l. ANSI/NSF Standard 61-2000a -- 2000, Drinking Water System Components -- Health Effects, available from the National Sanitation Foundation, 789 N. Dixboro Road, Ann Arbor, Michigan 48105, Telephone (734) 769-8010. (4-6-05)

m. American Water Works Association (AWWA) Standards, available from the AWWA, 6666 West

- Quincy Avenue, Denver, Colorado 80235, (800) 926-7337, www.awwa.org. (3-30-07)
- n.** Cross Connection Control Manual, available from Pacific Northwest Section of the American Water Works Association, P.O. Box 19581, Portland, OR, 97280-0581, Telephone (503) 246-5845. (3-30-07)
- o.** Manual of Cross-Connection Control, Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, KAP-200 University Park MC-2531, Los Angeles, CA 90089-2531, (866)545-6340, www.usc.edu/dept/fccchr/. (3-30-07)
- p.** Manual on Slow Sand Filtration (1991), published by AWWA Research Foundation 6666 West Quincy Avenue, Denver, CO 80235, (800)926-7337, www.awwa.org. (3-30-07)
- q.** Slow Sand Filtration (1991), published by the American Society of Civil Engineers American Society of Civil Engineers, 1801 Alexander Bell Drive, Reston, VA 20191, (800)548-2723, www.asce.org. (3-30-07)
- r.** Slow Sand Filtration and Diatomaceous Earth Filtration for Small Water Systems, DOH Pub #331-204 (4/03), Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, PO Box 47828, Olympia WA 98504-7828, (360)236-3100 or (800)521-0323, http://www.doh.wa.gov/ehp/dw/Programs/water_sys_design.htm. (3-30-07)
- s.** Water System Design Manual, DOH Pub #331-123 (Rev. 8/01), Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, PO Box 47828, Olympia WA 98504-7828, (360)236-3100 or (800)521-0323, http://www.doh.wa.gov/ehp/dw/Programs/water_sys_design.htm. (3-30-07)
- t.** Submersible Motors: Application, Installation, Maintenance (Franklin Electric AIM manual), Franklin Electric, Bluffton, Indiana 46714, (800)348-2420, <http://www.franklin-electric.com/aim-manual.aspx>. (3-30-07)
- u.** Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources (March 1991 Edition), U.S. Environmental Protection Agency, <http://water.epa.gov/lawsregs/rulesregs/sdwa/swtr/upload/guidsws.pdf>. (3-30-07)
- v.** Standard Methods for the Examination of Water and Wastewater, a joint publication of the American Public Health Association, the Water Environment Federation, and the American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235, 800-926-7337, www.standardmethods.org (3-30-07)
- w.** F480-02 Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension ratios (SDR), SCH 40 and SCH 80, American Society for Testing and Materials (ASTM Standard F480-02). (3-30-07)
- x.** "Idaho Standards for Public Works Construction," Local Highway Technical Assistance Council, 3330 Grace Street, Boise, ID 83605, (208)344-0565. (4-4-13)
- y.** Memorandum of Understanding between the Idaho Department of Environmental Quality and the Idaho Division of Building Safety Plumbing Bureau, Idaho Department of Environmental Quality, 1410 North Hilton, Boise, Idaho 83706, www.deq.idaho.gov. (3-30-07)
- z.** Idaho General Safety and Health Standards (IGSHS), available from the Idaho Division of Building Safety, 1090 E. Watertower St., Meridian, Idaho 83642, (208)334-3950, <http://dbs.idaho.gov/>. (3-30-07)
- aa.** Implementation Guidance for the Long Term 2 Enhanced Surface Water Treatment Rule, Idaho Department of Environmental Quality, 1410 North Hilton, Boise, Idaho 83706, www.deq.idaho.gov. (4-2-08)
- bb.** Implementation Guidance for the Stage 2 Disinfectants and Disinfection Byproducts Rule, Idaho Department of Environmental Quality, 1410 North Hilton, Boise, Idaho 83706, www.deq.idaho.gov. (4-2-08)
- cc.** Implementation Guidance for the Ground Water Rule, Idaho Department of Environmental Quality,

1410 North Hilton, Boise, Idaho 83706, www.deq.idaho.gov. (5-8-09)

dd. AWWA Recommended Practice for Backflow Prevention and Cross-Connection Control (M14), available from the AWWA, 6666 West Quincy Avenue, Denver, Colorado 80235, Telephone (800) 926-7337. (4-7-11)

ee. Membrane Filtration Guidance Manual (EPA 815-R-06-009) published by the U.S. Environmental Protection Agency, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Telephone (202) 782-3238, http://www.epa.gov/ogwdw/disinfection/lt2/pdfs/guide_lt2_membranefiltration_final.pdf. (4-4-13)

ff. Ultraviolet Disinfection Guidance Manual for the Final Long Term 2 Enhanced Surface water Treatment Rule (EPA 815-R-06-007) published by the U.S. Environmental Protection Agency, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.20402, Telephone (202) 782-3238, www.epa.gov/safewater/disinfection/lt2/pdfs/guide_lt2_uvguidance.pdf. (4-4-13)

gg. Improving Clearwell Design for CT Compliance, Report #90756, available from the Water Research Foundation, http://waterrf.org/ProjectsReports/PublicReportLibrary/RFR90756_2000_271.pdf. (4-4-13)

hh. Surface Water Treatment Rule Compliance Guidance, dated January 10, 1996, Idaho Department of Environmental Quality, www.deq.idaho.gov. (4-4-13)

ii. Uniform Plumbing Code, available at Division of Building Safety, 1090 E. Watertower St., Meridian, Idaho 83642; and at the Division of Building Safety, 1250 Ironwood Dr., Ste. 220, Coeur d'Alene, Idaho 83814, <http://dbs.idaho.gov>. (4-4-13)

03. Precedence. In the event of conflict or inconsistency between the language in these rules and that found in any document incorporated by reference, these rules shall prevail. (4-11-06)

003. DEFINITIONS.

The definitions set forth in 40 CFR 141.2 are herein incorporated by reference except for the definition of the terms "action level," "disinfection," "noncommunity water system," and "person." (4-4-13)

01. Action Level. The concentration of lead or copper in water that determines, in some cases, whether a water system must install corrosion control treatment, monitor source water, replace lead service lines, or undertake a public education program. (12-10-92)

02. Administrator. The Administrator of the United States Environmental Protection Agency.(4-5-00)

03. Annual Samples. Samples that are required once per calendar year. (12-10-92)

04. Annular Opening. As used in well construction, this term refers to the nominal inside diameter of the borehole minus the outside diameter of the casing divided by two (2). (3-30-07)

05. Aquifer. A geological formation of permeable saturated material, such as rock, sand, gravel, etc., capable of yielding an economic quantity of water to wells and springs. (5-3-03)

06. Average Day Demand. The volume of water used by a system on an average day based on a one (1) year period. See also the definition of Water Demand in these rules. (5-8-09)

07. Backflow. The reverse from normal flow direction in a plumbing system or water system caused by back pressure or back siphonage. (12-10-92)

08. Bag Filters. Pressure-driven separation devices that remove particulate matter larger than one (1) micrometer using an engineered porous filtration media. They are 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. (4-2-08)

09. Bank Filtration. A water treatment process that uses a well to recover surface water that has naturally infiltrated into ground water 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). (4-2-08)

10. Board. The Idaho Board of Environmental Quality. (5-3-03)

11. Capacity. The capabilities required of a public drinking water system in order to achieve and maintain compliance with these rules and the requirements of the federal Safe Drinking Water Act. It is divided into three (3) main elements: (4-5-00)

a. Technical capacity means the system has the physical infrastructure to consistently meet drinking water quality standards and treatment requirements and is able to meet the requirements of routine and emergency operations. It further means the ability of system personnel to adequately operate and maintain the system and to otherwise implement technical knowledge. Training of operator(s) is required, as appropriate, for the system size and complexity. (4-6-05)

b. Financial capacity means the financial resources of the water system, including an appropriate budget; rate structure; cash reserves sufficient for current operation and maintenance, future needs and emergency situations; and adequate fiscal controls. (5-8-09)

c. Managerial capacity means that the management structure of the water system embodies the aspects of water system operations, including, but not limited to; (5-8-09)

i. Short and long range planning; (4-5-00)

ii. Personnel management; (4-5-00)

iii. Fiduciary responsibility; (4-5-00)

iv. Emergency response; (4-5-00)

v. Customer responsiveness; (4-5-00)

vi. Source water protection; (4-5-00)

vii. Administrative functions such as billing and consumer awareness; and (4-5-00)

viii. Ability to meet the intent of the federal Safe Drinking Water Act. (4-5-00)

12. Cartridge Filters. Pressure-driven separation devices that remove particulate matter larger than one (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. (4-2-08)

13. Clean Compliance History. For the purposes of the Revised Total Coliform Rule in Subsection 100.01, clean compliance history means a record of no maximum contaminant level violations under Subsection 050.05, no monitoring violations under Subsection 100.01, and no coliform treatment technique trigger exceedances or treatment technique violations under Subsection 100.01. ()

14. Combined Distribution System. The interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water. (4-2-08)

15. Community Water System. A public water system which serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents. See also the definition of a Public Drinking Water System in these rules. (5-8-09)

156. Components of Finished Water Storage. Storage is available to serve the system if the storage structure or facility is elevated sufficiently or is equipped with sufficient booster pumping capability to pressurize the system. Components of finished water storage are further defined as: (5-8-09)

a. Dead Storage. Storage that is either not available for use in the system or can provide only substandard flows and pressures. (3-30-07)

b. Effective Storage. Effective storage is all storage other than dead storage and is made up of the additive components described in Paragraphs c. through f. of this Subsection. (5-8-09)

c. Operational Storage. Operational storage supplies water when, under normal conditions, the sources are off. This component is the larger of; (3-30-07)

i. The volume required to prevent excess pump cycling and ensure that the following volume components are full and ready for use when needed; or (3-30-07)

ii. The volume needed to compensate for the sensitivity of the water level sensors. (3-30-07)

d. Equalization Storage. Storage of finished water in sufficient quantity to compensate for the difference between a water system's maximum pumping capacity and peak hour demand. (3-30-07)

e. Fire Suppression Storage. The water needed to support fire flow in those systems that provide it. (3-30-07)

f. Standby Storage. Standby storage provides a measure of reliability or safety factor should sources fail or when unusual conditions impose higher than anticipated demands. Normally used for emergency operation, if standby power is not provided, to provide water for eight (8) hours of operation at average day demand. (5-8-09)

167. Composite Correction Program (CCP). A systematic approach to identifying opportunities for improving the performance of water treatment and implementing changes that will capitalize on these opportunities. The CCP consists of two (2) elements: (4-5-00)

a. Comprehensive Performance Evaluation (CPE). 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; evaluation 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. (4-5-00)

b. Comprehensive Technical Assistance (CTA). The implementation phase that is carried out if the CPE results indicate improved performance potential. During the CTA phase, the system must identify and systematically address plant-specific factors. The CTA consists of follow-up to the CPE results, implementation of process control priority setting techniques, and maintaining long term involvement to systematically train staff and administrators. (4-5-00)

178. Compositing of Samples. The mixing of up to five (5) samples by the laboratory. (4-5-00)

189. Confining Layer. A nearly impermeable subsurface stratum which is located adjacent to one (1) or more aquifers and does not yield a significant quantity of water to a well. (5-3-03)

192. Confirmation Sample. A sample of water taken from the same point in the system as the original sample and at a time as soon as possible after the original sample was taken. (12-10-92)

201. Connection. Each structure, facility, or premises which is connected to a water system, and which is or could be used for domestic purposes, is considered a single connection. A single family residence is considered to be a premises. Multi-family dwellings and apartment, condominium, and office complexes are considered single

connections unless individual units are billed separately for water by the water system, in which case each such unit shall be considered a single connection. (4-7-11)

242. Consecutive System. A public water system that receives some or all of its finished water from one (1) or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one (1) or more consecutive systems. (4-2-08)

243. Consumer. Any person served by a public water system. (12-10-92)

244. Consumer Confidence Report (CCR). An annual report that community water systems must deliver to their customers. The reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner. (4-5-00)

245. Contaminant. Any physical, chemical, biological, or radiological substance or matter in water. (12-10-92)

256. Cross Connection. Any actual or potential connection or piping arrangement between a public or a consumer's potable water system and any other source or system through which it is possible to introduce into any part of the potable water system used water, water from any source other than an approved public water system, industrial fluid, gas or substance other than the intended potable water with which the system is supplied. Cross connections include bypass arrangements, jumper connections, removable sections, swivel or change-over devices and other temporary or permanent devices which, or because of which "backflow" can or may occur. (10-1-93)

267. Dead End Main. A distribution main of any diameter and length that does not loop back into the distribution system. (3-30-07)

278. Dead Storage. Storage that is either not available for use in the system or can provide only substandard flows and pressures. See also the definition of Components of Finished Water Storage in these rules. (5-8-09)

289. Department. The Idaho Department of Environmental Quality. (12-10-92)

2930. Director. The Director of the Department of Environmental Quality or his designee. (12-10-92)

301. Direct Integrity Test (DIT). A physical test applied to a microfiltration or ultrafiltration membrane unit in order to identify integrity breaches. (4-4-13)

342. Disinfection. Introduction of chlorine, other agents, or processes that are approved by the Department (such as ultraviolet light) in sufficient concentration, dosage, or application, and for the time required to kill or inactivate pathogenic and indicator organisms. (4-4-13)

323. Disinfection Profile. A summary of daily Giardia lamblia inactivation through the drinking water treatment plant. The procedure for developing a disinfection profile is contained in 40 CFR 141.172 and 40 CFR 141.530-141.536. (5-3-03)

334. Distribution System. Any combination of pipes, tanks, pumps, and other equipment which delivers water from the source(s), treatment facility(ies), or a combination of source(s) and treatment facility(ies) to the consumer. Chlorination may be considered as a function of a distribution system. (5-8-09)

345. Drinking Water. Means "water for human consumption." (3-30-07)

356. Drinking Water System. All mains, pipes, and structures through which water is obtained and distributed, including wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing water for drinking or general domestic use. (12-10-92)

367. Dual Sample Set. A set of two (2) samples collected at the same time and same location, with one (1) sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected for the purposes of conducting an Initial Distribution System Evaluation (40 CFR Part 141, Subpart U) and for determining compliance with the TTHM and HAA5 MCLs under the Stage 2 Disinfection Byproducts Requirements (40 CFR Part 141, Subpart V). (4-2-08)

378. Effective Contact Time. For the purpose of these rules, effective contact time means the time in minutes that it takes for water to move from the point of completely mixed chemical application to the point where residual concentration is measured. It is the “T” in contact time (CT) calculations and is either “demonstrated” or “calculated.” It is the contact time sufficient to achieve the inactivation of target pathogens under the expected range of raw water pH and temperature variation and must be demonstrated through tracer studies or other evaluations or calculations acceptable to the Department. “Improving Clearwell Design for CT Compliance,” referenced in Subsection 002.02, contains information that may be used as guidance for these calculations. (4-4-13)

389. Effective Storage. Effective storage is all storage other than dead storage and is made up of the additive components described in Paragraphs c. through f. of the definition of Components of Finished Water Storage in these rules. (4-4-13)

3940. Enhanced Coagulation. The addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment. Conventional filtration treatment is defined in 40 CFR 141.2. (5-3-03)

401. Enhanced Softening. The improved removal of disinfection byproduct precursors by precipitative softening. (4-5-00)

412. Equalization Storage. Storage of finished water in sufficient quantity to compensate for the difference between a water system’s maximum pumping capacity and peak hour demand. See also the definition of Components of Finished Water Storage in these rules. (5-8-09)

423. Equivalent Dwelling Unit (EDU). A unit of measure that standardizes all land use types (housing, retail, office, etc.) to the level of demand created by a single-family detached housing unit within a water system. The demand for one (1) equivalent dwelling unit is equivalent to the amount of water provided to the average single-family detached housing unit within a water system. For example, a business designed to use three (3) times as much water as an average single-family detached housing unit would have a demand of three (3) equivalent dwelling units. (5-8-09)

434. Exemption. A temporary deferment of compliance with a maximum contaminant level or treatment technique requirement which may be granted only if the system demonstrates to the satisfaction of the Department that the system cannot comply due to compelling factors and the deferment does not cause an unreasonable risk to public health. (12-10-92)

445. Facility Plan. The facility plan for a public drinking water system describes the overall system, including sources of water, treatment processes and facilities, pumping stations and distribution piping, finished water storage, and waste disposal. It is a comprehensive planning document for infrastructure and includes a plan for the future of the system/facility, including upgrades and additions. It is usually updated on a regular basis due to anticipated or unanticipated growth patterns, regulatory requirements, or other infrastructure needs. A facility plan is sometimes referred to as a master plan or facilities planning study. In general, a facility plan is an overall system-wide plan as opposed to a project specific plan. (3-30-07)

456. Facility Standards and Design Standards. Facility standards and design standards are described in Sections 500 through 552 of these rules. Facility and design standards found in Sections 500 through 552 of these rules must be followed in the planning, design, construction, and review of public drinking water facilities. (3-30-07)

467. Fee Assessment. A charge assessed on public drinking water systems based on a rate structure calculated by system size. (10-1-93)

478. Filter Profile. A graphical representation of individual filter performance, 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. (4-5-00)

489. Filtrate. As the term relates to microfiltration and ultrafiltration, the product water or the portion of the feed stream that has passed through the membrane. (4-4-13)

4950. Finished Water. Water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except as necessary to maintain water quality in the distribution system (e.g., booster disinfection, addition of corrosion control chemicals). (4-2-08)

501. Finished Water Storage Structures or Facilities. Finished water storage structures or facilities are defined as: (5-8-09)

a. Above-ground storage structure or facility. A finished water storage structure or facility with a bottom elevation above normal ground surface. (5-8-09)

b. Ground-level storage structure or facility. A finished water storage structure or facility with a bottom elevation at normal ground surface. (5-8-09)

c. Partially buried storage structure or facility. A finished water storage structure or facility with a bottom elevation below normal ground surface and any portion of the structure or facility above normal ground surface. (5-8-09)

d. Below-ground storage structure or facility. A finished water storage structure or facility with a bottom elevation and top elevation below normal ground surface. (5-8-09)

542. Fire Flow Capacity. The water system capacity, in addition to maximum day demand, that is available for fire fighting purposes within the water system or distribution system pressure zone. Adequacy of the water system fire flow capacity is determined by the local fire authority or through a hydraulic analysis performed by a licensed professional engineer to establish required fire flows in accordance with the International Fire Code as adopted by the State Fire Marshal. (4-4-13)

523. Fire Suppression Storage. The water needed to support fire flow in those systems that provide it. See also the definition of Components of Finished Water Storage in these rules. (5-8-09)

534. Fixture Protection. The practice of installing backflow prevention assemblies or devices to isolate one (1) or more cross connections within a customer's facility. (5-8-09)

545. Flowing Stream. As used in the Long Term 2 Enhanced Surface Water Treatment Rule (40 CFR Part 141, Subpart W), this term means a course of running water flowing in a definite channel. (4-2-08)

556. Flux. The throughput of a pressure-driven membrane filtration process expressed as flow per unit of membrane area, usually in gallons per square foot per day or liters per hour per square meter. (4-4-13)

567. Ground Water System. A public water system which is supplied exclusively by a ground water source or sources. (12-10-92)

578. Ground Water Under the Direct Influence of Surface Water (GWUDI). Any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, 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. Direct influence shall be determined by the Department for individual sources. The determination of direct influence may be based on site-specific measurements of water quality, documentation of well construction characteristics and geology with field evaluation, a combination of water quality and documentation, or other information required by the Department. (4-4-13)

589. Haloacetic Acids (Five) (HAA5). 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 (2) significant figures after addition. (4-5-00)

~~59~~**60. Health Hazards.** Any condition which creates, or may create, a danger to the consumer's health. Health hazards may consist of, but are not limited to, design, construction, operational, structural, collection, storage, distribution, monitoring, treatment or water quality elements of a public water system. See also the definition of Significant Deficiency, which refers to a health hazard identified during a sanitary survey. (5-3-03)

~~60~~**1. Indirect Integrity Monitoring.** Monitoring some aspect of filtrate water quality that is indicative of the removal of particulate matter. (4-4-13)

~~61~~**2. Inorganic.** Generally refers to compounds that do not contain carbon and hydrogen. (12-10-92)

~~62~~**3. Internal or In-Plant Isolation.** The practice of installing backflow prevention assemblies to protect an area within a water customer's structure, facility, or premises from contaminating another part of the structure, facility, or premises. (4-7-11)

~~63. Laboratory Certification Reciprocity.~~ *Acceptance of a laboratory certification made by another state. Laboratory reciprocity may be granted to laboratories outside of Idaho after application, proof of home state certification, and EPA performance evaluation results are submitted and reviewed. Reciprocity must be renewed after a time specified by the Idaho Laboratory Certification Officer to remain valid.* (4-5-00)

64. Lake/Reservoir. As used in the Long Term 2 Enhanced Surface Water Treatment Rule (40 CFR Part 141, Subpart W), this term 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. (4-2-08)

65. Level 1 Assessment. A Level 1 Assessment is 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. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any Department directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. ()

66. Level 2 Assessment. A Level 2 Assessment is 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 provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the Department in accordance with Subsection 305.03, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. ()

~~65~~**7. License.** A physical document issued by the Idaho Bureau of Occupational Licenses certifying that an individual has met the appropriate qualifications and has been granted the authority to practice in Idaho under the provisions of Chapter 24, Title 54, Idaho Code. (4-6-05)

~~66~~**8. Locational Running Annual Average (LRAA).** The average of sample analytical results for samples taken at a particular monitoring location during the previous four (4) calendar quarters, as set forth in the Stage 2 Disinfection Byproducts Requirements (40 CFR Part 141, Subpart V). (4-2-08)

679. Log. Logarithm to the base ten (10). In the context of these rules, it is used in the determination of removal or inactivation efficiencies. It is expressed as the logarithm to the base ten (10) or “log” of the concentration of the feed or raw water minus the log of the concentration in the filtrate or product water. For example, if the incoming feed or raw water concentration is one hundred (100), and the outgoing filtrate or product water concentration is ten (10), a 10-fold reduction was attained; or 1-log removal. 1-log removal also equates to ninety percent (90%) removal, as ninety (90) of the original feed concentration counts had been removed, leaving ten (10) in the filtrate. Similarly, 2-log equates to ninety-nine percent (99%) removal. (4-4-13)

6870. Log Removal Value (LRV). LRV is a measure of filtration removal efficiency for a target organism, particulate, or surrogate expressed as Logarithm to the base ten (10). (4-4-13)

6971. Material Deviation. A change from the design plans that significantly alters the type or location of facilities, requires engineering judgment to design, or impacts the public safety or welfare. (4-11-06)

702. Material Modification. Those modifications of an existing public water system that are intended to increase system capacity or alter the methods or processes employed. Any project that adds source water to a system, increases the pumping capacity of a system, increases the potential population served by the system or the number of service connections within the system, adds new or alters existing drinking water system components, or affects the water demand of the system is considered to be increasing system capacity or altering the methods or processes employed. Maintenance and repair performed on the system and the replacement of valves, pumps, or other similar items with new items of the same size and type are not considered a material modification. (5-8-09)

713. Maximum Contaminant Level (MCL). The maximum permissible level of a contaminant in water which is delivered to any user of a public water system. (3-30-07)

724. Maximum Day Demand. The average rate of consumption for the twenty-four (24) hour period in which total consumption is the largest for the design year. See also the definition of Water Demand in these rules. (5-8-09)

735. Maximum Pumping Capacity. The pumping capacity with the largest source or pump out of service. (5-8-09)

746. Maximum Residual Disinfectant Level (MRDL). 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. For chlorine and chloramines, a public water system is in compliance with the MRDL, when the running annual average of monthly averages of samples taken in the distribution system, computed quarterly, is less than or equal to the MRDL. For chlorine dioxide, a public water system is in compliance with the MRDL when daily samples are taken at the entrance to the distribution system and no two (2) consecutive daily samples exceed the MRDL. MRDLs are enforceable in the same manner as maximum contaminant levels under Section 1412 of the Safe Drinking Water Act. There is convincing evidence that addition of a disinfectant is necessary for control of waterborne microbial contaminants. Notwithstanding the MRDLs listed in 40 CFR 141.65, operators may increase residual disinfectant levels of chlorine or chloramines (but not chlorine dioxide) in the distribution system to a level and for a time necessary to protect public health to address specific microbiological contamination problems caused by circumstances such as distribution line breaks, storm runoff events, source water contamination, or cross-connections. (4-4-13)

757. Maximum Residual Disinfectant Level Goal (MRDLG). The maximum level of a disinfectant added for water treatment at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety. MRDLGs are nonenforceable health goals and do not reflect the benefit of the addition of the chemical for control of waterborne microbial contaminants. (4-5-00)

768. Membrane Filtration. A pressure or vacuum driven separation process in which particulate matter larger than one (1) micrometer (μm) is rejected by an engineered barrier, primarily through a size-exclusion mechanism. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis. (4-4-13)

779. **Membrane Unit.** A group of treatment systems or membrane modules that usually share common control and valving so that the group can be isolated for testing or cleaning. (4-4-13)

780. **Method Detection Limit (MDL).** The lowest concentration which can be determined to be greater than zero with ninety-nine percent (99%) confidence, for a particular analytical method. (12-10-92)

7981. **Microfiltration (MF).** A low pressure membrane filtration process with pore diameter normally in the range of 0.1 to 0.5 μm . (4-4-13)

802. **Module.** As the term relates to membrane filtration, it is the smallest component of a membrane unit in which a specific membrane surface area is housed. The component is typically equipped with a feedwater inlet, a filtrate outlet, and concentrate or backwash outlet structure. (4-4-13)

813. **Nanofiltration (NF).** A membrane filtration process that removes dissolved constituents from water. Nanofiltration is similar to reverse osmosis but allows a higher percentage of certain ions to pass through the membrane. These systems typically operate under higher pressure than microfiltration and ultrafiltration. (4-4-13)

824. **New System.** Any water system that meets, for the first time, the definition of a public water system provided in Section 1401 of the federal Safe Drinking Water Act (42 U.S.C. Section 300f). This includes systems that are entirely new construction and previously unregulated systems that are expanding. (4-5-00)

835. **Noncommunity Water System.** A public water system that is not a community water system. A non-community water system is either a transient noncommunity water system or a non-transient noncommunity water system. See also the definition of a Public Drinking Water System in these rules. (5-8-09)

846. **Non-Potable Fluids.** Any fluids that do not meet the definition of potable water. This definition also includes any gases that are heavier than air such as propane. (4-4-13)

857. **Non-Potable Mains.** Pipelines that collect, deliver, or otherwise convey non-potable fluids. (4-4-13)

868. **Non-Potable Services or Lines.** Pipelines that collect, deliver, or otherwise convey non-potable fluids to or from a non-potable main. These pipelines connect individual facilities to the non-potable main. This term also refers to pipelines that convey non-potable fluids from a pressurized irrigation system, reclaimed wastewater system, and other non-potable systems to individual consumers. (4-4-13)

879. **Nontransient Noncommunity Water System.** A public water system that is not a community water system and that regularly serves at least twenty-five (25) of the same persons over six (6) months per year. See also the definition of a Public Drinking Water System in these rules. (5-8-09)

8890. **Operating Shift.** That period of time during which water system operator decisions that affect public health are necessary for proper operation of the system. (4-5-00)

891. **Operational Storage.** Operational storage supplies water when, under normal conditions, the sources are off. This component is the larger of the volume required to prevent excess pump cycling and ensure that the following volume components are full and ready for use when needed or the volume needed to compensate for the sensitivity of the water level sensors. See also the definition of Components of Finished Water Storage in these rules. (5-8-09)

902. **Operation and Maintenance Manual.** An operation and maintenance manual typically covers three main subjects: a water system specific operations plan (see definition of Operations Plan); maintenance information and checklists; and manufacturer's product information (including trouble shooting information, a parts list and parts order form, special tools, spare parts list, etc.). An operation and maintenance manual may cover every aspect of the water system or any part of the water system, including but not limited to the following: treatment, pump stations, storage reservoirs, distribution system, pressure reducing valve stations, etc. (4-4-13)

913. **Operations Plan.** The operations plan is part of an operation and maintenance manual. Depending

on which facilities of the water system are being addressed, the operations plan may cover many types of information including but not limited to the following: daily, weekly, monthly, and yearly operating instructions; information specific to a particular type of treatment; location of valves and other key distribution system features; pertinent telephone and address contact information including the responsible charge water system operator and water system owner; operator safety procedures; alarm system; emergency procedures; trouble-shooting advice; water quality testing; depressurization events; customer service; and response to customer complaints. (4-4-13)

924. Owner/Purveyor of Water/Supplier of Water. The person, company, corporation, association, or other organizational entity which holds legal title to the public water system, who provides, or intends to provide, drinking water to the customers, and who is ultimately responsible for the public water system operation. (5-8-09)

935. Peak Hour Demand. The highest hourly flow, excluding fire flow, that a water system or distribution system pressure zone is likely to experience in the design year. See also the definition of Water Demand in these rules. (5-8-09)

946. Person. A human being, municipality, or other governmental or political subdivision or other public agency, or public or private corporation, any partnership, firm, association, or other organization, any receiver, trustee, assignee, agent or other legal representative of the foregoing or other legal entity. (12-10-92)

957. Pesticides. Substances which meet the criteria for regulation pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, and any regulations adopted pursuant to FIFRA. For example, pesticides include, but are not limited to insecticides, fungicides, rodenticides, herbicides, and algaecides. (12-10-92)

968. Plant Design Capacity. The maximum design flow through treatment units. The minimum plant design capacity could be equal to peak hour demand but could also be equal to the maximum day demand if equalization storage is provided. (4-4-13)

979. Plant. A physical facility where drinking water or wastewater is treated or processed. (3-30-07)

98100. Point of Use (POU) Treatment Device. A treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that one tap. (3-30-07)

99101. Point of Use (POU) Treatment System. A collection of POU treatment devices. (3-30-07)

1002. Potable Mains. Pipelines that deliver potable water to multiple service connections. (3-30-07)

1013. Potable Services. Pipelines that convey potable water from a connection to the potable water main to individual consumers. (3-30-07)

1024. Potable Water. Water for human consumption. See the definition of Water for Human Consumption in Section 003. (4-4-13)

1035. Preliminary Engineering Report. The preliminary engineering report for a public drinking water system facility is a report that addresses specific portions of the system or facility for which modifications are being designed. Modifications may include, but are not limited to, significant changes to existing processes or facilities, system expansion, addition of treatment, or installation of other processes and facilities. This report addresses specific purpose and scope, design requirements, alternative solutions, costs, operation and maintenance requirements, and other requirements as described in Section 503. Preliminary engineering reports are generally project specific as opposed to an overall system-wide plan, such as a facility plan. (4-4-13)

1046. Premises Isolation or Containment. The practice of separating the customer's structure, facility, or premises from the purveyor's system by means of a backflow prevention assembly installed on the service line before any distribution takes place. (4-7-11)

1057. Presedimentation. 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. (4-2-08)

108. **Protected Water Source.** For the purposes of the Revised Total Coliform Rule (40 CFR Part 141, Subpart Y), a protected water source is a ground water well that is not susceptible to contamination on the basis of well construction, hydrologic data, or contamination history. ()

1069. **Public Notice.** The notification of public water system consumers of information pertaining to that water system including information regarding water quality or compliance status of the water system. (12-10-92)

1107. **Public Drinking Water System.** A system for the provision to the public of water for human consumption through pipes or, after August 5, 1998, other constructed conveyances, if such system has at least fifteen (15) service connections, regardless of the number of water sources or configuration of the distribution system, or regularly serves an average of at least twenty-five (25) individuals daily at least sixty (60) days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under the control of the operator of such system and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any "special irrigation district." A public water system is either a "community water system" or a "noncommunity water system" as further defined as: (5-8-09)

a. Community water system. A public water system which serves at least fifteen (15) service connections used by year-round residents or regularly serves at least twenty-five (25) year-round residents. (5-8-09)

b. Noncommunity water system. A public water system that is not a community water system. A noncommunity water system is either a transient noncommunity water system or a non-transient noncommunity water system. (5-8-09)

c. Nontransient noncommunity water system. A public water system that is not a community water system and that regularly serves at least twenty-five (25) of the same persons over six (6) months per year. (5-8-09)

d. Transient noncommunity public water system. A noncommunity water system which does not regularly serve at least twenty-five (25) of the same persons over six (6) months per year. (5-8-09)

10811. **Public Water System/Water System/System.** Means "public drinking water system." (4-5-00)

10912. **Pump House.** A structure containing important water system components, such as a well, hydropneumatic tank, booster pump, pump controls, flow meter, well discharge line, or a treatment unit. Pump houses are often called well houses in common usage, even though in modern construction these structures may not contain either a well or a pump. These terms are used interchangeably in national standards and trade publications. (4-4-13)

1103. **Qualified Licensed Professional Engineer (QLPE).** A professional engineer licensed by the state of Idaho; qualified by education or experience in the specific technical fields involved in these rules; and retained or employed by a city, county, quasi-municipal corporation, or regulated public utility for the purposes of plan and specification review. (5-8-09)

1114. **Quasi-Municipal Corporation.** A public entity, other than community government, created or authorized by the legislature to aid the state in, or to take charge of, some public or state work for the general welfare. For the purpose of these rules, this term refers to drinking water districts. (4-11-06)

1125. **Raw Water.** Raw water is any ground water, spring water, or surface water utilized as source water prior to treatment for the purpose of producing potable water. (4-4-13)

1136. **Redundancy.** The installation of duplicate components or backup systems that are designed to maintain minimum pressure and capacity of the system should any component fail or otherwise be out of service for maintenance or repair. (4-4-13)

1147. **Regulated Public Utility.** For the purpose of these rules, any public water system that falls under the jurisdiction of the Idaho Public Utilities Commission and is subject to the rules thereof. (3-30-07)

1158. Reverse Osmosis (RO). A membrane filtration process that removes dissolved constituents from water. Reverse osmosis is similar to nanofiltration but allows a lower percentage of certain ions to pass through the membrane. These systems typically operate under higher pressure than microfiltration and ultrafiltration. (4-4-13)

1169. Repeat Compliance Period. Any subsequent compliance period after the initial compliance period. (12-10-92)

11720. Resolution. As the term relates to membrane treatment, it is the size of the smallest integrity breach that contributes to a response from a direct integrity test when testing low pressure membranes. (4-4-13)

11821. Responsible Charge (RC). Responsible Charge means active, daily on-site or on-call responsibility for the performance of operations or active, on-going, on-site, or on-call direction of employees and assistants. (5-8-09)

11922. Responsible Charge Operator. An operator of a public drinking water system, designated by the system owner, who holds a valid license at a class equal to or greater than the drinking water system classification, who is in responsible charge of the public drinking water system. (4-6-05)

1203. Reviewing Authority. For those projects requiring preconstruction approval by the Department, the Department is the reviewing authority. For those projects allowing for preconstruction approval by others, pursuant to Subsection 504.03.b. of these rules, the qualified Idaho licensed professional engineer (QLPE) is also the reviewing authority. (5-8-09)

1214. Sampling Point. The location in a public water system from which a sample is drawn. (12-10-92)

1225. Sanitary Defects. ~~Any faulty structural condition which may allow the water supply to become contaminated.~~ 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. Examples of sanitary defects include but are not limited to: cross connections, inadequate distribution system pressures, inadequate or missing sanitary seal, improperly screened storage tank vents, inadequate protection from contamination during flooding, history of treatment failures, deterioration of system components, and water main leaks or breaks. (12-10-92)()

1236. Sanitary Survey. An onsite review of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water. The sanitary survey will include, but is not limited to the following elements: (4-5-00)

- a. Source; (4-5-00)
- b. Treatment; (4-5-00)
- c. Distribution system; (4-5-00)
- d. Finished water storage; (4-5-00)
- e. Pumps, pump facilities, and controls; (4-5-00)
- f. Monitoring and reporting and data verification; (4-5-00)
- g. System management and operation; and (4-5-00)
- h. Operator compliance with state requirements. (4-5-00)

1247. SDWIS-State. An acronym that stands for “Safe Drinking Water Information System-State Version.” It is a software package developed under contract to the U.S. Environmental Protection Agency and used by a majority of U.S. states to collect, maintain, and report data about regulated public water systems. (4-4-13)

128. **Seasonal System.** A noncommunity water system 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. ()

1259. **Sensitivity.** As the term relates to membrane treatment, it is the maximum log removal value (LRV) for a specific resolution that can be reliably verified by the direct integrity test associated with a given low pressure membrane filtration system. (4-4-13)

12630. **Sewage.** The water-carried human or animal waste from residences, buildings, industrial establishments or other places, together with such ground water infiltration and surface water as may be present. (3-30-07)

12731. **Significant Deficiency.** As identified during a sanitary survey, any defect in a system's design, operation, maintenance, or administration, as well as any failure or malfunction of any system component, that the Department or its agent determines to cause, or have potential to cause, risk to health or safety, or that could affect the reliable delivery of safe drinking water. See also the definition of Health Hazards. (5-3-03)

12832. **Simple Water Main Extension.** New or replacement water main(s) that require plan and specification review by a qualified licensed professional engineer (QLPE) or by the Department per these rules and that is connected to existing water main facilities and does not require the addition of system components designed to control quantity or pressure, including, but not limited to, booster stations, new sources, pressure reducing valve stations, or reservoirs; and continues to provide the pressure and quantity requirements of Subsection 552.01. (4-4-13)

12933. **Special Irrigation District.** An irrigation district in existence prior to May 18, 1994 that provides primarily agricultural service through a piped water system with only incidental residential or similar use where the system or the residential or similar users of the system comply with the exclusion provisions in Section 1401(4)(B)(i)(II) or (III) of the Safe Drinking Water Act. (4-6-05)

1304. **Spring.** A source of water which flows from a laterally percolating water table's intersection with the surface or from a geological fault that allows the flow of water from an artesian aquifer. (12-10-92)

1345. **Standby Storage.** Standby storage provides a measure of reliability or safety factor should sources fail or when unusual conditions impose higher than anticipated demands. See also the definition of Components of Finished Water Storage in these rules. (5-8-09)

1326. **Substantially Modified.** The Department shall consider a public water system to be substantially modified when, as the result of one (1) or more projects, there is a combined increase of twenty-five percent (25%) or more above the system's existing configuration in the population served or number of service connections, the total length of transmission and distribution water mains, and the peak or average water demand. (5-8-09)

1337. **Substitute Responsible Charge Operator.** An operator of a public drinking water system who holds a valid license at a class equal to or greater than the drinking water system classification, designated by the system owner to replace and to perform the duties of the responsible charge operator when the responsible charge operator is not available or accessible. (4-6-05)

1348. **Surface Water System.** A public water system which is supplied by one (1) or more surface water sources or ground water sources under the direct influence of surface water. Also called subpart H systems in applicable sections of 40 CFR Part 141. (4-5-00)

1359. **Total Organic Carbon (TOC).** Total organic carbon in mg/l measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to two (2) significant figures. (4-5-00)

13640. **Total Trihalomethanes (TTHM).** The sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane and tribromomethane [bromoform]), rounded to two (2) significant figures. (4-2-08)

13741. Transient Noncommunity Public Water System. A noncommunity water system which does not regularly serve at least twenty-five (25) of the same persons over six (6) months per year. See also the definition of a Public Drinking Water System in these rules. (5-8-09)

13842. Treatment Facility. Any place(s) where a public drinking water system or nontransient noncommunity water system alters the physical or chemical characteristics of the drinking water. Chlorination may be considered as a function of a distribution system. (4-5-00)

13943. Turbidity. A measure of the interference of light passage through water, or visual depth restriction due to the presence of suspended matter such as clay, silt, nonliving organic particulates, plankton and other microscopic organisms. Operationally, turbidity measurements are expressions of certain light scattering and absorbing properties of a water sample. Turbidity is measured by the Nephelometric method. (12-10-92)

1404. Ultrafiltration (UF). A low pressure membrane filtration process with pore diameter normally in the range of five thousandths to one tenth micrometer (0.005 to 0.1 µm). (4-4-13)

1415. Ultraviolet (UV) Light Technology. A physical disinfection process that has proven effective against common pathogens in drinking water. (4-4-13)

1426. UV Transmittance (UVT). A measure of the fraction of incident light transmitted through a material (e.g., water sample or quartz). The UVT is usually reported for a wavelength of two hundred fifty-four (254) nm and a pathlength of one (1) cm. It is often represented as a percentage. (4-4-13)

1437. Unregulated Contaminant. Any substance that may affect the quality of water but for which a maximum contaminant level or treatment technique has not been established. (12-10-92)

1448. Use Assessment. For the purpose of obtaining a waiver from certain monitoring requirements, a use assessment is an evaluation as to whether synthetic organic contaminants are being or have been used, manufactured, transported, stored, or disposed of in the watershed for surface water or the zone of influence for ground water. (5-8-09)

1459. Variance. A temporary deferment of compliance with a maximum contaminant level or treatment technique requirement which may be granted only when the system demonstrates to the satisfaction of the Department that the raw water characteristics prevent compliance with the MCL or requirement after installation of the best available technology or treatment technique and the deterrent does not cause an unreasonable risk to public health. (12-10-92)

14650. Very Small Public Drinking Water System. A Community or Nontransient Noncommunity Public Water System that serves five hundred (500) persons or less and has no treatment other than disinfection or has only treatment which does not require any chemical treatment, process adjustment, backwashing or media regeneration by an operator (e.g. calcium carbonate filters, granular activated carbon filters, cartridge filters, ion exchangers). (4-5-00)

14751. Volatile Organic Chemicals (VOCs). VOCs are lightweight organic compounds that vaporize or evaporate easily. (10-1-93)

14852. Vulnerability Assessment. A determination of the risk of future contamination of a public drinking water supply. (12-10-92)

14953. Waiver. (12-10-92)

a. For the purposes of these rules, except Sections 500 through 552, “waiver” means the Department approval of a temporary reduction in sampling requirements for a particular contaminant. (3-30-07)

b. For purposes of Sections 500 through 552, “waiver” means a dismissal of any requirement of compliance. (3-30-07)

c. For the purposes of Section 010, “waiver” means the deferral of a fee assessment for a public drinking water system. (10-1-93)

1504. Wastewater. Any combination of liquid or water and pollutants from activities and processes occurring in dwellings, commercial buildings, industrial plants, institutions and other establishments, together with any ground water, surface water, and storm water that may be present; liquid or water that is chemically, biologically, physically or rationally identifiable as containing blackwater, gray water or commercial or industrial pollutants; and sewage. See IDAPA 58.01.16, “Wastewater Rules,” for additional information. (4-7-11)

1505. Water for Human Consumption. Water that is used by humans for drinking, bathing for purposes of personal hygiene (including hand-washing), showering, cooking, dishwashing, and maintaining oral hygiene. In common usage, the terms “culinary water,” “drinking water,” and “potable water” are frequently used as synonyms. (5-3-03)

1506. Water Demand. The volume of water requested by system users to satisfy their needs. Water demand can be further categorized as: (5-8-09)

a. Average day demand. The volume of water used by a system on an average day based on a one (1) year period. (5-8-09)

b. Maximum day demand. The average rate of consumption for the twenty-four (24) hour period in which total consumption is the largest for the design year. (5-8-09)

c. Peak hour demand. The highest hourly flow, excluding fire flow, that a water system or distribution system pressure zone is likely to experience in the design year. (5-8-09)

1507. Water Main. A pipe within a public water system which is under the control of the system operator and conveys water to two (2) or more service connections or conveys water to a fire hydrant. The collection of water mains within a given water supply is called the distribution system. (5-8-09)

1508. Watershed. The land area from which water flows into a stream or other body of water which drains the area. (3-30-07)

1509. Wholesale System. 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 (1) or more consecutive systems. (4-2-08)

(BREAK IN CONTINUITY OF SECTIONS)

100. MONITORING AND ANALYTICAL REQUIREMENTS.

01. ~~Microbiological Contaminant~~ Total Coliform Sampling and Analytical Requirements. The Total Coliform Rule, 40 CFR 141.21, is herein incorporated by reference and is effective until March 31, 2016. The Revised Total Coliform Rule, 40 CFR Part 141, Subpart Y, is herein incorporated by reference, excluding the annual monitoring provisions in 40 CFR 141.854 (a)(4), (d), (e), (f) and (h), and is effective April 1, 2016. ~~(10-1-93)~~()

a. 40 CFR 141.21 is herein incorporated by reference Routine monitoring requirements for public water systems serving more than one thousand (1,000) people. 40 CFR 141.857 is herein incorporated by reference. ~~(4-4-13)~~()

b. The Department may reduce the total coliform monitoring frequency for community water systems serving twenty five (25) to one thousand (1000) persons, as specified in 40 CFR 141.21(a)(2) and Subsection 100.01. The Department may allow community water systems serving twenty five (25) to one thousand (1000) persons to reduce the total coliform monitoring frequency to once per quarter when; Routine monitoring requirements for

community water systems serving one thousand (1,000) or fewer people using only ground water. 40 CFR 141.855 is herein incorporated by reference. (12-10-92)()

- ~~i. The system submits a written request to the Department in advance of the requirement; and (12-10-92)~~
 - ~~ii. There has been no history of total coliform contamination in its current configuration; and (10-1-93)~~
 - ~~iii. The system has been in compliance with the total coliform monitoring requirements for the last three (3) years; and (12-10-92)~~
 - ~~iv. A sanitary survey has been conducted within the past five (5) years which indicates to the Department that there are no deficiencies which could affect microbial quality; and (12-10-92)~~
 - ~~v. The system uses only a ground water source that is protected. (12-10-92)~~
- ~~c. The Department may reduce the total coliform monitoring frequency for noncommunity water systems serving less than one thousand (1000) persons as specified in 40 CFR 141.21(a)(3)(i) and Subsection 100.01 of this rule. The Department may allow noncommunity water systems serving less than one thousand (1000) persons to reduce the total coliform monitoring frequency to once per year when; Routine monitoring requirements for subpart H public water system serving one thousand (1,000) or fewer people. 40 CFR 141.856 is herein incorporated by reference. (12-10-92)()~~

- ~~i. The system submits a written request to the Department in advance of the requirement; and (12-10-92)~~
 - ~~ii. No coliforms have been detected in the last three (3) years of monitoring; and (12-10-92)~~
 - ~~iii. The system has been in compliance with the total coliform monitoring requirements for the last three (3) years; and (12-10-92)~~
 - ~~iv. A sanitary survey has been conducted within the past five (5) years which indicates to the Department that there are no deficiencies which could affect microbial quality; and (12-10-92)~~
 - ~~v. The system uses only a ground water source that is protected. (12-10-92)~~
- ~~d. The Department may reduce the total coliform monitoring frequency for noncommunity water systems serving more than one thousand (1000) persons during any month the system serves one thousand (1000) persons or fewer as specified in 40 CFR 141.21(a)(3)(ii) and Subsection 100.01. The Department will allow noncommunity water systems serving more than one thousand (1000) persons to reduce the total coliform monitoring frequency for any month the system serves one thousand (1000) persons or fewer, down to a minimum of one (1) sample per year, provided; Routine monitoring requirements for non-community water system serving one thousand (1,000) or fewer people using only ground water. 40 CFR 141.854 is herein incorporated by reference, excluding the annual monitoring provisions in 40 CFR 141.854 (a)(4), (d), (e), (f), and (h). (10-1-93)()~~

- ~~i. The system submits a written request to the Department in advance of the requirement; and (12-10-92)~~
- ~~ii. No coliforms have been detected in the last three (3) years of monitoring; and (12-10-92)~~
- ~~iii. The system has been in compliance with the total coliform monitoring requirements for the last three (3) years; and (12-10-92)~~
- ~~iv. A sanitary survey has been conducted within the past five (5) years which indicates that there are no deficiencies which could affect microbial quality; and (4-4-13)~~

- ~~v. The system uses only a ground water source that is protected. (12-10-92)~~
- ~~e. A system must collect repeat samples within twenty-four (24) hours of notification of positive results as specified in 40 CFR 141.21(b) and Subsection 100.01. The Department may allow a system to delay collection of repeat samples if the system: (12-10-92)~~
 - ~~i. Identifies the cause of the contamination; (12-10-92)~~
 - ~~ii. Is making progress towards correcting the problem; (12-10-92)~~
 - ~~iii. Submits a written request to delay collecting repeat samples and a written statement admitting an acute MCL violation; (12-10-92)~~
 - ~~iv. Follows public notification requirements specified under 40 CFR Part 141, Subpart Q for Tier 1 MCL violations including notice for consumers to boil their water; (4-4-13)~~
 - ~~v. Continues to collect the regularly scheduled number of routine samples; (12-10-92)~~
 - ~~vi. Collects all repeat samples immediately following correction of the problem; and (12-10-92)~~
 - ~~vii. Collects five (5) routine samples during the month following the end of the violation as required under 40 CFR 141.21 (b)(5), unless waived as allowed under that paragraph. (12-10-92)~~
- 02. Turbidity Sampling and Analytical Requirements.** 40 CFR 141.22 is herein incorporated by reference. (4-4-13)
- 03. Inorganic Chemical Sampling and Analytical Requirements.** 40 CFR 141.23 is herein incorporated by reference. (4-4-13)
- 04. Organic Chemicals, Sampling and Analytical Requirements.** 40 CFR 141.24 is herein incorporated by reference. (4-4-13)
- 05. Analytical Methods for Radioactivity.** 40 CFR 141.25 is herein incorporated by reference. (4-4-13)
- 06. Monitoring Frequency and Compliance Requirements for Radioactivity in Community Water Systems.** 40CFR 141.26 is herein incorporated by reference. (4-4-13)
- 07. Monitoring Waivers.** 40 CFR 141.23(b) 141.23(c), 141.24(f), 141.24(h) are herein incorporated by reference. (4-4-13)
 - a.** Waivers from sampling requirements in Subsections 100.03, 100.04, 200.01, and 503.03.e.v. may be available to all systems for all contaminants except nitrate, nitrite, and disinfection byproducts and are based upon a vulnerability assessment, use assessment, the analytical results of previous sampling, or some combination of vulnerability assessment, use assessment, and analytical results. (4-4-13)
 - b.** There are two (2) general types of monitoring waivers: (12-10-92)
 - i.** Waivers based exclusively upon previous analytical data (12-10-92)
 - ii.** Waivers based on a use or vulnerability assessment. (12-10-92)
 - c.** Waivers are to be made by the Department on a contaminant specific basis and must be in writing. (12-10-92)
 - d.** Vulnerability assessments may be conducted by the Department, the water system, or a third party organization. The Department shall approve or disapprove all vulnerability assessments in writing. (12-10-92)

e. Water systems which do not receive waivers shall sample at the required initial and repeat monitoring frequencies. (12-10-92)

f. If a system elects to request a waiver from monitoring, it shall do so in writing at least sixty (60) days prior to the required monitoring deadline date. (10-1-93)

08. Initial Monitoring Schedule. In addition to the requirements specified in 40 CFR 141.23, 40 CFR 141.24, and 40 CFR 141.40, initial monitoring must be completed according to the following schedule unless otherwise specified by the Department: (4-4-13)

a. Public water systems serving more than one hundred (100) people must conduct initial monitoring before January 1, 1995 except that: (10-1-93)

i. Initial monitoring for nitrate and nitrite must be completed before January 1, 1994 for all surface water sources serving transient noncommunity public water systems and for all ground water sources serving any public water system. (10-1-93)

ii. Initial monitoring for nitrate and nitrite must be completed before April 1, 1993 for all surface water sources serving community or nontransient noncommunity public water systems. (10-1-93)

iii. Initial monitoring required under 40 CFR 141.23(c) must be completed before January 1, 1994 for all surface water sources serving community or nontransient noncommunity public water systems. (10-1-93)

b. Public water systems serving one hundred (100) or less people must conduct initial monitoring before January 1, 1996 except that: (10-1-93)

i. Initial monitoring for nitrate and nitrite must be completed before January 1, 1994 for all surface water sources serving transient noncommunity public water systems and for all ground water sources serving a public water system. (10-1-93)

ii. Initial monitoring for nitrate and nitrite must be completed before April 1, 1993 for all surface water sources serving community or nontransient noncommunity public water systems. (10-1-93)

iii. Initial monitoring required under 40 CFR 141.23(c) must be completed before January 1, 1994 for all surface water sources serving community or nontransient noncommunity public water systems. (10-1-93)

09. Alternate Analytical Techniques. 40 CFR 141.27 is herein incorporated by reference. (10-1-93)

10. Approved Laboratories. 40 CFR 141.28, and beginning April 1, 2016, 40 CFR 141.852(b) is ~~are~~ herein incorporated by reference. All analyses conducted pursuant to these rules, except those listed below, shall be performed in laboratories certified or granted reciprocity by the Idaho Department of Health and Welfare, Bureau of Laboratories, as provided in IDAPA 16.02.13, "Rules Governing Certification of Idaho Water Quality Laboratories." The following analyses may be performed by any person acceptable to the Department of Environmental Quality: (~~4-4-13~~)()

a. pH; (12-10-92)

b. Turbidity (Nephelometric method only); (12-10-92)

c. Daily analysis for fluoride; (12-10-92)

d. Temperature; (5-8-09)

e. Disinfectant residuals, except ozone, which shall be analyzed using the Indigo Method or an acceptable automated method pursuant to Subsection 300.05.ed.; (~~5-8-09~~)()

- f. Alkalinity; (5-8-09)
- g. Calcium; (5-8-09)
- h. Conductivity; (5-8-09)
- i. Silica; and (5-8-09)
- j. Orthophosphate. (5-8-09)
- 11. **Monitoring of Consecutive Water Systems.** 40 CFR 141.29 is herein incorporated by reference. (4-4-13)
- 12. **Disinfection Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors.** 40 CFR Part 141, Subpart L is herein incorporated by reference. (4-4-13)

(BREAK IN CONTINUITY OF SECTIONS)

150. REPORTING, PUBLIC NOTIFICATION, RECORDKEEPING.

- 01. **Reporting Requirements.** 40 CFR 141.31 is herein incorporated by reference. (4-4-13)
- 02. **Public Notification of Drinking Water Violations.** 40 CFR Part 141, Subpart Q is herein incorporated by reference. (4-4-13)
- 03. **Record Maintenance.** 40 CFR 141.33 is herein incorporated by reference. (4-4-13)
- 04. **Reporting for Unregulated Contaminant Monitoring Results.** 40 CFR 141.35 is herein incorporated by reference. (4-4-13)
- 05. **Reporting and Record Keeping Requirements for the Interim Enhanced Surface Water Treatment Rule.** 40 CFR 141.175 is herein incorporated by reference. (4-4-13)
- 06. **Reporting and Record Keeping Requirements for the Disinfectants and Disinfectant Byproducts Rule.** 40 CFR 141.134 is herein incorporated by reference. (4-4-13)
- 07. **Reporting and Record Keeping Requirements for the Revised Total Coliform Rule.** 40 CFR 141.861 is herein incorporated by reference. ()

(BREAK IN CONTINUITY OF SECTIONS)

300. FILTRATION AND DISINFECTION.

- 01. **General Requirements.** 40 CFR 141.70 is herein incorporated by reference. Each public water system using a surface water source or ground water source directly influenced by surface water shall be operated by personnel, as specified in Sections 553 and 554, who have met state requirements for licensing of water system operators. (4-4-13)
- 02. **Filtration.** 40 CFR 141.73 is herein incorporated by reference. (4-4-13)
 - a. Each system which provides filtration treatment shall submit engineering evaluations, other documentation, or some combination of engineering evaluations and other documentation as required by the Department to demonstrate ongoing compliance with these rules. (4-7-11)

b. The Department will establish filtration removal credit on a system-by-system basis. Unless otherwise demonstrated to the satisfaction of the Department, the maximum log removal credit allowed for filtration is as follows:

Maximum Log Removal			
Filtration Type	Giardia lamblia	Viruses	Cryptosporidium
Conventional	2.5	2.0	2.5
Direct	2.0	1.0	2.0
Slow sand	2.0	2.0	2.0
Diatomaceous earth	2.0	1.0	2.0
Microfiltration	3.0	0.5	3.0
Ultrafiltration	3.5	2.0	3.5
Nanofiltration	4.0	3.0	4.0
Reverse Osmosis	4.0	3.0	4.0
Alternate technology	2.0	0	2.0

(4-4-13)

- c. Filtration removal credit shall be granted for filtration treatment provided the system is: (4-7-11)
- i. Operated in accordance with the Operations Plan specified in Subsection 552.03.a.; and (4-7-11)
 - ii. The system is in compliance with the turbidity performance criteria specified under 40 CFR 141.73; and (4-7-11)
 - iii. Coagulant chemicals must be added and coagulation and flocculation unit process must be used at all times during which conventional and direct filtration treatment plants are in operation; and (4-7-11)

iv. Slow sand filters are operated at rates not to exceed: one-tenth (0.1) gallons per minute per square foot or as approved by the Department; and ~~(4-4-13)()~~

~~(1) One-tenth (0.1) gallons per minute per square foot when anticipated temperatures are expected above five degrees Celsius (5°C); and (4-4-13)~~

~~(2) Five hundredths (0.05) gallons per minute per square foot when anticipated temperatures are expected at or below five degrees Celsius (5°C); and (4-4-13)~~

v. Diatomaceous earth filters are operated at a rate not to exceed one point five (1.5) gallons per minute per square foot. (4-7-11)

03. Criteria for Avoiding Filtration. 40 CFR 141.71 is herein incorporated by reference. (4-4-13)

04. Disinfection. 40 CFR 141.72 is herein incorporated by reference. (10-1-93)

a. In addition to the disinfection requirements in 40 CFR 141.72, each system with a surface water source or ground water source directly influenced by surface water shall maintain a minimum of at least two-tenths (0.2) parts per million of chlorine in the treated water after an effective contact time of at least thirty (30) minutes at peak hour demand before delivery to the first customer. Effective contact time is either demonstrated or calculated. ()

i. Demonstrated effective contact time is generally determined by tracer studies on a completed contact basin. Prior to conducting a tracer study, a testing plan shall be submitted to the Department for review and approval. The tracer chemical shall not be reactive with anything in the water or be consumed in the process. (____)

ii. Calculated effective contact time for tank type contact basins is based on tank baffling and inlet/outlet configurations for the maximum hourly flow rate through that contact basin. Calculated effective contact time in a "pipeline type contact basin" (often called a pipeline contactor) is calculated by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipeline contactor. (~~4-4-13~~)(____)

b. The Department may allow a system to utilize automatic shut-off of water to the distribution system whenever total disinfectant residual is less than two-tenths (0.2) mg/l rather than provide redundant disinfection components and auxiliary power as required in 40 CFR 141.72(a)(2). An automatic water shut-off may be used if the system demonstrates to the satisfaction of the Department that, at all times, a minimum of twenty (20) psi pressure and adequate fire flow can be maintained in the distribution system when water delivery is shut-off to the distribution system and, at all times, minimum *Giardia lamblia* and virus inactivation removal rates can be achieved prior to the first customer. (12-10-92)

c. Each system which is required to provide filtration must provide disinfection treatment such that filtration plus disinfection provide at least 3-Log or ninety-nine and nine tenths percent (99.9%) inactivation/removal of *Giardia lamblia* cysts and at least 4-Log or ninety-nine and ninety-nine hundredths percent (99.99%) inactivation/removal of viruses as specified in 40 CFR 141.72 and Section 300, and at least 2-Log or ninety-nine percent (99%) removal of *Cryptosporidium* as required by 40 CFR Part 141, Subpart P or Subpart T. However, in all cases the disinfection portion of the treatment train shall be designed to provide not less than five tenths (0.5) log *Giardia lamblia* inactivation, irrespective of the *Giardia lamblia* removal credit awarded to the filtration portion of the treatment train. (4-4-13)

05. Analytical and Monitoring Requirements. 40 CFR 141.74 is herein incorporated by reference. (4-4-13)

a. Each public water system which is required to provide disinfection shall monitor as follows: (4-4-13)

i. Each day the system is in operation, the purveyor shall determine the total level of inactivation of *Giardia lamblia* cysts and viruses achieved through disinfection based on CT99.9 values provided in 40 CFR 141.74(b)(3) (Tables 1.1 through 1.6, 2.1 and 3.1). (12-10-92)

ii. At least once per day, the system shall monitor the following parameters to determine the total inactivation ratio achieved through disinfection: (12-10-92)

(1) Temperature of the disinfected water at each residual disinfectant concentration sampling point; and (12-10-92)

(2) If using chlorine, the pH of the disinfected water at each chlorine residual sampling point. (12-10-92)

(3) The effective contact time, "T," must be determined each day during peak hour demand. Disinfectant contact time, "T," in pipelines used for *Giardia lamblia* and virus inactivation shall be calculated by dividing the internal volume of the pipe by the peak hour flow rate through that pipe. Effective contact time, "T," for all other system components used for *Giardia lamblia* and virus inactivation shall be determined by tracer studies or other evaluations or calculations acceptable to the Department. (4-4-13)

(4) The residual disinfectant concentrations at each residual disinfectant sampling point at or before the first customer, must be determined each day during peak hour demand, or at other times approved by the Department. (5-8-09)

iii. The purveyor may demonstrate to the Department, based on a Department approved on-site

disinfection challenge study protocol, that the system is achieving disinfection requirements specified in Subsection 300.04 utilizing CT99.9 values other than those specified in 40 CFR 141.74(b)(3) (Tables 2.1 and 3.1) for ozone, chlorine dioxide, and chloramine. (4-4-13)

- iv. The total inactivation ratio shall be calculated as follows: (12-10-92)
 - (1) If the system applies disinfectant at only one (1) point, the system shall determine the total inactivation ratio by either of the two (2) following methods: (12-10-92)
 - (a) One inactivation ratio (CTcalc/CT99.9) is determined at/or before the first customer during peak hour demand; or (5-8-09)
 - (b) Sequential inactivation ratios are calculated between the point of disinfectant application and a point at or before the first customer during peak hour demand. The following method must be used to calculate the total inactivation ratio: (5-8-09)
 - (i) Step 1: Determine (CTcalc/CT99.9) for each sequence. (12-10-92)
 - (ii) Step 2: Add the (CTcalc/CT99.9) values for all sequences. The result is the total inactivation ratio. (12-10-92)
 - (2) If the system uses more than one point of disinfectant application at or before the first customer, the system must determine the CT value of each disinfection sequence immediately prior to the next point of disinfectant application during peak hour demand. The sum of the (CTcalc/CT99.9) values from all sequences is the total inactivation ratio. (CTcalc/CT99.9) must be determined by the methods described in 40 CFR 141.74(b)(4)(i)(B). (5-8-09)
- v. Log removal credit for disinfection shall be determined by multiplying the total inactivation ratio by three (3). (12-10-92)
- vi. The Department may reduce the CT monitoring requirements specified under Section 300, for any system which demonstrates that the required inactivation levels are consistently exceeded. Reduced CT monitoring shall be allowed only where the reduction in monitoring will not endanger the health of consumers served by the water system. (12-10-92)
- b. Residual disinfectant concentrations for ozone must be measured using the Indigo Method, or automated methods may be used if approved by the Department as provided for in 40 CFR 141.74(a)(4). (4-4-13)()
- c. Unfiltered Subpart H systems. 40 CFR 141.857(c) is herein incorporated by reference. ()
- d. As provided for in 40 CFR 141.74(b), the Department may specify interim monitoring requirements for unfiltered systems notified by the Department or U.S. Environmental Protection Agency that filtration treatment must be installed. Until filtration is installed, systems shall conduct monitoring for turbidity and disinfectant residuals as follows unless otherwise specified by the Department. (4-4-13)()
- i. Disinfectant residual concentrations entering the distribution system shall be measured at the following minimum frequencies, and samples must be taken at evenly spaced intervals throughout the workday.

Minimum Frequencies	
Population	Samples/day
Less than 500	1
501 - 1000	2

Minimum Frequencies	
Population	Samples/day
1,001 - 2,500	3
Greater than 2501	4

(12-10-92)

ii. Turbidity shall be measured at least once per day at the entry point to the distribution system. (12-10-92)

iii. The Department may, at its discretion, reduce the turbidity monitoring frequency for any noncommunity system which demonstrates to the satisfaction of the Department: (12-10-92)

(1) A free chlorine residual of two-tenths (0.2) part per million is maintained throughout the distribution system; (12-10-92)

(2) The water source is well protected; (12-10-92)

(3) Through March 31, 2016, the total coliform MCL is not exceeded, or after March 31, 2016, a Level 1 or Level 2 Assessment has not been triggered in accordance with 40 CFR 141.859; and ~~(12-10-92)~~(____)

(4) No significant health risk is present. (12-10-92)

de. The Department may allow systems with surface water sources or ground water sources under the direct influence of surface water, to substitute continuous turbidity monitoring for grab sample monitoring as specified in 40 CFR 141.74(b)(2) and 40 CFR 141.74(c)(1) and Subsection 300.05. The Department may allow continuous turbidity monitoring provided the continuous turbidimeter is operated, maintained, standardized and calibrated per the manufacturer's recommendations. For purposes of determining compliance with turbidity performance criteria, discrete values must be recorded every four (4) hours water is supplied to the distribution system. (10-1-93)

ef. The Department may allow systems using both a surface water source(s), or ground water source(s) under the direct influence of surface water, and one (1) or more ground water sources, to measure disinfectant residual at points other than the total coliform sampling points, as specified in 40 CFR 141.74(b)(6)(i) and 40 CFR 141.74(c)(3)(i) and Subsection 300.05. The Department may allow alternate sampling points provided the system submits an acceptable alternate monitoring plan to the Department for approval in advance of the monitoring requirement that demonstrates the alternative points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in 40 CFR 141.74(a)(1), may be measured in lieu of residual disinfectant concentration as outlined in 40 CFR 141.74(b)(6)(i). ~~(10-1-93)~~(____)

fg. The Department may allow a reduced turbidity monitoring frequency for systems using slow sand filtration or technology other than conventional, direct, or diatomaceous earth filtration, as specified in 40 CFR 141.74(c)(1) and Subsection 300.05. To be considered for a reduced turbidity monitoring frequency, a system must submit a written request to the Department in advance of the monitoring requirement. (12-10-92)

06. Reporting and Recordkeeping Requirements. 40 CFR 141.75 is herein incorporated by reference. (4-4-13)

a. As provided in 40 CFR 141.75(a) and Section 300, the Department may establish interim reporting requirements for systems notified by the Department or U.S. Environmental Protection Agency that filtration treatment must be installed as specified in 40 CFR 141.75(a) and as referred to in Subsection 300.06. Until filtration treatment is installed, systems required to install filtration treatment shall report as follows: (4-4-13)

i. The purveyor shall immediately report to the Department via telephone or other equally rapid means, but no later than the end of the next business day, the following information: (12-10-92)

- (1) The occurrence of a waterborne disease outbreak potentially attributable to that water system; (12-10-92)
- (2) Any turbidity measurement which exceeds five (5) NTU; and (12-10-92)
- (3) Any result indicating that the disinfectant residual concentration entering the distribution system is below two-tenths (0.2) mg/l free chlorine. (12-10-92)

ii. The purveyor shall report to the Department within ten (10) days after the end of each month the system serves water to the public the following monitoring information using a Department-approved form: (12-10-92)

- (1) Turbidity monitoring information; and (12-10-92)
- (2) Disinfectant residual concentrations entering the distribution system. (12-10-92)

iii. Personnel qualified under Subsection 300.01 shall complete and sign the monthly report forms submitted to the Department as required in Subsection 300.06. (12-10-92)

b. In addition to the reporting requirements in 40 CFR 141.75(b) pertaining to systems with filtration treatment, each public water system which provides filtration treatment must report the level of *Giardia lamblia* and virus inactivation/removal achieved each day by filtration and disinfection. (4-4-13)

07. Recycle Provisions. 40 CFR 141.76 is herein incorporated by reference. (4-4-13)

a. The Department shall evaluate recycling records kept by water systems pursuant to 40 CFR 141.76 during sanitary surveys, comprehensive performance evaluations, or other inspections. (5-3-03)

b. The Department may require a system to modify recycling practices if it can be shown that these

(BREAK IN CONTINUITY OF SECTIONS)

303. SANITARY SURVEYS FOR PUBLIC WATER SYSTEMS USING GROUND WATER.

The Department shall conduct a sanitary survey of all public water systems that use ground water. 40 CFR Part 141, Subpart S, is herein incorporated by reference. (4-4-13)

01. Frequency. For non-community water systems, a sanitary survey shall be conducted every five (5) years. For community water systems, a sanitary survey shall be conducted every three (3) years, except as provided below. (5-8-09)

a. A community water system may have a sanitary survey conducted every five (5) years if the system provides at least a four (4)-log treatment of viruses (using inactivation, removal, or a Department approved combination of 4-log inactivation and removal) before or at the first customer for all of its ground water sources. (5-8-09)

b. A community water system may have a sanitary survey conducted every five (5) years if it has an outstanding performance record, as determined by the Department and documented in previous sanitary surveys, and has no history of Total Coliform Rule or Revised Total Coliform Rule MCL or monitoring violations under Subsection 100.01-~~4~~ since the last sanitary survey. (5-8-09)()

02. Report. A report describing the results of the sanitary survey shall be provided to the water system. (5-8-09)

a. As part of the sanitary survey report or as an independent action, the Department shall provide written notice to the water system describing any significant deficiency within thirty (30) days after the Department identifies the significant deficiency. The notice may specify corrective actions and deadlines for completion of corrective actions. (5-8-09)

b. The Department may, at its discretion, provide this written notice at the time of the sanitary survey. (5-8-09)

03. Significant Deficiencies. For each of the eight (8) elements of a sanitary survey of a ground water system, the following deficiencies shall in all cases be considered significant for the purposes of the notice required in Subsection 303.02. Decisions about the significance of other deficiencies identified during the sanitary survey shall be at the Department's discretion, as indicated in the Department's sanitary survey protocol. (5-8-09)

a. Source: Lack of a sanitary well cap as specified in Subsection 511.06.b. (5-8-09)

b. Treatment: (4-4-13)

i. Chemical addition lacks emergency shut-off as specified in Subsection 531.02.b.ii. (4-4-13)

ii. Chemical addition is not flow proportioned where the rate of flow or chemical demand is not reasonably constant, as specified in Subsection 531.02.b.ii. (4-4-13)

c. Distribution system: No means for flushing dead end water mains, as specified in Subsection 542.09. (5-8-09)

d. Finished water storage: Roof leaking, as specified in Subsections 544.09 and 544.09.c. (5-8-09)

e. Pumps, pump facilities, and controls: No accessible check valve between pump and shut-off valve, as specified in Subsection 511.04. (5-8-09)

f. Monitoring, reporting, and data verification: Repeated failure to collect the required number and type of Total Coliform Rule or the Revised Total Coliform Rule samples during the most recent two (2) year period, as specified in Subsection 100.01. ~~ca.~~ (5-8-09) ()

g. System management and operation: History of frequent depressurization in the distribution system in violation of Subsection 552.01. (5-8-09)

h. Operator compliance with state licensing requirements: Responsible charge operator is not licensed as required in Subsection 554.02. (5-8-09)

04. Response Required. The owner of a public water system must respond in writing, describing how and on what schedule the system will address all significant deficiencies, not later than thirty (30) days after receiving notification from the Department. (4-4-13)

05. Consultation with the Department. Public water systems shall consult with the Department prior to taking specific corrective actions in response to significant deficiencies identified during a sanitary survey unless such corrective actions are specified in detail by the Department in its written notification under Subsection 303.02. (5-8-09)

06. Violation. Failure to address significant deficiencies identified in a sanitary survey that are within the control of the public water system and its governing body shall constitute a violation of these rules. (5-8-09)

(BREAK IN CONTINUITY OF SECTIONS)

305. COLIFORM TREATMENT TECHNIQUE TRIGGERS AND ASSESSMENT REQUIREMENTS FOR PROTECTION AGAINST POTENTIAL FECAL CONTAMINATION.

40 CFR 141.859, excluding 40 CFR 141.859(a)(2)(iii), is herein incorporated by reference. ()

01. Treatment Technique Triggers. Systems owners and operators must ensure that assessments are conducted in accordance with Subsection 305.02 after exceeding treatment technique triggers in this subsection. ()

a. Level 1 treatment technique triggers: ()

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

ii. For systems taking fewer than forty (40) samples per month, the system has two (2) or more total coliform positive samples in the same month. ()

iii. The system owner or operator fails to take every required repeat sample after any single total coliform-positive sample. ()

b. Level 2 treatment technique triggers: ()

i. An *E.coli* MCL violation, as specified in Subsection 050.05 and Subsection 101.01 of these rules;
or ()

ii. A second or any additional Level 1 triggers as defined in Subsection 305.01.a. within a rolling 12-month period, unless the Department has determined a likely reason that the samples that caused the first Level 1 treatment technique trigger were total coliform-positive and has established that the system has corrected the problem. ()

02. Requirements For Assessments. ()

a. System owners and operators must ensure that Level 1 and 2 assessments are conducted in order to identify the possible presence of sanitary defects and defects in distribution system coliform monitoring practices. The assessment must be conducted consistent with any Department directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.()

b. When conducting assessments, owners and operators must ensure that the assessor evaluates minimum elements that include review and identification of inadequacies in sample sites; sampling protocol; sample processing; atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., small ground water systems); and existing water quality monitoring data. The system owner or operator must ensure the assessments are consistent with the elements in the Department provided forms for Level 1 and Level 2 assessments. ()

c. Level 1 Assessments. A system owner or operator must conduct a Level 1 assessment if the system exceeds one of the treatment technique triggers in Subsection 305.01.a. as soon as practical after any trigger level is identified and submit a completed Level 1 assessment report or form to the Department within thirty (30) days after the system learns that it has exceeded a trigger. ()

i. The completed assessment report or form must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment report or form may also note that no sanitary defects were identified. ()

ii. If the Department reviews the completed Level 1 report or form and determines that the assessment is not sufficient (including any proposed timetable for any corrective actions not already completed), the Department will consult with the owner or operator of the system. If the Department requires revisions after consultation, the

system owner or operator must submit a revised assessment report or form to the Department on an agreed-upon schedule not to exceed thirty (30) days from the date of consultation. ()

iii. Upon completion and submission of the assessment report or form by the system owner or operator, the Department will determine if the system has identified a likely cause for the Level 1 trigger and, if so, establish that the system has corrected the problem, or has included a schedule acceptable to the Department for correcting the problem. ()

d. Level 2 Assessments. A system owner or operator must ensure that a Level 2 assessment is conducted if the system exceeds one of the treatment technique triggers in Subsection 305.01.b. The owner or operator must comply with any expedited actions or additional action required by the Department in the case of an *E.coli* MCL violation. ()

i. The system owner or operator must ensure that a Level 2 assessment is conducted by the Department or a party approved by the Department as described in Subsection 305.03 as soon as practical after any trigger in Subsection 305.01.b. and must submit a completed Level 2 assessment report or form to the Department within 30 (thirty) days after the system learns that it has exceeded a trigger if the assessment was conducted by a party other than the Department. ()

ii. The Department will schedule and conduct Level 2 assessments for an *E.coli* treatment technique trigger in Subsection 305.01.b.i. unless the Department approves another party to conduct the assessment as outlined in Subsection 305.03. ()

iii. A second or any additional triggered Level 2 Assessment within a rolling twelve-month period must be conducted by a Department approved third party even if the public water system has staff or management approved under Subsection 305.03. ()

iv. The completed assessment report or form must describe sanitary defects detected, corrective actions completed, and a proposed timetable for any corrective actions not already completed. The assessment report or form may also note that no sanitary defects were identified. ()

v. If the Department reviews the completed Level 2 report or form and determines that the assessment is not sufficient (including any proposed timetable for any corrective actions not already completed), the Department will consult with the owner or operator of the system. If the Department requires revisions after consultation, the system owner or operator must submit a revised assessment report or form to the Department on an agreed-upon schedule not to exceed 30 (thirty) days from the date of consultation. ()

vi. Upon completion and submission of the assessment report or form by the system owner or operator, the Department will determine if the system has identified a likely cause for the Level 2 trigger and, if so, establish that the system has corrected the problem, or has included a schedule acceptable to Department for correcting the problem. ()

e. Corrective action. Systems must correct sanitary defects found through either Level 1 or Level 2 assessments conducted under this section. For corrections not completed by the time of submission of the assessment report or form, the system must complete the corrective action(s) in compliance with a timetable approved by the Department in consultation with the system. The system must notify the Department when each scheduled corrective action is completed. ()

f. Consultation. At any time during the assessment or corrective action phase, either the water system or the Department may request a consultation with the other party to determine the appropriate actions to be taken. The system may consult with the Department on all relevant information that may impact its ability to comply with a requirement of this Section, including the method of accomplishment, an appropriate timeframe, and other relevant information. ()

03. Approved Parties for Level 2 Assessments. The system may conduct a Level 2 assessment if the system has staff or management with the certification or qualifications outlined in this Subsection or if the system hires parties that meet the qualifications in this Subsection. The following parties are approved by the Department to

conduct Level 2 assessments: ()

a. The Department or persons contracted with the Department who are trained to conduct sanitary surveys: ()

b. Currently licensed operators in good standing that are licensed through the Idaho Bureau of Occupational Licensing with a drinking water classification of Distribution I through IV or Treatment I through IV and that are licensed at least to the classification level of the public water system requiring the Level 2 assessment: ()

c. Licensed professional engineers licensed by the state of Idaho and qualified by education and experience in the specific technical fields involved in these rules. ()

(BREAK IN CONTINUITY OF SECTIONS)

552. OPERATING CRITERIA FOR PUBLIC WATER SYSTEMS.

01. Quantity and Pressure Requirements. Design requirements regarding pressure analysis are found in Section 542.13. (5-8-09)

a. Minimum Capacity. The capacity of a public drinking water system shall be at least eight hundred (800) gallons per day per residence. (5-8-09)

i. The minimum capacity of eight hundred (800) gallons per day shall be the design maximum day demand rate exclusive of irrigation and fire flow requirements. (5-8-09)

ii. The minimum capacity of eight hundred (800) gallons per day is only acceptable if the public drinking water system has equalization storage of finished water in sufficient quantity to compensate for the difference between a water system's maximum pumping capacity and peak hour demand. (5-8-09)

iii. The design capacity of a public drinking water system for material modifications may be less than eight hundred (800) gallons per day per residence if the water system owner provides information that demonstrates to the Department's satisfaction the maximum day demand for the system, exclusive of irrigation and fire flows, is less than eight hundred (800) gallons per day per residence. (5-8-09)

b. Pressure. All public water systems shall meet the following requirements: (4-7-11)

i. Any public water system shall be capable of providing sufficient water during maximum day demand conditions, including fire flow where provided, to maintain a minimum pressure of twenty (20) psi throughout the distribution system, at ground level, as measured at the service connection or along the property line adjacent to the consumer's premises. (4-7-11)

ii. Public Notification. (4-4-13)

(1) During unplanned or emergency situations, when water pressure within the system is known to have fallen below twenty (20) psi, the water supplier must notify the Department, provide public notice to the affected customers within twenty-four (24) hours, and disinfect or flush the system as appropriate. When sampling and corrective procedures have been conducted and after determination by the Department that the water is safe, the water supplier may re-notify the affected customers that the water is safe for consumption. The water supplier shall notify the affected customers if the water is not safe for consumption. (~~4-4-13~~)()

(2) During planned maintenance or repair situations, when water pressure within the system is expected to fall below twenty (20) psi, the water supplier must provide public notice to the affected customers prior to the planned maintenance or repair activity and shall ensure that the water is safe for consumption. (4-4-13)

iii. If an initial investigation by the water supplier fails to discover the causes of inadequate or excessive pressure, the Department may require the water supplier to conduct a local pressure monitoring study to diagnose and correct pressure problems. Compliance with these requirements by water systems that do not have a meter vault or other point of access at the service connection or along the property line adjacent to the consumer's premises where pressure in the distribution system can be reliably measured shall be determined by measurements within the consumer's premises, or at another representative location acceptable to the Department. (4-4-13)

iv. Copies of pressure monitoring study reports required under Subsection 552.01.b.iii. detailing study results and any resulting corrective actions planned or performed by the public water system shall be submitted to the Department in accordance with these rules. (4-7-11)

v. The following public water systems or service areas of public water systems shall maintain a minimum pressure of forty (40) psi throughout the distribution system, during peak hour demand conditions, excluding fire flow, measured at the service connection or along the property line adjacent to the consumer's premises. (5-8-09)

(1) Any public water system constructed or substantially modified after July 1, 1985. (5-8-09)

(2) Any new service areas. (5-8-09)

(3) Any public water system that is undergoing material modification where it is feasible to meet the pressure requirements as part of the material modification. (5-8-09)

vi. Any public water system shall keep static pressure within the distribution system below one hundred (100) psi and should ordinarily keep static pressure below eighty (80) psi. Pressures above one hundred (100) psi shall be controlled by pressure reducing valve stations installed in the distribution main. In areas where failure of installed pressure reducing valve stations would result in extremely high pressure, pressure relief valves may be required. The Department may approve the use of pressure reducing devices at individual service connections on a case by case basis, if it can be demonstrated that higher pressures in portions of the distribution system are required for efficient system operation. If system modification will cause pressure to routinely exceed eighty (80) psi, or if a check valve or an individual pressure reducing device is added to the service line, the water system owner shall notify affected customers. Notification may include reasons for the elevated pressure, problems or damage that elevated pressure can inflict on appliances or plumbing systems, and suggested procedures or mitigation efforts affected property owners may initiate to minimize problems or damage. (4-4-13)

vii. The Department may allow the installation of booster pump systems at individual service connections on a case by case basis. However, such an installation may only occur with the full knowledge and agreement of the public water system, including assurance by the water system that the individual booster pump will cause no adverse effects on system operation. (4-11-06)

viii. For elevated storage tanks, pressure calculations during peak hour demand shall be based on the lowest water level after both operational storage and equalization storage have been exhausted. Pressure calculations during fire flow demands shall be based on the lowest water level after operational storage, equalization storage, and fire suppression storage have been exhausted. (4-4-13)

ix. For hydropneumatic tanks, pressure calculations shall be based on the lowest pressure of the pressure cycle and this requirement shall be noted in the operation and maintenance manual. (4-4-13)

c. Fire Flows. Any public water system designed to provide fire flows shall ensure that such flows are compatible with the water demand of existing and planned fire-fighting equipment and fire fighting practices in the area served by the system. (5-3-03)

d. Irrigation Flows. (12-1-92)

i. Any public water system constructed after November 1, 1977, shall be capable of providing water for uncontrolled, simultaneous foreseeable irrigation demand, which shall include all acreage that the system is designed to irrigate. (5-3-03)

(1) The Department must concur with assumptions regarding the acreage to be irrigated. In general, an assumption that no outside watering will occur is considered unsound and is unlikely to be approved. (5-3-03)

(2) An assumption of minimal outside watering, as in recreational subdivisions, may be acceptable if design flows are adequate for maintenance of “green zones” for protection against wildland fire. (5-3-03)

ii. The requirement of Subsection 552.01.d.i. may be modified by the Department if: (5-3-03)

(1) A separate irrigation system is provided; or (12-10-92)

(2) The supplier of water can regulate the rate of irrigation through its police powers, and the water system is designed to accommodate a regulated rate of irrigation flow. The Department may require the water system to submit a legal opinion addressing the enforceability of such police powers. (5-3-03)

iii. If a separate non-potable irrigation system is provided for the consumers, all mains, hydrants and appurtenances shall be easily identified as non-potable. The Department must concur with a plan to ensure that each new potable water service is not cross-connected with the irrigation system. (5-3-03)

02. Ground Water. (12-10-92)

a. Public water systems constructed after July 1, 1985, and supplied by ground water, shall treat water within the system by disinfection if the ground water source is not protected from contamination. (12-10-92)

b. The Department may, in its discretion, require disinfection for any existing public water system supplied by ground water if the system ~~consistently exceeds the MCL for~~ **as repeated** coliform ~~present samples or E.coli MCL exceedances~~, and if the system does not appear adequately protected from contamination. Adequate protection will be determined based upon at least the following factors: ~~(12-10-92)~~ **()**

i. Location of possible sources of contamination; (12-10-92)

ii. Size of the well lot; (12-10-92)

iii. Depth of the source of water; (12-10-92)

iv. Bacteriological quality of the aquifer; (12-10-92)

v. Geological characteristics of the area; and (12-10-92)

vi. Adequacy of development of the source. (12-10-92)

03. Operating Criteria. The operating criteria for systems that provide filtration shall be as follows: (4-4-13)

a. A project specific operation and maintenance manual shall be provided as required in Subsection 501.12. See definition of Operation and Maintenance Manual in Section 003 for the typical contents of an operation and maintenance manual and the included operations plan. For the operations plan in the operation and maintenance manual, additional guidance for several types of filtration systems can be found in the Department’s SWTR Compliance Guidance referenced in Subsection 002.02. (4-4-13)

b. The system shall conduct monitoring specified by the Department before serving water to the public in order to protect the health of consumers served by the system. (4-4-13)

c. New treatment facilities shall be operated in accordance with Subsection 552.03.b., and the system shall conduct monitoring specified by the Department for a trial period specified by the Department before serving water to the public in order to protect the health of consumers served by the system. (3-30-07)

04. Chlorination. Systems that regularly add chlorine to their water are subject to the provisions of Section 320. Systems using surface water or ground water under the direct influence of surface water, are subject to the disinfection requirements of Sections 300 and 518. (3-30-07)

a. Systems using only ground water that add chlorine for the purpose of disinfection, as defined in Section 003, are subject to the following requirements: (4-6-05)

i. Chlorinator and chlorine contact tank capacity shall be such that the system is able to demonstrate that it is routinely achieving four (4) logs (ninety-nine point ninety-nine percent) (99.99%) inactivation/removal of viruses. The required effective contact time will be specified by the Department. This condition must be attainable even when the plant design capacity coincides with anticipated maximum chlorine demands. (4-4-13)

ii. A detectable chlorine residual shall be maintained throughout the distribution system. (4-6-05)

iii. Automatic proportioning chlorinators are required where the rate of flow or chlorine demand is not reasonably constant. (4-4-13)

iv. Analysis for free chlorine residual shall be conducted at a location at or prior to the first service connection at least daily and records of these analyses shall be kept by the supplier of water for at least one (1) year. A report of all daily chlorine residual measurements for each calendar month shall be submitted to the Department no later than the tenth day of the following month. The frequency of measuring free chlorine residuals shall be sufficient to detect variations in chlorine demand or changes in water flow. (5-8-09)

v. If gas chlorination equipment is provided, a separate and ventilated room is required. (4-4-13)

vi. The Department may, in its discretion, require a treatment rate higher than that specified in Subsection 552.04.a.i. (3-30-07)

vii. When chlorine gas is used, chlorine leak detection devices and safety equipment shall be provided and equipped with both an audible alarm and a warning light. (5-8-09)

viii. The Department may require redundant chlorine pumping capabilities with automatic switchover for systems with documented source water contamination problems and that lack adequate storage to supply the system during a pump failure. (5-8-09)

b. Systems using only ground water that add chlorine for the purpose of maintaining a disinfectant residual in the distribution system, when the source(s) is not at risk of microbial contamination, are subject to the following requirements: (4-6-05)

i. Automatic proportioning chlorinators are required where the rate of flow or chlorine demand is not reasonably constant. (4-4-13)

ii. Analysis for free chlorine residual shall be made at a frequency that is sufficient to detect variations in chlorine demand or changes in water flow. (4-6-05)

c. Systems using only ground water that add chlorine for other purposes, such as oxidation of metals or taste and odor control, when the source(s) is known to be free of microbial contamination, must ensure that chlorine residual entering the distribution system after treatment is less than four (4.0) mg/L. The requirements in Subsection 552.04.b.ii. also apply if the system maintains a chlorine residual in the distribution system. (3-30-07)

05. Fluoridation. (12-1-92)

a. Commercial sodium fluoride, sodium silico fluoride and hydrofluosilicic acid which conform to the applicable American Water Works Association (AWWA) Standards, incorporated by reference into these rules at Subsection 002.01, are acceptable. Use of other chemicals shall be specifically approved by the Department. (3-30-07)

- b.** Fluoride compounds shall be stored in covered or unopened shipping containers. (3-30-07)
- c.** Provisions shall be made to minimize the quantity of fluoride dust. Empty bags, drums, or barrels shall be disposed of in a manner that will minimize exposure to fluoride dusts. (3-30-07)
- d.** Daily records of flow and amounts of fluoride added shall be kept. An analysis for fluoride in finished water shall be made at least weekly. Records of these analyses shall be kept by the supplier of water for five (5) years. (12-10-92)

06. Cross Connection Control Program - Community Water Systems. The water purveyor is responsible through its cross connection control program to take reasonable and prudent measures to protect the water system against contamination and pollution from cross connections through premises isolation, internal or in-plant isolation, fixture protection, or some combination of premises isolation, internal isolation, and fixture protection. Pursuant to Section 543, all suppliers of water for community water systems shall implement a cross connection control program to prevent the entrance to the system of materials known to be toxic or hazardous. The water purveyor is responsible to enforce the system's cross connection control program. The program will at a minimum include: (4-7-11)

- a.** An inspection program to locate cross connections and determine required suitable protection. For new connections, suitable protection must be installed prior to providing water service. (5-8-09)
- b.** Required installation and operation of adequate backflow prevention assemblies. Appropriate and adequate backflow prevention assembly types for various facilities, fixtures, equipment, and uses of water should be selected from the AWWA Pacific Northwest Section Cross Connection Control Manual, the Uniform Plumbing Code, the AWWA Recommended Practice for Backflow Prevention and Cross Connection Control (M14), the USC Foundation Manual of Cross Connection Control, or other sources deemed acceptable by the Department. The assemblies must meet the requirements of Section 543 and comply with local ordinances. (4-4-13)
- c.** Annual inspections and testing of all installed backflow prevention assemblies by a tester licensed by a licensing authority recognized by the Department. Testing shall be done in accordance with the test procedures published by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research. See the USC Foundation Manual of Cross-Connection Control referenced in Subsection 002.02. (4-7-11)
- d.** Discontinuance of service to any structure, facility, or premises where suitable backflow protection has not been provided for a cross connection. (4-7-11)
- e.** Assemblies that cannot pass annual tests or those found to be defective shall be repaired, replaced, or isolated within ten (10) business days. If the failed assembly cannot be repaired, replaced, or isolated within ten (10) business days, water service to the failed assembly shall be discontinued. (4-4-13)

07. Cross Connection Control - Non-Community Water Systems. All suppliers of water for non-community water systems shall ensure that cross connections do not exist or are isolated from the potable water system by an approved backflow prevention assembly. Backflow prevention assemblies shall be inspected and tested annually for functionality by an Idaho licensed tester, as specified in Subsections 552.06.c. and 552.06.e. (4-4-13)

08. Start-up Procedures For Seasonal Systems Subject To Subsections 100.01.a., c., and d. ()

a. Beginning April 1, 2016, all seasonal system owners and operators must demonstrate completion of a Department approved start-up procedure, including start-up sampling, prior to serving water to the public. The system owner or operator must submit information on a Department provided or approved form that includes a statement certifying that the system owner or operator followed proper start-up procedures. The form shall be submitted to the Department within 30 (thirty) days following the system's start-up date. ()

b. The Department may exempt any seasonal system from Subsection 552.08.a. if the entire distribution system remains pressurized during the entire period that the system is not operating, except that the systems that monitor less frequently than monthly must still monitor during the vulnerable period designated by the Department. The Department may exempt a seasonal system from Subsection 552.08.a. if the owner or operator of

the system meets all of the following conditions: ()

- i. Requests an exemption in writing to the Department for approval; ()
- ii. Demonstrates a clean compliance history as defined in Section 003 for a minimum of five (5) years; ()
- iii. Has no uncorrected significant deficiencies from the most recent sanitary survey; and ()
- iv. Total coliform samples submitted to a certified laboratory within 30 (thirty) days prior to serving water to the public demonstrate the absence of total coliform. ()